CMAJ OPEN
MEDICAL RESEARCH FOR ALL

# Working hard but working differently – A qualitative study of the impact of generational change on rural healthcare

| | |
|---|---|
| Journal: | *CMAJ Open* |
| Manuscript ID | CMAJOpen-2017-0075.R1 |
| Manuscript Type: | Qualitative |
| Date Submitted by the Author: | 17-Jul-2017 |
| Complete List of Authors: | Snadden, David; University of British Columbia Faculty of Medicine, Family Practice<br>Kunzli, Mark; University of British Columbia, Family Practice |
| Keywords: | Rural health and medicine, Qualitative research, Medical careers, Health services research, Family medicine, general practice, primary care, Health policy |
| More Detailed Keywords: | Generational change, Rural practice contexts, Recruitment and retention |
| Abstract: | Background<br>The purpose of this study was to explore rural practitioners' experiences of their current contexts relevant to recruitment and retention and to determine how practices are responding to changing aspirations of new practitioners.<br><br>Methods<br>Qualitative methods were used. Participants were selected to ensure diversity of career stage. Interviews were conducted with 39 physicians and three non-physicians from rural Northwest Canada. 4 interviews were then conducted in rural Vancouver Island to confirm emerging themes. Interviews were recorded and analyzed interpretively.<br><br>Results<br>Three themes were identified that demonstrated the interplay between practitioners, patients, and resources within a rural health environment: 1) Scope of practice and the changing concept of generalism; 2) Connectivity and relationships; 3) Divergent career aspirations. Within these themes, generational differences between early career rural physicians and those preceding them influenced changes underway in rural practice in terms of adapting the practice environment to enhance recruitment and retention. |

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Interpretation
This study shows how some rural practices are beginning to adapt in ways that reflect changing generational aspirations. Specifically, they provide environments that support and nurture young physicians, encourage collaborative working, and include flexible working arrangements with varying support and financial models. Rural practices that were responsive to changing aspirations reported success in recruitment and retention. There are implications in how practices respond to these shifting aspirations for not only rural communities and their patients, but also for the wider healthcare system as this shift is likely impacting all levels of healthcare.

Registration
UBC Ethics Review Board Certificate H16-00848

SCHOLARONE™
Manuscripts

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

# Introduction

There continues to be an inequitable distribution of physicians in rural and remote areas in Canada. While the 2016 Canadian Census showed that 16.8% of the population lived in rural areas (1), a 2015 assessment of physician distribution showed that only 8.2% of Canadian physicians were based outside of urban centres (2). Additionally, while urban centres had approximately equal numbers of family physicians and specialists, only 1 out of 7 rural physicians were designated as specialists (2). Current evidence suggests that rural upbringing and exposure to rural practice during training can encourage interest in rural careers (3-7). Character traits such as novelty seeking and low harm avoidance have been associated with physician interest in rural practice (8). In attempts to increase recruitment of physicians to rural areas, some medical schools have sought to identify students with rural affinity during the admissions process (9), and others have noted positive impacts on the rural workforce through creating a rural generalist training pathway (10). Rurally oriented medical programs have been created in Canada (11, 12) and Australia (13, 14). There have been examples of success from these efforts; however, many rural areas struggle to recruit and retain enough physicians and to provide equitable access to healthcare.

Confidential

The research described assumes a stable state with respect to rural work environments. There has been some consideration of the changes required of the medical educational system in response to the new generation of physicians (15), yet there is limited literature evaluating generational change in the physician workforce and the adjustments required of practices, practitioners, and the healthcare system as a whole. While the above evidence suggests some commonalities in physicians choosing rural practice across generations, this study aimed to explore rural practitioners' experiences to understand the adaptations, successes, and challenges influencing recruitment and retention in rural healthcare to answer the question of how practices are responding to the influence of the incoming generation of practitioners in a dynamic multi-generational environment.

# Methods

## Setting

Rural practices in Northwest Canada.

## Design

Qualitative interview study conducted in practice settings. The first author was the Regional Associate Dean for the UBC Faculty of Medicine Northern Medical Program from 2003 to 2011, and then Executive Associative Dean Education from 2011 to 2016 and is known throughout northern BC. Some participants were former students of the Northern Medical Program, some had been met previously through community visits, the majority had not been met before. The study design took this into account and used an interpretive approach, related to hermeneutics (16, 17), which acknowledges that the researcher comes with experiences and assumptions and that the interpretation builds on and refines or changes these. Also in driving to the communities (approximately 10,000 kilometres overall), he directly experienced the challenges of geography, and came to a new appreciation of geographic influences on rural practice (18).



For Peer Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

## Sample

Practitioners in rural and remote communities in Northwest Canada were invited to participate in a semi-structured interview to discuss their views on rural health pertaining to research, training, recruitment, retention, and other issues they deemed relevant.

A purposive sample was sought from practices throughout Northern British Columbia, the Yukon, and Northwest Territories. Medical directors and physician leads sent out a letter of invitation to practitioners requesting volunteers contact the first author directly if interested. All who responded were interviewed by the first author. In two larger communities, the medical directors organised group interviews, and in other communities, the practice team elected to attend the interview, which meant that the sample contained non-physicians. A confirmatory cohort was recruited by the second author using convenience sampling in another health authority to test emerging themes.

## Data Collection

An interview guide was developed based on a review of the literature and discussion with rural physicians. Participants were interviewed between June and October of 2016 at a place of their choosing in their practice community, with the exception of three individuals interviewed by Skype or telephone.

The first author kept field notes and reflections about visits to the communities, tours of the healthcare facilities, and had informal conversations with staff during these visits. All interviews were recorded digitally and transcribed. In two instances, where there were issues with the digital recordings, summaries and field notes were created for analysis.

Confidential

## Data Analysis

In keeping with qualitative research approaches (17, 19), the data were analysed as data collection was ongoing and subsequent interviews adapted to explore emerging themes. All transcripts and field notes were read, coded using NVivo (QSR International), and analyzed by both authors separately. This separation of analyses strengthened the findings, as perspectives were brought to bear independently, and both authors kept reflective notes during this phase. Analysis continued until both authors agreed no new themes or codes could be identified. A summary of findings and emerging themes was sent to all participants, with their feedback incorporated into the continuing analyses. Upon completion of data collection, the two sets of themes were found to be similar but labeled differently. A single set of themes was agreed upon and the data were further compared with these themes. At the completion of analysis and interpretation, the second author conducted four individual interviews with rural practitioners in a different region to test the resonance of the themes.

## Ethics

This study received harmonized ethics approval from the UBC Behavioral Research Ethics Board and the Northern Health Ethics Committee.

## Rigour

As some of the participants were graduates of the undergraduate or residency programs in which the first author played a major role, the interviews were analysed independently by the second author to increase the sensitivity of the findings. Disconfirming evidence was sought within the interviews and was enhanced by the diversity of participants. The themes were commonly held across diverse contexts and



For Peer Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

individuals, which strengthens the authenticity and transferability of the findings. The written analysis is also accompanied by quotes, which are illustrative of the many perspectives that came together to make a theme.

# Results

In-depth interviews were conducted with 42 participants (35 family physicians, 4 specialist physicians [without previous family physician training], 2 nurses, 1 practice administrator) from rural Northwest Canada. The first author conducted 17 individual interviews, two interviews with pairs, and interviewed 25 participants in four group settings. The same interview guide was used for group interviews which were conducted as broad conversations, not focus groups. Interviews lasted 30-50 minutes, and the group interviews 45-90 minutes. Two persons participated in both a group interview and an individual interview. 4 individual interviews (3 physicians, 1 nurse) were conducted by the second author in rural Vancouver Island to confirm emerging themes. Participants ranged from their first year of practice to recently retired (Figure 1). The non-physicians all had valuable contributions to make, particularly on physician recruitment and retention and their observations of new physicians entering rural practice. Physicians were remunerated by fee for service arrangements, alternate payment plans (income guarantee and contract salary arrangements), and return-of-service obligations.

Confidential

Three major themes emerged from the data, all of which contained intergenerational dynamics:

1. Scope of practice and the changing concept of generalism
2. Culture, connectivity and relationships
3. Divergent career aspirations

## Scope of practice and the changing concept of generalism (Table 1)

Participants spoke positively about the breadth of rural practice, the opportunity to solve complex issues, and the challenge of the unexpected. They considered generalism to be the capacity to deal with any condition that presented, with having emergency skills and, for some, included extended skills such as obstetrics, oncology, GP surgery, or anaesthesia. The data indicated that generalism as a concept is evolving with some of the extended skills of generalism being vested in a team rather than within one person, thus increasing the importance of supportive and accessible colleagues and specialty services. Universally the participants hesitated endorsing formal certification of generalism and extended skills, as the needs of each community are different, and the interests of physicians change over their career.

Frequent examples were provided of policies or protocols developed in fully resourced urban environments having a disproportionate impact on rural communities that lacked a full complement of specialists, equipment, and/or support staff. Instances were mentioned where the tone and tenor of specialist consults and interactions with urban-based colleagues was less than desirable. These negative experiences, in addition to administrative challenges, appeared to be rooted in a limited understanding of rural healthcare delivery on the part of specialist physicians and services, frustrating rural physicians acutely aware of the resource limitations of their community. Of major concern were difficulties arranging patient transport to larger centres. Many commented strongly on the importance of ensuring that best practices and protocols are scalable to each rural practice context.

In some cases, participants spoke of limiting the scope of practice due to lack of support, resources, or confidence; this was cited primarily with new physicians, both by them and of them. Despite the



For Peer Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

challenges, participants commented that good specialist relationships do exist and many newly graduated and early career physicians spoke of networks formed through training that served them well in their transition to rural practice. Where specialists are part of or visit communities, or where video links connect specialists, family physicians, and patients together, an added supportive network existed to attract and retain rural physicians.

## Culture, connectivity and relationships (Table 2)

Participants revealed that the culture of a rural practice is a major determinant of the ability of communities to recruit and retain physicians. Practice cultures were influenced by the level of collegial support and mentorship, integration within the broader interdisciplinary healthcare team, and relationships with the community. Enablers to establishing this supportive culture were reductions in administrative burdens, the development of trust between colleagues, and a strong relationship between clinicians and the local health authority. Communities with a supportive culture differentiated themselves positively from those without and noted a positive effect on recruitment and retention.

Established physicians mentioned that new graduates are highly skilled, but often need to gain confidence in rural environments, with those trained in low-resource environments through residency or clerkships adjusting more easily. Newer physicians noted that collegial support in the early years of practice was key to building confidence and was facilitated by the availability of experienced people, embedded in the community, who were willing and able to provide early mentorship and reinforcement. This component allowed new recruits to learn about the community itself and form connections to the multidisciplinary team, health authorities, and referral centres. Access to telehealth and connectivity in general emerged as important ways of accessing information and enabling relationships with specialists, members of the healthcare team near and far, as well as patients. Ultimately, established physicians felt that the newer generation of physicians was competent to work in rural areas, but required on-site support and connectivity to develop confidence, which in turn determined comfort and success in practice.

Confidential

## Divergent career aspirations (Table 3)

Both positive and negative opinions were expressed about how the different practice philosophy of new physicians contrasts with the traditional expectations of a rural physician. Some established physicians noted that newer physicians were not taking a full roster of patients, had longer appointment times, did not generate sufficient billings, and/or preferred non-fee-for-service funding arrangements. This contrasted with others who noted the high quality of care provided through patient-centred and comprehensively documented approaches. Practices that encouraged shared accountability and integration of care by adapting their environment and cost-sharing models reported positive effects on culture, collegiality, recruitment, and retention.

What presented as divergent practice styles during initial interviews became more clearly generational in nature, with newer physicians approaching their medical careers differently: valuing flexibility over scheduling; working arrangements that change over time; prioritising work-life blend over remuneration; valuing team-based, patient-centred care; and using technology to ensure information transfer. Some established practitioners viewed new recruits as having a sense of entitlement and being unwilling to work the same kind of hours as they had, thus requiring more physicians to serve the same population. Interestingly, the propensity for burnout in rural healthcare was noted across the spectrum;

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

however, newer physicians seemed more comfortable setting boundaries to prevent it. Overall, the data indicated that newer physicians are working hard, but working differently.

# Interpretation

## Main Findings

Renewal of the rural physician workforce will require attention to shifting demographics and generational aspirations in the context of the changing health system. Adaptations will be needed as family physicians, comprising 86% of rural practitioners in Canada, have steadily increased in age from 23% aged 55 years or older in 2000, to 40% in 2017 (20) (Figure 2), and will be replaced by a new generation of physicians.

## Explanation and comparison with other studies

This study highlights the importance of understanding changing generational aspirations in order to support recruitment and retention to rural communities. The new generation of physicians are seeking practice environments that are collegial, supportive, which have well developed internal and external relationships and which allow flexibility in practice and financial arrangements. Strauss-Howe's Generational Theory (21) gives us one way of considering the impact of these changes, a theory further supported by the NextGen global generational study of over 44,000 employees commissioned by PwC in a direct response to retention issues with Millennials (22). In their cohort, they found a higher proportion of Millennials valued work/life balance over greater compensation; a cohesive team-based culture with a sense of community; increased desire for diversity of career experiences; and a greater emphasis on being supported and appreciated – all issues that emerged from our analysis and ones that affect the broader workforce as a whole (23). As Millennial physicians (born 1982-2004) are only just now entering practice due to increased length of education, the experiences of other professions with Millennial recruitment and retention could hold the key to understanding the incoming generation of physicians.

While we found no research applying multigenerational understanding to rural practices, generational theory has been used to gain insight and shape interventions in academic medicine to address issues very similar to those being faced in rural healthcare (24). In this context, a generational forecasting model and specific programs were developed to address differences in work/life balance, compensation, team vs solo work, and diversity. Interventions included formalized succession planning programs; financial support programs leveraging the success of Baby Boomers to provide opportunities for the next generation; leadership and mentorship skill development programs; and an emphasis on cultivating a team-based culture facilitating connectivity and collaboration (25), all similar to positive interventions observed in our study. There was little appetite for practices to engage in research due to busy clinical workloads and research did not emerge as an important theme in our study other than rural practitioners want to ensure that there is relevant research to advocate for rural health. Our data did not show gender differences, and the relevance of connection to a rural 'place' did not emerge other than through the importance of community relationships, which has been found in other studies (26).

## Limitations

This study represents the experiences of practitioners in rural Northwest Canada, but can be relevant to other practitioners and transferred to other practice settings. On two occasions the digital recording partially failed and field notes were used for analysis. Field notes were made immediately after the



For Peer Review Only

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

interviews, and resonated well with the main data. Skype and telephone interviews were digitally recorded and were not found to be inferior to other data in terms of content, but there is a definite advantage to interviewing people in their own settings in terms of developing an appreciation for their contexts. This was mitigated by the first author having visited all the communities in the study.

## Conclusions and implications for practice and future research

Rural medicine remains exciting for many physicians, with collegial relationships, in-house mentorship, and educational support found to improve confidence in its wide scope of practice. While academic settings are preparing physicians to work as part of a team and emphasising patient centred approaches, not all practice environments incorporate these ideas. Practices can allow flexibility for physicians in their work arrangements, yet there is limited flexibility in physician compensation and how clinics are run and funded. This creates a disconnect with new physicians who are trained differently only to graduate into a system that requires them to leave a large part of what they learned behind. The transition from residency programs to practice is supported by providing easy access to advice and addressing the tension between established practitioners and the aspirations of new physicians; experienced practitioners have a critical role to play in helping new practitioners understand the unique features of their communities. How to develop healthy supportive practice environments is an area for further research, as is the question of what will be the impacts of generational change in urban practices and hospitals and what adaptations will be required in the health system as a whole. Another potential area of research is to explore whether there are differences in gender aspirations as opposed to generational ones.

This study of rural physicians showed evidence of generational change impacting the healthcare system. As subsequent generations come of age immersed in an increasingly interconnected world, they too will shape the healthcare environment with expectations that challenge traditional norms. Established physicians or health authorities seeking to enhance rural recruitment and retention need to consider the practice environment desired by new recruits in terms of internal and external relationships, the flexibility of working and compensation arrangements, team based care with comprehensive shared information systems, and access to rapid support through specialist and telehealth networks. The willingness and ability to respond to shifting generational aspirations has a direct impact on the health of a rural practice and our results indicate that a community embracing this paradigm is one that will be easier to recruit to and retain people within.

Confidential



For Peer Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

# References

1. Bollman R. 2016 Census Update: Update of rural and small town population. 2017. Available from: http://crrf.ca/publications/?platform=hootsuite.
2. Supply Distribution and Migration of Physicians in Canada, 2015;. Available from: https://secure.cihi.ca/estore/productFamily.htm?pf=PFC3269&lang=en&media=0.
3. Viscomi M, Larkins S, Gupta TS. Recruitment and retention of general practitioners in rural Canada and Australia: a review of the literature. Can J Rural Med. 2013;18(1):13-23.
4. Verma P, Ford JA, Stuart A, Howe A, Everington S, Steel N. A systematic review of strategies to recruit and retain primary care doctors. BMC Health Serv Res. 2016;16:126.
5. Grobler L, Marais BJ, Mabunda S. Interventions for increasing the proportion of health professionals practising in rural and other underserved areas. Cochrane Database Syst Rev. 2015(6):CD005314.
6. Increasing access to health workers in remote and rural areas through improved retention: Global policy recommendations. World Health Organisation; 2010. Report No.: ISBN 978 92 4 156401 4.
7. Soles TL, Wilson RC, Oandasan IF. Family medicine education in rural communities as a health service intervention supporting recruitment and retention of physicians: Advancing Rural Family Medicine: The Canadian Collaborative Taskforce. Can Fam Physician. 2017;63(1):32-8.
8. Eley D, Young L, Przybeck TR. Exploring the temperament and character traits of rural and urban doctors. J Rural Health. 2009;25(1):43-9.
9. Bates J, Frinton V, Voaklander D. A new evaluation tool for admissions. Med Educ. 2005;39(11):1146.
10. Woolley T, Sen Gupta T, Murray R. James Cook University's decentralised medical training model: an important part of the rural workforce pipeline in northern Australia. Rural Remote Health. 2016;16(1):3611.
11. Strasser S, Strasser RP. The Northern Ontario School of Medicine: a long-term strategy to enhance the rural medical workforce. Cah Sociol Demogr Med. 2007;47(4):469-89.
12. Snadden D, Bates J. Expanding undergraduate medical education in British Columbia: a distributed campus model. CMAJ. 2005;173(6):589-90.
13. Hays RB. Rural initiatives at the JCU School of Medicine: a vertically integrated regional/rural/remote medical provider. Australian Journal of Rural Health. 2001;9(Suppl):S2-5.
14. Evaluation of the University Departments of Rural Health Program and the Rural Clinical Schools Program. 2009. Available from: http://www.health.gov.au/internet/publications/publishing.nsf/Content/work-pubs-eval-udrh-toc~work-pubs-eval-udrh-5.
15. Boysen PG, 2nd, Daste L, Northern T. Multigenerational Challenges and the Future of Graduate Medical Education. Ochsner J. 2016;16(1):101-7.
16. Gadamer H-G, Weinsheimer J, Marshall DG. Truth and method. 2nd, rev. ed. London ; New York: Continuum; 2004. xxxvi, 601 p. p.
17. Moules NJ, McCaffrey G, Field JC, Laing CM. Conducting Hermeneutic Research: from Philospthy to Practice. New York: Peter Laing; 2015.
18. Dube TV, Schinke RJ, Strasser R, Lightfoot N. Interviewing in situ: employing the guided walk as a dynamic form of qualitative inquiry. Med Educ. 2014;48(11):1092-100.
19. Patton MQ. Qualitative Evaluation and Research Methods: Integrating Theory and Practice. Fourth Edition ed. Thousand Oaks, California: Sage; 2015.
20. Number of physicians by specialty and age, Canada 2017 [Internet]. Canadian Medical Association. 2017 [cited 30 May 2017]. Available from: https://www.cma.ca/En/Pages/canadian-physician-statistics.aspx.

Confidential

21. Strauss W, Howe N. Generations: The history of America's future, 1548 to 2069. New York: William Morrow & Co.; 1991.
22. Finn D, Donovan A. PwC's NextGen: A global generational study. 2013. Available from: http://www.pwc.com/gx/en/hr-management-services/publications/assets/pwc-nextgen.pdf.
23. Howe N, Strauss W. The next 20 years: how customer and workforce attitudes will evolve. Harv Bus Rev. 2007;85(7-8):41-52, 191.
24. Howell LP, Servis G, Bonham A. Multigenerational challenges in academic medicine: UCDavis's responses. Acad Med. 2005;80(6):527-32.
25. Howell LP, Joad JP, Callahan E, Servis G, Bonham AC. Generational forecasting in academic medicine: a unique method of planning for success in the next two decades. Acad Med. 2009;84(8):985-93.
26. Kearns R, Myers J, Adair V, Coster H, Coster G. What makes 'place' attractive to overseas-trained doctors in rural New Zealand? Health Soc Care Community. 2006;14(6):532-40.

Confidential



For Peer Review Only

# Introduction

There continues to be an inequitable distribution of physicians in rural and remote areas in Canada. While the 2016 Canadian Census showed that 16.8% of the population lived in rural areas (1), a 2015 assessment of physician distribution showed that only 8.2% of Canadian physicians were based outside of urban centres (2). Additionally, while urban centres had approximately equal numbers of family physicians and specialists, only 1 out of 7 rural physicians were designated as specialists (2). Current evidence

~~Several reviews examining rural physician recruitment and retention~~ suggests that rural upbringing and exposure to rural practice during training can encourage interest in rural careers (3-7). ~~Additionally, c~~Character traits such as novelty seeking and low harm avoidance have been associated with physician interest in rural practice (8). In attempts to increase recruitment of physicians to rural areas, some medical schools have sought to identify students with rural affinity during the admissions process (9), and others have noted positive impacts on the rural workforce through creating a rural generalist training pathway (10). Rurally oriented medical programs have been created in Canada (11, 12) and Australia (13, 14). There have been examples of success from these efforts; however, many rural areas struggle to recruit and retain enough physicians and to provide equitable access to healthcare.

~~While valuable, the~~The research described assumes a stable state with respect to ~~trainee and practitioner aspirations in terms of~~rural work environments. There has been some consideration of the ~~adaptations~~ changes required of the medical educational system in response to the ~~Millennial generation~~new generation of physicians (15), yet there is limited literature evaluating generational change in the physician workforce and the ~~adaptations~~ adjustments required of practices, practitioners, and the healthcare system as a whole. While the above evidence suggests some commonalities in physicians choosing rural practice across generations, this study aimed to explore rural practitioners' experiences to understand the adaptations, successes, and challenges influencing recruitment and retention in rural healthcare~~, it is~~ to answer the question of ~~important to determine~~ how practices are responding to the influence of the incoming generation of practitioners in a dynamic multi-generational environment. ~~This study explored rural practitioners' experiences to understand the adaptations, successes, and challenges in an increasingly complex and interconnected healthcare system to determine current factors influencing recruitment and retention in rural healthcare.~~

# Methods

## Setting

Rural ~~p~~Practices in N~~W~~orthwest Canada.

## Design

Qualitative interview study conducted in ~~the~~ practice settings. The first author was the Regional Associate Dean for the UBC Faculty of Medicine Northern Medical Program from 2003 to 2011, and then Executive Associative Dean Education from 2011 to 2016 and is known ~~of~~ throughout northern BC. Some participants were former students of the Northern Medical Program, some had been met previously through community visits, the majority had not been met before. The study design took this into account and used an interpretive approach, related to hermeneutics (16, 17), which acknowledges that the researcher comes with experiences and assumptions and that the interpretation builds on and

**Formatted:** Font color: Auto
**Formatted:** Heading 1
**Formatted:** Font color: Auto
**Formatted:** Heading 1
**Formatted:** Font color: Auto
**Formatted:** Font color: Auto
**Formatted:** Heading 2

Confidential

refines or changes these. Also in driving to the communities (approximately 10,000 kilometres overall), he directly experienced the challenges of geography, and came to a new appreciation of geographic influences on rural practice (18).
~~Practitioners in rural and remote communities in Northwest Canada were invited to participate in a semi-structured interview to discuss their views on rural health pertaining to research, training, recruitment, retention, and other issues they deemed relevant.~~

## Sample

Practitioners -in rural and remote communities in Northwest Canada were invited to participate in a semi-structured interview to discuss their views on rural health pertaining to research, training, recruitment, retention, and other issues they deemed relevant.

**Formatted:** Font: (Default) +Headings (Calibri Light), 13 pt, Font color: Auto

**Formatted:** Font color: Auto

A purposive sample was sought from practices throughout Northern British Columbia, the Yukon, and Northwest Territories. Medical ~~Directors~~ directors and ~~Physician~~ physician ~~Leads~~ leads sent out a letter of invitation to practitioners requesting volunteers contact the first author directly if interested. All who responded were interviewed by the first author. In two larger communities, the ~~Medical~~ medical ~~Directors~~ directors organised group ~~meetings~~interviews, and in other communities, the practice team elected to attend the interview, which meant that the sample contained non-physicians. A confirmatory cohort was recruited by the second author using convenience sampling in another health authority to test emerging themes.

## Data Collection

An ~~initial~~ interview guide was developed based on a review of the literature and discussion with rural physicians. Participants were interviewed between June and October of 2016 at a place of ~~the participants'~~ their choosing in their practice community, with the exception of three individuals interviewed by Skype or telephone.

The first author kept f~~F~~ield notes and reflections about visits to the communities, tours of the~~were kept by the first author who visited the communities, toured their~~ healthcare facilities, and had informal conversations with staff during these visits~~. In driving to the communities (approximately 10,000 kilometres overall), he directly experienced the challenges of geography, thus bringing an ethnographic element to the research (16)~~. All interviews were recorded digitally and transcribed. In two instances, where there were issues with the digital recordings, summaries and field notes were created for analysis. ~~Analysis of the data continued until saturation, which was when both authors agreed no new themes or codes emerged from the data. A summary of findings and emerging themes were sent to all participants to test for accuracy, with feedback incorporated into the analysis.~~

## Data Analysis

In keeping with qualitative research ~~methods~~ approaches (17, 19), the data were analysed as data collection was ongoing and subsequent interviews adapted to explore emerging themes. All transcripts~~, with~~ and field notes ~~included as part of the data trail,~~ were read, coded using NVivo (QSR International), and analyzed by both authors separately. This separation of analyses strengthened the ~~analysis~~ findings, as perspectives were brought to bear independently, and both authors kept reflective notes during ~~the analys~~this phase. Analysis ~~of the data~~ continued until both authors agreed no new themes or codes could be identified. A summary of findings and emerging themes was sent to all participants, with their feedback incorporated into the continuing analyses. Upon completion of data collection, the two

Confidential

~~thematic frameworks~~sets of themes were found to be similar but labeled differently. A ~~common analytic framework was~~single set of themes was agreed upon and the data were further ~~analysed using constant comparison with the framework~~compared with these themes. At the completion of analysis and interpretation, the second author~~,~~ conducted four individual interviews ~~were conducted by the second author~~ with rural practitioners in a different region to test the resonance of the ~~emerging~~ themes.

## Ethics

This study received harmonized ethics approval from the UBC Behavioral Research Ethics Board and the Northern Health Ethics Committee.

## ~~Trustworthiness~~Rigour

As some of the participants were graduates of the undergraduate or residency programs in which the first author played a major role, the interviews were analysed independently by the second author to ~~enhance~~ increase the sensitivity of the findings. Disconfirming evidence was sought within the interviews and was enhanced by the diversity of participants. ~~That t~~The themes were commonly held across diverse contexts and individuals, which strengthens the authenticity and transferability of the findings. The written analysis is also accompanied by quotes, which are illustrative of the many perspectives that came together to make a theme.

# Results

In-depth interviews ~~(17 individual, 2 couple, 4 group)~~ were conducted with 42 participants (~~39~~ 35 family physicians, 4 specialist physicians ~~(~~[without previous family physician training ~~as family physicians)~~], 2 nurses, 1 practice administrator) from rural Northwest Canada. The first author conducted 17 individual interviews, two interviews with ~~couples~~pairs, and interviewed 25 participants in four group settings. The same interview guide was used for group interviews which were conducted as broad conversations, not focus groups. Interviews lasted 30-50 minutes, and the group interviews 45-90 minutes. Two persons participated in both a group interview and a ~~subsequent~~n individual interview. 4 individual interviews (3 physicians, 1 nurse) were conducted by the second author in rural Vancouver Island to confirm emerging themes. Participants ranged from their first year of practice to recently retired (Figure 1). The non-physicians all had valuable contributions to make, particularly on physician recruitment and retention and their observations of new physicians entering rural practice. Physicians were ~~on~~ remunerated by fee for service arrangements, alternate payment plans (income guarantee and contract salary arrangements), and return-of-service obligations.

Three major themes emerged from the data, all of which contained intergenerational dynamics:

1. Scope of practice and the changing concept of generalism
2. Culture, connectivity and relationships
3. Divergent career aspirations

## Scope of practice and the changing concept of generalism (Table 1)

Participants spoke positively about the breadth of rural practice, the opportunity to solve complex issues, and the challenge of the unexpected. They considered generalism to be the capacity to deal with any condition that presented, with having emergency skills and, for some, included extended skills such as ~~Obstetrics~~obstetrics, o~~O~~ncology, GP s~~S~~urgery, or a~~A~~naesthesia. The data indicated that generalism as a concept is evolving with some of the extended skills of generalism being vested in a team rather than



Confidential

within one person, thus increasing the importance of supportive and accessible colleagues and specialty services. Universally the participants hesitated endorsing formal certification of generalism and extended skills, as the needs of each community are different, and the interests of physicians change over their career.

Frequent examples were provided of policies or protocols developed in fully resourced urban environments having a disproportionate impact on rural communities that lacked a full complement of specialists, equipment, and/or support staff. Instances were mentioned where the tone and tenor of specialist consults and interactions with urban-based colleagues was less than desirable. These negative experiences, in addition to administrative challenges, appeared to be rooted in a limited understanding of rural healthcare delivery on the part of specialist physicians and services, frustrating rural physicians acutely aware of the resource limitations of their community. Of major concern were difficulties arranging patient transport to larger centres. Many commented strongly on the importance of ensuring that best practices and protocols are scalable to each rural practice context.

Confidential

In some cases, participants spoke of limiting the scope of practice due to lack of support, resources, or confidence; this was cited primarily with new physicians, both by them and of them. Despite the challenges, participants commented that good specialist relationships do exist and many newly graduated and early career physicians spoke of networks formed through training that served them well in their transition to rural practice. Where specialists are part of or visit communities, or where video links connect specialists, family physicians, and patients together, an added supportive network existed to attract and retain rural physicians.

## Culture, connectivity and relationships (Table 2)

Participants revealed that the culture of a rural practice is a major determinant of the ability of communities to recruit and retain physicians. Practice cultures were influenced by the level of collegial support and mentorship, integration within the broader interdisciplinary healthcare team, and relationships with the community. Enablers to establishing this supportive culture were reductions in administrative burdens, the development of trust between colleagues, and a strong relationship between clinicians and the local health authority. Communities with a supportive culture differentiated themselves positively from those without and noted a positive effect on recruitment and retention.

Established physicians mentioned that new graduates are highly skilled, but often need to gain confidence in rural environments, with those trained in low-resource environments through residency or clerkships adjusting more easily. Newer physicians noted that collegial support in the early years of practice was key to building confidence and was facilitated by the availability of experienced people, embedded in the community, who were willing and able to provide early mentorship and reinforcement. This component allowed new recruits to learn about the community itself and form connections to the multidisciplinary team, health authorities, and referral centres. Access to telehealth and connectivity in general emerged as important ways of accessing information and enabling relationships with specialists, members of the healthcare team near and far, as well as patients. Ultimately, established physicians felt that the newer generation of physicians was competent to work in rural areas, but required on-site support and connectivity to develop confidence, which in turn determined comfort and success in practice.



For Peer Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

### Divergent career aspirations (Table 3)

Both positive and negative opinions were expressed about how the different practice philosophy of new physicians contrasts with the traditional expectations of a rural physician. Some established physicians noted that newer physicians were not taking a full roster of patients, had longer appointment times, did not generate sufficient billings, and/or preferred non-fee-for-service funding arrangements. This contrasted with others who noted the high quality of care provided through patient-centred and comprehensively documented approaches. Practices that encouraged shared accountability and integration of care by adapting their environment and cost-sharing models reported positive effects on culture, collegiality, recruitment, and retention.

What presented as divergent practice styles during initial interviews became more clearly generational in nature, with newer physicians approaching their medical careers differently: valuing flexibility over scheduling; working arrangements that change over time; prioritising work-life blend over remuneration; valuing team-based, patient-centred care; and using technology to ensure information transfer. Some established practitioners viewed new recruits as having a sense of entitlement and being unwilling to work the same kind of hours as they had, thus requiring more physicians to serve the same population. Interestingly, the propensity for burnout in rural healthcare was noted across the spectrum; however, newer physicians seemed more comfortable setting boundaries to prevent it. Overall, the data indicated that newer physicians are working hard, but working differently.

## Interpretation

### Main Findings

Renewal of the rural physician workforce will require attention to shifting demographics and generational aspirations in the context of the changing health system. Adaptations will be needed as family physicians, comprising 86% of rural practitioners in Canada, have steadily increased in age from 23% aged 55 years or older in 2000, to 40% in 2017 (20) (Figure 2), and will be replaced by a new generation of physicians.

Formatted: Heading 2

Formatted: Font: Font color: Auto

### Explanation and comparison with other studies

This study highlights the importance of understanding changing generational aspirations in order to support recruitment and retention to rural communities. The new generation of physicians are seeking practice environments that are collegial, supportive, which have well developed internal and external relationships and which allow flexibility in practice and financial arrangements. Strauss-Howe's Generational Theory (21) gives us one way of considering the impact of these changes, a theory further supported by the NextGen global generational study of over 44,000 employees commissioned by PwC in a direct response to retention issues with Millennials (22). In their cohort, they found a higher proportion of Millennials valued work/life balance over greater compensation; a cohesive team-based culture with a sense of community; increased desire for diversity of career experiences; and a greater emphasis on being supported and appreciated – all issues that emerged from our analysis and ones that affect the broader workforce as a whole (23). As Millennial physicians (born 1982-2004) are only just now entering practice due to increased length of education, the experiences of other professions with



Confidential

Millennial recruitment and retention could hold the key to understanding the incoming generation of physicians.

While we found no research applying multigenerational understanding to rural practices, generational theory has been used to gain insight and shape interventions in academic medicine to address issues very similar to those being faced in rural healthcare (24). In this context, a generational forecasting model and specific programs were developed to address differences in work/life balance, compensation, team vs solo work, and diversity. Interventions included formalized succession planning programs; financial support programs leveraging the success of Baby Boomers to provide opportunities for the next generation; leadership and mentorship skill development programs; and an emphasis on cultivating a team-based culture facilitating connectivity and collaboration (25), all similar to positive interventions observed in our study. ~~While we did ask about research t~~There was little appetite for practices to engage in research due to busy clinical workloads and research did not emerge as an important theme in our study other than rural practitioners want to ensure that there is relevant research to advocate for rural health. Our data did not show gender differences, and the relevance of connection to a rural 'place' did not emerge other than through the importance of community relationships, ~~though~~which has been found in other studies (26).

Formatted: Heading 2

Formatted: Font color: Auto

Formatted: Heading 2

## Limitations

Formatted: Font color: Auto

~~This is a qualitative~~This study represents the experiences of practitioners in rural N~~W~~orthwest Canada, but can be relevant to other~~s~~ practitioners and transferred to other ~~contexts~~practice settings. On two occasions the digital recording partially failed and field notes were used for analysis. Field notes were made immediately after the interviews, and resonated well with the main data. Skype and telephone interviews were digitally recorded and were not found to be inferior to other data in terms of content, but there is a definite advantage to interviewing people in their own settings in terms of developing an appreciation for their contexts. This was mitigated by the first author having visited all the communities in the study. ~~study carried out in rural practices in Northwest Canada. Like all such studies, the data are related to the rich context of the different participants and communities and the results are not generalizable in the scientific meaning of generalisability. Such results, however, do have transferability of themes into other contexts.~~

Formatted: Heading 2

## Conclusions and implications for practice and future research

Formatted: Font color: Auto

~~This study of rural physicians showed evidence of the impacts of generational change in the healthcare system~~~~Rural medicine remains exciting for many physicians. The concept of generalism is alive and well in rural medicine, but in keeping with a coming generation that values collaborative working, the wide scope of practice in a rural community may be vested in a team of individuals rather than in one person. Collegial relationships, in-house mentorship, and educational support improve confidence in a wider~~



Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

scope of practice. For rural health to thrive, interventions must encourage a common culture while respecting the uniqueness of each Influence of generational change

Renewal of the rural physician workforce will require attention to shifting demographics and generational aspirations in the context of the changing health system. Adaptations will be needed as family physicians, comprising 86% of rural practitioners in Canada, have steadily increased in age from 23% aged 55 years or older in 2000, to 40% in 2017 (19) (Figure2).

Strauss-Howe's Generational Theory (20) gives us one way of considering the impact of these changes. They posit a cycle of 4 generational archetypes shaped by societal and cultural influences as a generation comes of age, which determines a collective persona and worldview. Further, a generation is considered to retain positive traits and oppose negative traits of the generation that raised them. In the context of the current multi-generational workforce, this tells us that the Millennial focus on achieving a work/life blend and team-oriented philosophies, with a strong desire for ongoing development and support, runs contrary to the Baby Boomer (born 1943-1960) idea of work/life balance and their primary metrics of job performance consisting of hours worked and dollars earned. These are, of course, broad generalisations and there are overlaps in the timing of each generation and individual variation in attitudes and values which has led to the contention that generational differences are a myth (21).

There is evidence, however, to support generational theory from the NextGen global generational study of over 44,000 employees commissioned by PwC in a direct response to retention issues with Millennials (22). Their findings aligned well with many of the issues seen in practice today. In their cohort, they found a higher proportion of Millennials valued work/life balance over greater compensation; a cohesive team-based culture with a sense of community; increased desire for diversity of career experiences; and a greater emphasis on being supported and appreciated – all issues that emerged from our analysis and ones that affect the broader workforce as a whole (23). As Millennial physicians (born 1982-2004) are only just now entering practice due to increased length of education, the experiences of other professions with Millennial recruitment and retention could hold the key to understanding the incoming generation of physicians.

While we found no research applying multigenerational understanding to rural practices, generational theory has been used to gain insight and shape interventions in academic medicine to address issues very similar to those being faced in rural healthcare (24). In this context, a generational forecasting model and specific programs were developed to address differences in work/life balance, compensation, team vs solo work, and diversity. Interventions included formalized succession planning programs; financial support programs leveraging the success of Boomers to provide opportunities for the next generation; leadership and mentorship skill development programs; and an emphasis on cultivating a team-based culture facilitating connectivity and collaboration (25), all similar to positive interventions observed in our study.

There is an opportunity for increased productivity and harmony in the multigenerational workplace that adjusts to divergent career aspirations and practice styles, and potential for conflict in one that does not. Overall, we saw a trend towards rural communities recognizing that the practice environment desired by new physicians is changing, and it is the community or clinic that needs to adapt to attract them. With the healthcare system and practitioners becoming increasingly interconnected, shared practice philosophy and the ability to work as part of a cohesive team is becoming a necessity in creating sustainable and healthy rural practices.



Confidential

~~New~~ ~~This study of rural physicians showed evidence of the impacts of generational change in the healthcare system. The Millennial focus on interconnectivity, collegiality and relationships may serve the healthcare system well, if the system can find a way to accommodate these desires. The incoming generation of physicians are working hard; but they are working differently.~~ ~~While rural~~Rural medicine remains exciting for many physicians, with collegial relationships, in-house mentorship, and educational support found to improve confidence in ~~a~~its wide~~r~~ scope of practice. ~~Much as medicine is being taught differently than it was 40 years ago,~~ While academic settings are preparing physicians to work as part of a team and emphasising patient centred approaches, ~~healthcare needs to adapt to allow it to be practiced differently~~not all practice environments incorporate these ideas ~~as yet~~. Practices can allow flexibility for physicians in their work arrangements, yet there is limited flexibility in physician compensation and how clinics are run and funded. ~~risking~~This creates a ~~feeling of~~ disconnect ~~by~~with new physicians who are trained differently ~~but~~only to graduate into a system that ~~at times seems to require~~requires them to leave a large part of what they learned behind. ~~Attention needs to be paid to the~~The transition from residency programs to practice is supported by~~,~~ providing easy access to advice and addressing the ~~locally and to in-house mentoring and support. While there is a~~ tension between established practitioners and the aspirations of new physicians; experienced practitioners have a ~~major~~critical role to play in ~~mentoring and~~ helping new practitioners understand the unique features of their communities. How to develop healthy supportive practice environments is an area for further research, as is the question of what will be the impacts of generational change in urban practices and hospitals and what adaptations will be required in the health system as a whole. Another potential area of research is to explore whether there are differences in gender aspirations as opposed to generational ones. ~~While practices can allow flexibility for physicians in how they work~~~~their work arrangements, there is limited flexibility in how they are compensated and in how clinics are run and funded. Alternative payment models and different "turn-key" practice environments need to be considered as we enter an interconnected age of collaborative continuity of care and flexible working arrangements.~~

~~We suggest better synchronization between the healthcare system and the academic system to prevent the disconnect felt by new physicians who trained differently but graduate into a system that requires them to leave a large part of what they learned behind.~~

This study of rural physicians showed evidence of generational change impacting the healthcare system. As subsequent generations come of age immersed in an increasingly interconnected world, they too will shape the healthcare environment with ~~their~~ expectations that challenge traditional norms. ~~The willingness and ability to respond to shifting generational aspirations has a direct impact on the health of a rural practice and our results indicate that a practice~~~~community~~ ~~embracing these factors is one that will be easier to recruit to and to retain people within. These impacts are likely to not only affect rural healthcare, but will be felt across the healthcare system as a whole.~~

~~physicians desire: good relationships within their practices; supportive and quick access to specialty support; to practice patient centred medicine; frequent access to information; and to use patient records comprehensively to ensure continuity of care by different providers. Together these shifting priorities mean that rural practices need to consider their whole environment in terms of culture, relationships, connectivity, and flexibility as they look to attract the next generation of rural practitioners.~~~~In this regard~~Established physicians or health authorities seeking to enhance rural recruitment and retention need to consider the practice environment desired by new recruits in terms of internal and external relationships~~, including community and specialty relationships, mentoring~~

~~support~~, the flexibility of working and compensation arrangements~~ and differing compensation models including salary arrangements~~, ~~links to~~ team based care ~~, and~~with comprehensive shared information systems, and ~~with~~ access to rapid support through special~~t~~ist~~y~~ and telehealth networks. The willingness and ability to respond to shifting generational aspirations has a direct impact on the health of a rural practice and our results indicate that a community embracing this paradigm is one that will be easier to recruit to and retain people within. ~~How to develop healthy supportive practice environments is an area for further research, as is the question of what will be the impacts of generational change in urban practices and hospitals and what adaptations will be required in the health system as a whole. Another potential area of research is to explore whether there are differences in gender aspirations as opposed to generational ones.~~

## ~~Limitations~~

~~This is a qualitative study carried out in rural practices in Northwest Canada. Like all such studies, the data are related to the rich context of the different participants and communities and the results are not generalizable in the scientific meaning of generalisability. Such results, however, do have transferability of themes into other contexts.~~

## ~~Conclusion~~

~~Rural medicine remains exciting for many physicians. The concept of generalism is alive and well in rural medicine, but in keeping with a coming generation that values collaborative working, the wide scope of practice in a rural community may be vested in a team of individuals rather than in one person. Collegial relationships, in-house mentorship, and educational support improve confidence in a wider scope of practice. For rural health to thrive, interventions must encourage a common culture while respecting the uniqueness of each community; this can be achieved by working with those who know their communities.~~

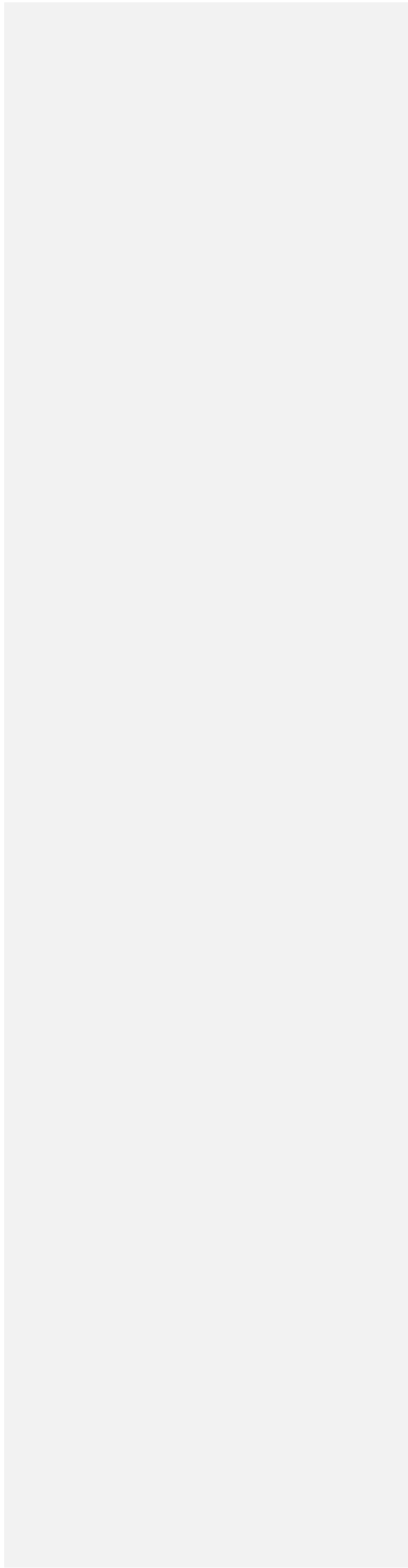
~~This study of rural physicians showed evidence of the impacts of generational change in the healthcare system. The Millennial focus on interconnectivity, collegiality and relationships may serve the healthcare system well, if the system can find a way to accommodate these desires. The incoming generation of physicians are working hard; but they are working differently. Much as medicine is being taught differently than it was 40 years ago, healthcare needs to adapt to allow it to be practiced differently. While practices can allow flexibility for physicians in how they work, there is limited flexibility in how they are compensated and in how clinics are run and funded. Alternative payment models and different "turn-key" practice environments need to be considered as we enter an interconnected age of collaborative continuity of care and flexible working arrangements.~~

~~We suggest better synchronization between the healthcare system and the academic system to prevent the disconnect felt by new physicians who trained differently but graduate into a system that requires them to leave a large part of what they learned behind. As subsequent generations come of age immersed in an increasingly interconnected world, they too will shape the healthcare environment with their expectations that challenge traditional norms. The willingness and ability to respond to shifting generational aspirations has a direct impact on the health of a rural practice and our results indicate that a practice embracing these factors is one that will be easier to recruit to and to retain people within. These impacts are likely to not only affect rural healthcare, but will be felt across the healthcare system as a whole.~~

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Confidential



10

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

# References

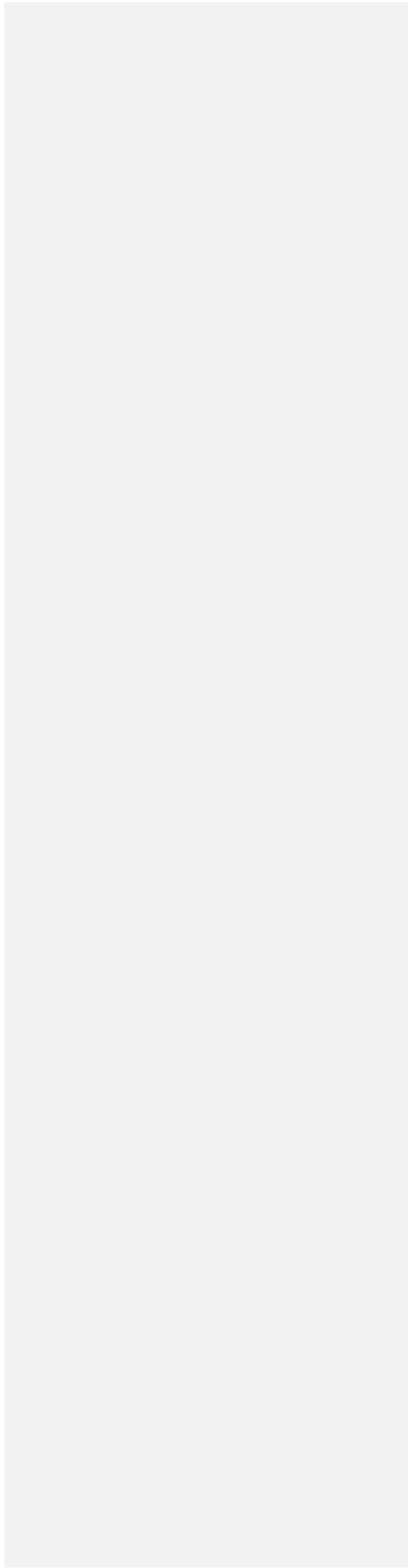
Formatted: Font color: Auto
Formatted: Heading 1

1. Bollman R. 2016 Census Update: Update of rural and small town population. 2017. Available from: http://crrf.ca/publications/?platform=hootsuite.
2. Supply Distribution and Migration of Physicians in Canada, 2015;. Available from: https://secure.cihi.ca/estore/productFamily.htm?pf=PFC3269&lang=en&media=0.
3. Viscomi M, Larkins S, Gupta TS. Recruitment and retention of general practitioners in rural Canada and Australia: a review of the literature. Can J Rural Med. 2013;18(1):13-23.
4. Verma P, Ford JA, Stuart A, Howe A, Everington S, Steel N. A systematic review of strategies to recruit and retain primary care doctors. BMC Health Serv Res. 2016;16:126.
5. Grobler L, Marais BJ, Mabunda S. Interventions for increasing the proportion of health professionals practising in rural and other underserved areas. Cochrane Database Syst Rev. 2015(6):CD005314.
6. Increasing access to health workers in remote and rural areas through improved retention: Global policy recommendations. World Health Organisation; 2010. Report No.: ISBN 978 92 4 156401 4.
7. Soles TL, Wilson RC, Oandasan IF. Family medicine education in rural communities as a health service intervention supporting recruitment and retention of physicians: Advancing Rural Family Medicine: The Canadian Collaborative Taskforce. Can Fam Physician. 2017;63(1):32-8.
8. Eley D, Young L, Przybeck TR. Exploring the temperament and character traits of rural and urban doctors. J Rural Health. 2009;25(1):43-9.
9. Bates J, Frinton V, Voaklander D. A new evaluation tool for admissions. Med Educ. 2005;39(11):1146.
10. Woolley T, Sen Gupta T, Murray R. James Cook University's decentralised medical training model: an important part of the rural workforce pipeline in northern Australia. Rural Remote Health. 2016;16(1):3611.
11. Strasser S, Strasser RP. The Northern Ontario School of Medicine: a long-term strategy to enhance the rural medical workforce. Cah Sociol Demogr Med. 2007;47(4):469-89.
12. Snadden D, Bates J. Expanding undergraduate medical education in British Columbia: a distributed campus model. CMAJ. 2005;173(6):589-90.
13. Hays RB. Rural initiatives at the JCU School of Medicine: a vertically integrated regional/rural/remote medical provider. Australian Journal of Rural Health. 2001;9(Suppl):S2-5.
14. Evaluation of the University Departments of Rural Health Program and the Rural Clinical Schools Program. 2009. Available from: http://www.health.gov.au/internet/publications/publishing.nsf/Content/work-pubs-eval-udrh-toc~work-pubs-eval-udrh-5.
15. Boysen PG, 2nd, Daste L, Northern T. Multigenerational Challenges and the Future of Graduate Medical Education. Ochsner J. 2016;16(1):101-7.
16. Gadamer H-G, Weinsheimer J, Marshall DG. Truth and method. 2nd, rev. ed. London ; New York: Continuum; 2004. xxxvi, 601 p. p.
17. Moules NJ, McCaffrey G, Field JC, Laing CM. Conducting Hermeneutic Research: from Philosphy to Practice. New York: Peter Laing; 2015.
18. Dube TV, Schinke RJ, Strasser R, Lightfoot N. Interviewing in situ: employing the guided walk as a dynamic form of qualitative inquiry. Med Educ. 2014;48(11):1092-100.
19. Patton MQ. Qualitative Evaluation and Research Methods: Integrating Theory and Practice. Fourth Edition ed. Thousand Oaks, California: Sage; 2015.
20. Number of physicians by specialty and age, Canada 2017 [Internet]. Canadian Medical Association. 2017 [cited 30 May 2017]. Available from: https://www.cma.ca/En/Pages/canadian-physician-statistics.aspx.



Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60



21. Strauss W, Howe N. Generations: The history of America's future, 1548 to 2069. New York: William Morrow & Co.; 1991.
22. Finn D, Donovan A. PwC's NextGen: A global generational study. 2013. Available from: http://www.pwc.com/gx/en/hr-management-services/publications/assets/pwc-nextgen.pdf.
23. Howe N, Strauss W. The next 20 years: how customer and workforce attitudes will evolve. Harv Bus Rev. 2007;85(7-8):41-52, 191.
24. Howell LP, Servis G, Bonham A. Multigenerational challenges in academic medicine: UCDavis's responses. Acad Med. 2005;80(6):527-32.
25. Howell LP, Joad JP, Callahan E, Servis G, Bonham AC. Generational forecasting in academic medicine: a unique method of planning for success in the next two decades. Acad Med. 2009;84(8):985-93.
26. Kearns R, Myers J, Adair V, Coster H, Coster G. What makes 'place' attractive to overseas-trained doctors in rural New Zealand? Health Soc Care Community. 2006;14(6):532-40.

Confidential



For Peer Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

*Table 1: Scope of practice and the changing concept of generalism*

- **Excitement of rural medicine:** "I like practicing rural medicine because of the spectrum. I like the action, I'm a bit of an adrenaline junkie when it comes to, you know, working under stress. I like that. I like the acute care. I like that I am it, I'm the person who will make the decisions when the critical care comes." – Family Physician, New to Practice
- **Importance of not restricting scope:** "I think to keep a physician motivated in a rural area, you need to be a generalist. Otherwise you're going to sit in Edmonton in the middle of the city and just doing office work. And there's a big difference between being an office physician and being a rural physician." – Family Physician, Late Career
- **Considerations with generalist accreditation:** "We have basically anything that occurs in the big centres, not as often as in a bigger centre, but we have everything that comes through the door we deal with. And that is exciting and stressful and challenging sometimes with the limited resource and equipment as well." –Family Physician, New to Practice
- **Disproportionate impact of policies developed in an urban environment:** "The protocols have their place and they can be helpful but I think sometimes big hospital protocols are extrapolated out to rural communities and places where they just don't work. You know, it's a totally different setting here. I haven't had huge issues, I mean sometimes it can be something as simple as, well recently there's been some protocol shift in terms of sterilization and with our autoclave in particular, they want to do away with it. So they want us to use just disposable equipment which I think is pretty awful, overall. . . .Based on hospital protocol or what they think is an acceptable sterilization technique is, we'll be stuck with plastic utensils to try and do things." – Family Physician, Early Career
- **Interactions with specialists:** "I think the specialists, well not all of them, but I think most of them sort of appreciate where we are. Sometimes we run into situations where we have newer docs who don't realize sort of how resource poor it can be in a rural setting." – Family Physician, Early Career
- **Burden of negative interactions with urban-based colleagues:** "I used to see it as my issues always when I was calling South and someone was mean and you know you'd be kind of bending over backwards to give the story in the right order and not upset them." – Family Physician, New to Practice
- **Administrative challenges:** "People are more stressed about transferring the patients than managing the MI or managing the polytrauma or whatever it might be." – Family Physician, Late Career
- **Impact on recruitment: "**What I'm looking for is a community where I can sort of grow and also a community that has a need and not wanting to be stuck in a family practice clinic and that's all I do. I enjoy doing the Emergency and the Obstetrics. So it's sort of doing the GP thing and having a multi-disciplinary practice." – Family Physician, New to Practice
- **Impact on retention:** "I think rural practice is certainly my passion. I think I'd probably shrivel up and die in a walk-in clinic in Vancouver so yeah, I do like what I do and I like to share it too." – Family Physician, New to Practice

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

*Table 2: Culture, connectivity, and relationships*

- **Impact of rural practice culture:** "I haven't found anywhere like it, and I think that [culture] is a big part of it for sure. And even small towns locuming around, you know, some small towns you'll have colleagues that are just so supportive, local colleagues, who say "Call me in a pinch, any problems, let me know." And other places in which that is not the case for whatever reason. And it makes a huge difference to practice." – Family Physician, Early Career
- **Collegial support:** "So as far as supports go, that's one thing that I find different here compared to a lot of places, . . . I know if at 3:00 in the morning I was really stuck, I could call anybody in town and get help. . . . I don't have to keep it to [my clinic], we all support and help each other and there have been times when I've struggled with things and had to call someone in or get advice or things like that. So I think as far as collegiality despite being short-staffed, despite being from different clinics, I think we have pretty good collegiality for that." – Family Physician, New to Practice
- **Barriers to support:** "The team here, it's a very diverse . . . and overworked team. We're short-staffed so . . . I didn't feel like I had kind of a mentorship and support where I could go and just chat about things, cause people are just overworked and busy and just trying to keep afloat." – Family Physician, New to Practice
- **Flexibility in scheduling:** "People really appreciate the flexibility of coming into a site like this one when they can take, assume a fraction of a full-time equivalent. To be honest, in the way of my recruitment strategy over the past few years, I haven't seen many physicians who want to take on a full-time right off the bat, so what we get here and I think why we're so successful in the way of recruitment is a lot of young locums who are coming right out of residency working with us, checking the site out and a lot of them like to float around and do rural locums in different communities, so this sort of allows them that flexibility to do that. Ya, so it's been good. I think you know as opposed to committing to a full-time and just being here sort of non-stop." – Family Physician, Early Career
- **Supportive culture differentiating itself:** "In that context, the younger generation usually comes in and says but I am not so competent and I don't do so well with obstetrics and then we tell them 'Okay but we'll take you through that. We will make sure that we support and help you. We've got a mentor program . . . that we've done before that helped [other physicians] to a level that they were very comfortable and gained their privileges.' So in the Emergency room, we have a support system that even if there's no [official] second on-call, . . . there's always a second on-call available. And so that gives that support system and so what I've seen now with the first resident, when he left here, he sat me down, he says 'My mind is blown. I did not expect this in a rural, underserviced area without any supports to experience this kind of support.'" – Family Physician, Late Career
- **Developing confidence in rural environments:** "I think the competence is there but the confidence is not. That's something I see as a big challenge with the new grads coming out is that even if they are capable and able, they don't feel capable and able. So we do need to look at supporting them in that confidence piece." – Family Physician, Late Career
- **Influence of training on transition to rural practice:** "I do feel like my residency training prepared me well for that but ultimately it's this process that we all go through in the first few years and it's hard to go through, and I don't think actually that more training would make it better. I think it's really just a, it's hard to be the MRP and the only way you really get good at that is by experience with adequate support, ideally." – Family Physician, Early Career
- **Importance of mentorship embedded in community:** "Mentorship [is critically important] for new arrivals in practice, whether they are experienced old hands in medicine, or brand new grads.

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Being mentored by someone experienced with the community, who can help the new arrival to develop a deep appreciation for the community and all its 'weirdness' is often helpful to the healthy practice ecosystem, but also to the community itself." – Family Physician, Retired

- **Collegial support in early years of practice:** "This is really important for any new doctor coming into the practice, especially a strange place and especially multi-racial community and the rest of it, coming from a different country especially, that support is very key. Because the positive reinforcement is what keeps you going when every other thing goes down. And I'm so happy, like on this table I have colleagues who support me, there were times they didn't know, but they gave me a positive reinforcement. I didn't say this back to them, that kept me going and kept me know, that ya, I can actually survive here, you know." – Family Physician, Mid Career

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

*Table 3: Divergent career aspirations*

- **Different practice styles of new physicians:** "I think we have a different approach . . . that's drilled into us in family medicine residency and med school around patient-centered care, . . . which takes a lot more time than a more paternalistic, traditional form of medicine, right. [Compared] with the doctor who had been there for 20 years, it took us a lot more time to see the same patients than it took him and that was because we talked more, or maybe we were a bit more thorough, maybe we took a longer history. Part of that would've been because we were younger and maybe less efficient, but part of it was because I do think we have a different approach as well, we're taught a different approach these days." – Family Physician, Early Career
- **Patient rosters:** "So what we're seeing is that as an average we used to have practice panels of I would about 1800 to 2400 per doc. But some of our new recruits, the new docs that have been here now for a year or two or longer and the newest ones, we're looking currently at practice panels of 800-1200. So even though you're getting new physicians your unattachment pool is actually growing so the net effect of that is that we need higher numbers of docs to do the same amount of work." – Family Physician, Mid Career
- **Not generating sufficient billings:** "An interesting thing that I see and we need to back it up a little bit is when you say you know the guy looked after 3000 patients and he made this much money. The young people coming in want to look after 800 and many of them want to make almost that same amount of money. But they only want to look after 800. And so that's a little bit of a disconnect as well. So finding a way to actually build some reality into younger physicians coming in. They want to work less hours, less hard but the same kind of income." – Family Physician, Late Career
- **Different approach to medical careers:** "I think this will be the new model. I think things will really change and it was the old generation and I have a lot of respect for older doctors. I mean they've worked very hard but I think there's a big shift, people demanding an adequate lifestyle. They're no longer willing to sort of sacrifice everything for medicine and I respect that too." – Family Physician, Early Career
- **Valuing flexibility in scheduling:** "We had to become more flexible with how we allotted our positions, right, and we found out very quickly that to maintain full-time positions, although it creates the best continuity, is not really a way forward in this sort of new environment that we're in." – Family Physician, Mid Career
- **Shared accountability and integration of care:** "Ultimately it is a shared practice and when I'm away someone's checking my results and dealing with things and they're not a locum that I've handpicked and so there's a lot of trust required and knowing that everybody is kind of on the same page in general. . . . I always think about narcotic prescriptions because I had some horrible experiences with a locum where you're just being asked to refill things all the time that you don't feel comfortable with but even simple things like not using statins for primary prevention or some ways that we're oriented in how we provide care. . . . Especially the longer I'm in practice, I have stronger and stronger ideas about how I like to do things for better or for worse. I wouldn't want to share a practice with people who were really divergent in their values. I think that would be really hard so we're lucky to have that." – Family Physician, Early Career
- **Working hard but working differently:**
  Dr A – "I think our sort of cohort of doctors is really moving in the direction of doctoring being a job and not a life which we certainly are trying to maintain as well. So certainly having the flexibility to not always be on-call and to not be working 100 hours a week is important."

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

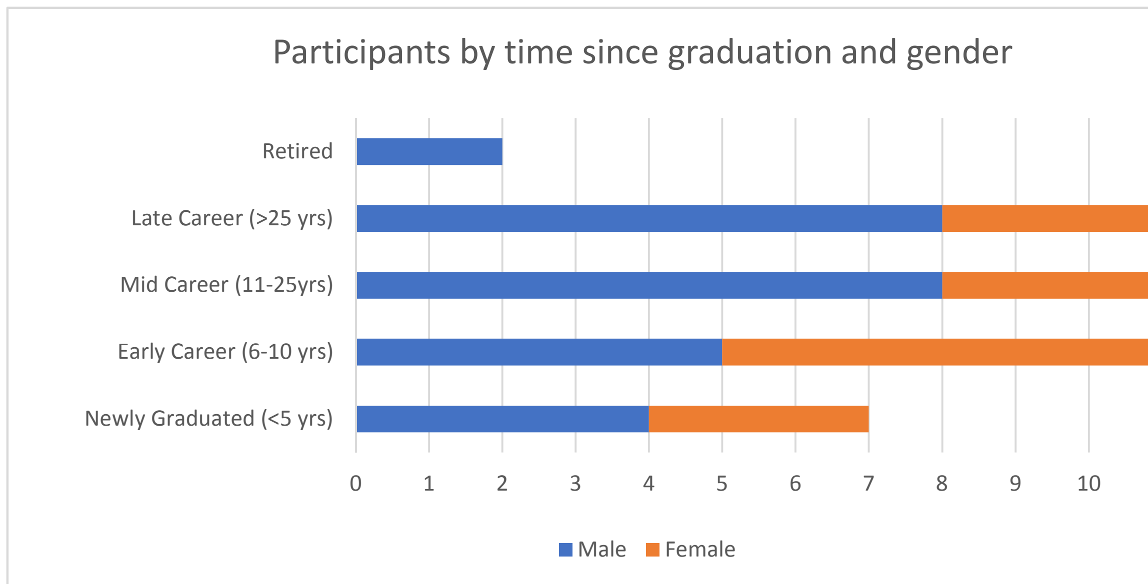
Dr B - "You know, all of us know through training that 100 hour weeks are something you're going to deal with one way or another, it's just not being every week."
Dr A – "Ya, ya, we do them but just not all the time." – Family Physicians, New to Practice.

- **Importance of work/life balance to prevent burn-out:** "I definitely think there is a change in kind of way people want to do things. I'm really wary of my own kind of mindfulness of the youth of today you know when we were young, and I think that's a problem we deal with as human beings all the time, is we always attribute things to a generational thing that may not even be a generational thing. It just may be kind of the lens that we're looking at it through. We're looking back and they're looking forward and so but I do see kind of work/life balance being more important and overtly more important. So and I think that's really important and I think there's a lot of value in that around sustainability because you have a bit of a pattern of a whole bunch of people going to rural communities burning out a lot of them and a few of us sticking it out. And maybe part of the reason for it is we've been a bit more intentional around the work/life balance. Maybe part of it is we mentally adjusted somehow. – Family Physician, Late Career

Confidential

| | Male | Female |
|---|---|---|
| Newly Graduated (<5 yrs) | 4 | 3 |
| Early Career (6-10 yrs) | 5 | 6 |
| Mid Career (11-25yrs) | 8 | 3 |
| Late Career (>25 yrs) | 8 | 3 |
| Retired | 2 | |

Confidential

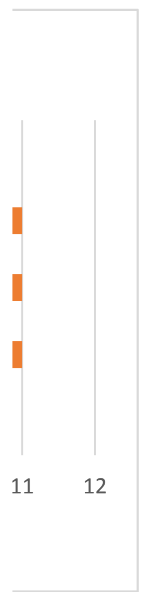



Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60




Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Number of physicians by age, Canada - Family Physicians

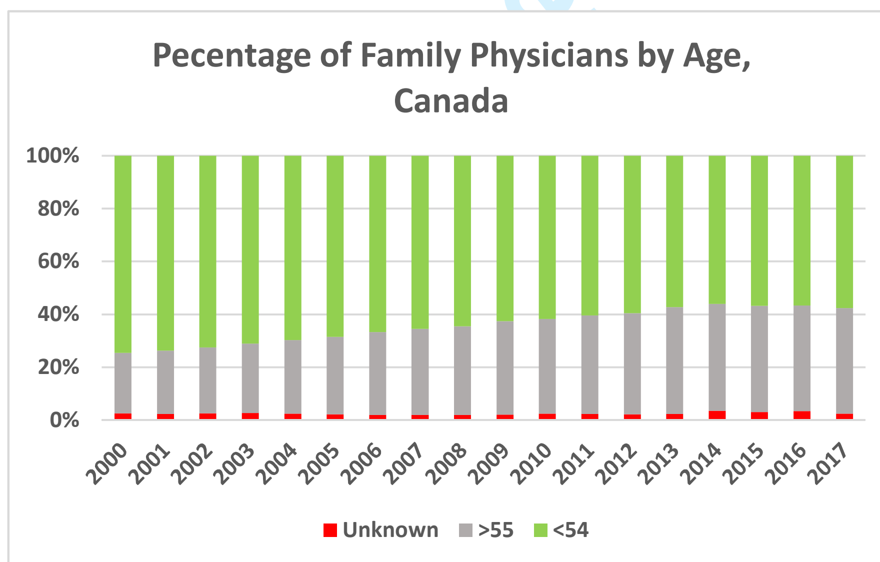
| | <34 | 35-44 | 45-54 | 55-64 | 65+ | Unknown | Total |
|---|---|---|---|---|---|---|---|
| 2000 | 3301 | 9586 | 9008 | 4390 | 2337 | 745 | 29367 |
| 2001 | 3316 | 9494 | 9247 | 4770 | 2408 | 701 | 29936 |
| 2002 | 3308 | 9301 | 9571 | 5254 | 2373 | 779 | 30586 |
| 2003 | 3312 | 9228 | 9857 | 5698 | 2555 | 853 | 31503 |
| 2004 | 3199 | 9087 | 10059 | 6176 | 2702 | 806 | 32029 |
| 2005 | 2628 | 8826 | 10239 | 6601 | 2666 | 712 | 31672 |
| 2006 | 2477 | 8643 | 10386 | 7189 | 2925 | 621 | 32241 |
| 2007 | 2412 | 8470 | 10593 | 7636 | 3041 | 632 | 32784 |
| 2008 | 2683 | 8382 | 10824 | 8066 | 3312 | 655 | 33922 |
| 2009 | 2527 | 8172 | 10850 | 8546 | 3570 | 738 | 34403 |
| 2010 | 3030 | 8186 | 11033 | 8961 | 3926 | 888 | 36024 |
| 2011 | 2793 | 8120 | 10965 | 9234 | 4248 | 839 | 36199 |
| 2012 | 3243 | 8269 | 10868 | 9622 | 4728 | 821 | 37551 |
| 2013 | 2927 | 8240 | 10740 | 9886 | 5587 | 879 | 38259 |
| 2014 | 3129 | 8377 | 10840 | 10184 | 5925 | 1436 | 39891 |
| 2015 | 3554 | 8660 | 10802 | 10464 | 5857 | 1234 | 40571 |
| 2016 | 3875 | 9015 | 10749 | 10532 | 6109 | 1439 | 41719 |
| 2017 | 4620 | 9519 | 10712 | 10793 | 6434 | 1088 | 43166 |

Percentage of physicians by age, Canada - Family Physicians

| | <34 | 35-44 | 45-54 | 55-64 | 65+ | Unknown | Total |
|---|---|---|---|---|---|---|---|
| 2000 | 11.2% | 32.6% | 30.7% | 14.9% | 8.0% | 2.5% | 100.0% |
| 2001 | 11.1% | 31.7% | 30.9% | 15.9% | 8.0% | 2.3% | 100.0% |
| 2002 | 10.8% | 30.4% | 31.3% | 17.2% | 7.8% | 2.5% | 100.0% |
| 2003 | 10.5% | 29.3% | 31.3% | 18.1% | 8.1% | 2.7% | 100.0% |
| 2004 | 10.0% | 28.4% | 31.4% | 19.3% | 8.4% | 2.5% | 100.0% |
| 2005 | 8.3% | 27.9% | 32.3% | 20.8% | 8.4% | 2.2% | 100.0% |
| 2006 | 7.7% | 26.8% | 32.2% | 22.3% | 9.1% | 1.9% | 100.0% |
| 2007 | 7.4% | 25.8% | 32.3% | 23.3% | 9.3% | 1.9% | 100.0% |
| 2008 | 7.9% | 24.7% | 31.9% | 23.8% | 9.8% | 1.9% | 100.0% |
| 2009 | 7.3% | 23.8% | 31.5% | 24.8% | 10.4% | 2.1% | 100.0% |
| 2010 | 8.4% | 22.7% | 30.6% | 24.9% | 10.9% | 2.5% | 100.0% |
| 2011 | 7.7% | 22.4% | 30.3% | 25.5% | 11.7% | 2.3% | 100.0% |
| 2012 | 8.6% | 22.0% | 28.9% | 25.6% | 12.6% | 2.2% | 100.0% |
| 2013 | 7.7% | 21.5% | 28.1% | 25.8% | 14.6% | 2.3% | 100.0% |
| 2014 | 7.8% | 21.0% | 27.2% | 25.5% | 14.9% | 3.6% | 100.0% |
| 2015 | 8.8% | 21.3% | 26.6% | 25.8% | 14.4% | 3.0% | 100.0% |
| 2016 | 9.3% | 21.6% | 25.8% | 25.2% | 14.6% | 3.4% | 100.0% |
| 2017 | 10.7% | 22.1% | 24.8% | 25.0% | 14.9% | 2.5% | 100.0% |

Confidential

| | Unknown | >55 | <54 |
|---|---|---|---|
| 2000 | 745 | 6727 | 21895 |
| 2001 | 701 | 7178 | 22057 |
| 2002 | 779 | 7627 | 22180 |
| 2003 | 853 | 8253 | 22397 |
| 2004 | 806 | 8878 | 22345 |
| 2005 | 712 | 9267 | 21693 |
| 2006 | 621 | 10114 | 21506 |
| 2007 | 632 | 10677 | 21475 |
| 2008 | 655 | 11378 | 21889 |
| 2009 | 738 | 12116 | 21549 |
| 2010 | 888 | 12887 | 22249 |
| 2011 | 839 | 13482 | 21878 |
| 2012 | 821 | 14350 | 22380 |
| 2013 | 879 | 15473 | 21907 |
| 2014 | 1436 | 16109 | 22346 |
| 2015 | 1234 | 16321 | 23016 |
| 2016 | 1439 | 16641 | 23639 |
| 2017 | 1088 | 17227 | 24851 |



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Data Source CMA Public Data Files

Confidential

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Rural Physician Interview Guide

These are stem questions, as a semi structured interview they will be used to facilitate a conversation on the research topic area.

Introduction

Thank you for agreeing to spend some time with me. Describe the recording method and consent procedures.

I'd like to ask you questions in a number of areas, firstly are there any questions you have to clarify the purpose of the study.

Primary Question:

So I'd like to start with your thoughts on the scope of rural practice and what is missing in terms of how we educate young physicians, in particular I'd be interested in what you think a rural generalist pathway would look like.

Probes: What disciplines do you need in your every day practice, what skills areas are young physicians telling you they need more help in,

Primary Question

One of the developments taking place is the creation of a Chair in Rural Health, what do you think the priorities for this would be?

Probes: what do you think the policy priorities should be, the relationship priorities and the research priorities.

Primary Question

How do you think rural physicians would like to be involved in rural research

Probes what are the barriers to rural physicians participating in research, what would encourage you to participate in research, is there anything we should be doing as a Faculty to support those physicians interested in doing research

Where does Quality Improvement in practice fit in with this, what would help support you in this area.

Primary Question
What do you think of the concept of an academic health science network and what do you think it could mean for rural physicians

Confidential



For Peer Review Only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Primary Question
Here is a diagram explaining the main themes in the Rural Recruitment and Retention policy of Northern Health what do you think about these.

Probes
Is anything missing
What works in your community.

Core themes of Northern Health Recruitment and Retention emerging policy