

Anticipated rural retention among internationally trained family physicians in Saskatchewan: an early practice-intentions comparison between those accessing Canadian practice through the SIPPA program versus a family medicine residency program

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Background

The influx of international medical graduates (IMGs) into Saskatchewan healthcare prompts an examination of their entry pathways and the factors influencing their rural retention, since rural communities have especially been affected by physician shortage. According to recent data from the Canadian Institute for Health Information, Saskatchewan has the highest proportion of internationally trained medical doctors practicing among Canadian provinces^{1,2,3}. However, it is among the provinces with one of the highest percentage of people without a regular family doctor⁴. Considering the large investments in training new physicians to join the Saskatchewan healthcare system, it is of interest to understand which entry pathway of the two current pathways provides the highest likelihood for rural retention, and to understand the demographic, training, organizational, and community features that facilitate improved retention. This study aims to compare the long-term rural practice intentions of IMGs entering through the Saskatchewan International Physician Practice Assessment (SIPPA) program versus family medicine residency programs.

The SIPPA program started in 2011 and has 3 intakes per year with a 6 to 12-week clinical field assessment, centralized assessment, and orientation. In 2023, there was government commitment to increase the number of SIPPA seats by 25%, to 45 seats annually. The program is a collaborative effort involving the University of Saskatchewan College of Medicine, the Saskatchewan Health Authority, Saskdocs, the College of Physicians and Surgeons of Saskatchewan, and the Ministry of Health.

The Department of Family Medicine residency training program through the University of Saskatchewan selects candidates through the Canadian Residency Matching Service. Family medicine residents train for a period of two years alongside fellow internationally trained and Canadian trained medical graduates.

Research Questions

Is there a difference in long-term rural practice intentions between internationally trained physicians who enter Canadian practice through SIPPA versus family medicine residency and what factors influence this?

In a 2017 study in Manitoba, program duration was significant in predicting retention. Whereby those who completed the three-month assessment program rather than the one-year training program were less likely to remain in Manitoba⁵. In keeping with this finding, for this study it was hypothesized that the residency training pathway, which is longer, may lead to more favourable practice intentions with respect to intention to stay in rural Saskatchewan.

Methodology

The study employed a quantitative approach. Recruitment was through email invitation sent out through the SIPPA program and University of Saskatchewan family medicine program coordinators in February 2024. All new and recently graduated SIPPA participants and current University of Saskatchewan family medicine IMG residents were eligible for inclusion. Already in practice IMG family physicians and IMGs who received their undergraduate medical education in the United States were excluded.

Data collection was through an online generated survey. There were 42 questions including demographic questions. Questions were informed by an extensive literature review and consultation process with research advisors at University of Saskatchewan and the SIPPA program. Utilizing a 5-point Likert scale, the research team evaluated aspects of practice intention, preferences, influences, and self-perceived readiness, among others. The University of Saskatchewan’s Research Ethics Board approved the project (Beh4595).

Results

Thirty-one respondents (SIPPA=9, DAFM=22) represented 29% and 32% of the respective groups. From the SIPPA group, there were 5 respondents who were just starting their field assessment, and 4 who had recently completed their field assessment. Of family medicine residents, 9 were first year family medicine residents in the second half of their first year, and 13 were second year family medicine residents nearing the end of their residency training.

For both the SIPPA and family medicine residents, the earlier training groups had higher rates of intention to stay (60% for SIPPA and 33.3% for first year family medicine residents) This number decreased to 25% for SIPPA graduates and 25% for second year family medicine residents (see **Table 1.**) Demographic information for the survey respondents is displayed in Table 2.

		SIPPA		Family Medicine Resident	
		Current/new participant (n=5)	Graduate (n=4)	First year (n=9)	Second year (n=12)
	Plan to stay	60.0	25.0	33.3	25.0
	Neutral/ plan to leave	40.0	75.0	66.7	75.0

		Program	
		SIPPA (n= 9)	DAFM (n=22)
Gender	Man	33.3	45.5
	Woman	66.7	54.5
Married/partnered	Yes	88.9	54.5
	No	11.1	45.5
Location of residence, prior year	Saskatchewan	22.2	9.1
	Another province	44.4	50.0
	Outside Canada	33.3	40.9
Community type growing up	Urban	44.4	68.2
	Semi-urban	22.2	13.6
	Rural	33.8	18.2
Identify as member of a racialized group	Yes	50.0	45.5
	No	50.0	54.5
Prior independent practice	5 years or more	88.9	0.0
	1 to 4 years	11.1	18.2
	No prior practice	0.0	81.8
Prior rural experience (practice/training)	Yes	88.9	18.2
	No	11.1	81.8
SIPPA = Saskatchewan Internation Physician Practice Assessment; DAFM = Department of Academic Family Medicine			

1. Practice experience in Saskatchewan for SIPPA compared to family medicine resident physician groups

SIPPA and residency training candidate responses to their training experiences are displayed in **Table 3**. Questions pertaining to community experience within the program were not asked of new/ just starting SIPPA participants due to lack of relevance. For these questions, there were only four respondents from the SIPPA recent graduate cohort.

Analysis revealed nuanced differences between SIPPA participants and family medicine residents regarding their inclination to stay in Saskatchewan beyond return of service obligation, and more generally to stay in a rural practice setting. Forty-four percent of SIPPA respondents expressed the likelihood of staying in Saskatchewan, compared to 28.6% of family medicine residents. However, only 22.2% of SIPPA respondents reported likelihood of staying in rural practice, compared to family medicine residents at 33.3%.

Spousal satisfaction— Partner satisfaction with life and work opportunities in Saskatchewan was slightly higher among family medicine residents (40%) compared to SIPPA participants (33.3%).

It was consistently reported to influence retention decisions, with 75% of SIPPA respondents considering it impactful, whereas this was 100% among family medicine residents.

Table 3. Participant perspectives on practice in Saskatchewan, n (%)			
		Program	
		SIPPA (n=9) *	DAFM (n=22)
Saskatchewan healthcare like medical training environment	Agree	25.0	47.6
	Neutral/disagree	75.0	52.4
Training/assessment community resembles ideal place to live	Agree	33.3	57.1
	Neutral/disagree	66.7	42.9
Remuneration adequate	Agree	28.6	38.1
	Neutral/disagree	71.4	61.9
Remuneration encourages staying	Agree	28.6	38.1
	Neutral/disagree	71.4	61.9
Increased remuneration would change a decision to leave	Agree	85.7	71.4
	Neutral/disagree	14.3	28.6
Mentorship impacts decision to stay	Agree	77.8	81.0
	Neutral/disagree	22.2	19.0
Partner satisfied with work/life opportunities	Agree	33.3	40.0
	Neutral/disagree	66.7	60.0
Partner satisfaction impacts decision to stay	Agree	75.0	100.0
	Neutral/disagree	25.0	0.0
Prepared for full-scope, rural, family medicine practice	Agree	100.0	47.6
	Neutral/disagree	0.0	52.4
Wish to keep obstetrical skills	Agree	55.6	38.1
	Neutral/disagree	44.0	61.9
Wish to keep emergency medicine skills	Agree	100.0	66.7
	Neutral/disagree	0.0	33.3
Would have been willing to sign a longer RoS agreement	Agree	22.2	4.8
	Neutral/disagree	77.8	95.2
Likely to stay in Saskatchewan	Agree	44.4	28.6
	Neutral/disagree	55.6	71.4
Likely to stay in rural practice	Agree	22.2	33.3
	Neutral/disagree	77.8	66.7
*SIPPA = Saskatchewan International Physician Practice Assessment; DAFM = Department of Academic Family Medicine; RoS = Return of Service			

Mentorship— Mentorship appeared as another pivotal factor for retention, with comparable importance perceived by both SIPPA (77.8%) and family medicine residents (81.0%) influencing their decision to stay. Only 33.3% of those planning to stay agreed that they had received adequate program mentorship to date, whereas 66.7% of respondents who reported they had adequate mentorship were also planning to leave.

Remuneration— 86% (SIPPA) and 71% (family medicine residents) indicated that higher remuneration could sway their decision to leave. Regarding training period remuneration, fewer SIPPA (28.6%) than family medicine residents (38.1%) deemed remuneration adequate, with the same proportions from each group reporting it as an encouragement to stay in Saskatchewan. However, a substantial majority in both groups (85.7% SIPPA, 71.4% family medicine residents) acknowledged that increased remuneration could sway their decision to remain.

Regarding skills and scope, SIPPA participants exhibited higher confidence in assuming a full family medicine scope of practice (100%) compared to family medicine residents (47.6%). Moreover, a larger proportion of SIPPA respondents expressed intent to maintain skills in obstetrics (55.6%) and emergency medicine (100%) compared to family medicine residents (38.1% and 66.7%, respectively).

Neither group displayed willingness to sign longer return of service agreements, with 77.8% of SIPPA and 95.2% of family medicine residents indicating their reluctance of longer return of service.

2. Trends among those reporting intention to stay after return of service obligation

Considering the overall surveyed population, data was sub-analyzed with stratification by likelihood of staying in Saskatchewan after the return of service period versus those unlikely, very unlikely, or neutral towards staying (collated together as more likely to leave), regardless of entry pathway. This analysis provided insight on shared characteristics among those inclined to stay.

Demographic patterns revealed notable gender and racial disparities. While 44% of women expressed intentions to stay post- return of service, only 16.7% of men shared similar sentiments. Forty-three percent of individuals identifying themselves as part of a racialized group expressed likelihood of staying, contrasting with 57.1% of racialized respondents who remained neutral or inclined to leave. Of those planning to leave, 75% reported experiencing or witnessing racism in the Saskatchewan healthcare system, which was similar to the 71.4% who reported this in the group planning to stay.

Prior clinical practice experience also played a role, with doctors practicing for over five years exhibiting the highest likelihood of staying (50%), compared to 20.0% and 29.4% among those practicing for less than five years or new to practice. Pre-residency location also correlated with intentions to stay, with 75% of prospective stayers having lived in Saskatchewan prior to their program, compared to 28.6% from other Canadian provinces and 25% from outside Canada.

Perceptions of organizational support revealed that among those planning to stay, varying levels of support was perceived from Saskatchewan Medical Association (SMA), Saskatchewan Health Authority (SHA), and Saskdocs, with 45.5%, 53.3%, and 50.0% feeling supported. SMA garnered

the lowest perceived support. Fourteen respondents felt supported by all organizations, while nine felt unsupported by all.

		Intend to remain in province*	
		Very likely/ likely (n=10)	Very unlikely/ unlikely/neutral (n=20)
Gender	Man	16.7	83.3
	Woman	44.4	55.6
Years of practice	None	29.4	70.6
	<5 years	20.0	80.0
	5 or more years	50.0	50.0
Location of residence in the year prior to starting SIPPA or residency	Saskatchewan	75.0	25.0
	Another province	28.6	71.4
	Outside Canada	25.0	75.0
Training/assessment community size	10000 to 50000	35.7	64.3
	2500 to 10000	14.3	85.7
	<2500	50.0	50.0
Training/assessment community similar to ideal	Agree	50.0	50.0
	Neutral/disagree	7.7	92.3
Felt supported by SHA	Agree	53.3	46.7
	Neutral/disagree	13.3	86.7
Felt supported by SaskDocs	Agree	50.0	50.0
	Neutral/disagree	0.0	100.0
Felt supported by SMA	Agree	45.0	55.0
	Neutral/disagree	10.0	90.0
Increased remuneration would motivate to stay	Agree	38.1	61.9
	Neutral/disagree	0.0	100.0
Mentorship would motivate to stay	Agree	41.7	58.3
	Neutral/disagree	0.0	100.0
Witnessed/ experienced racism in SK healthcare	Yes	71.4	75.0
	No	28.6	25.0
Self-identify as part of racialized group	Yes	42.9	57.1
	No	26.7	73.3
Partner satisfaction	Agree	33.3	66.7
	Neutral/ disagree	30.0	70.0
*One participant did not share their practice intention.			

Interestingly, when looking at those planning to stay, partner satisfaction correlations were less clear, as only 33.3% were planning to stay despite reported spousal satisfaction. Conversely, 66.7% intended to leave despite partner satisfaction.

Mentorship emerged as a complex indicator. While 41.7% motivated by mentorship planned to stay, 58.3% intended to leave. Conversely, 100% of those deeming mentorship insignificant or unrelated to retention planned to leave. Similarly, those discounting remuneration as a motivator all intended to leave. However, 61.9% motivated by increased remuneration planned to leave, while only 38.1% of those incentivized by it intended to stay.

Community size also seemed to influence retention. Respondents from the smallest communities (<2500) exhibited the highest intent to stay (50%), followed by the largest (10 000 to 50 000) at 35.7%. Conversely, only 14.3% of physicians who did SIPPA or residency in mid-sized communities intended to stay. Moreover, alignment between training community features and ideal living conditions correlated strongly with retention, as 50% of those in congruent settings planned to stay, compared to 92.3% in incongruent settings intending to leave.

Discussion

This descriptive study underscores the multifaceted nature of retention factors, encompassing individual or demographic factors, career scope, partner satisfaction, remuneration, and mentorship. Despite differences, both groups identified similar key retention influencers, highlighting the importance of addressing these factors to enhance physician retention efforts.

While SIPPA participants expressed higher confidence in their practice scope and skills maintenance, family medicine residents placed greater emphasis on partner satisfaction. Family medicine residents also displayed a marginally higher inclination towards staying in rural settings, while SIPPA physicians were more inclined to stay in Saskatchewan. It is presumed that lower rates of intention to stay but higher intentions to stay in rural practice indicates that family medicine residents who intend to stay rural may be planning to do so in another province. According to the 2023 University of Saskatchewan Postgraduate Medical Education report, family medicine residents had retention rates ranging from 66-75% in from 2016 through 2021⁶. The prospective retention rates through this practice intentions study suggests that retention for IMG family medicine residents may be less than the average for family medicine residents overall.

Certain factors such as age, racial identity, and gender are non-modifiable but worth noting. In keeping with findings from previous studies this study found that male physicians are more likely to move than non-male physicians^{7,8}. Although unclear whether practice intentions were affected, over 70% of respondents who disclosed a practice intention to leave Saskatchewan reported experiencing or witnessing racism during their training period. A recent 2023 study from Saskatchewan found IMG resident physicians experienced a higher prevalence of racial discrimination than North American Medical graduates⁹. Previous research findings indicate that IMGs and Canadian trained physician having similar rates of abusive encounters during residency¹⁰.

Among both entry pathways, spousal satisfaction with work and life opportunities in Saskatchewan is low. Previous studies have demonstrated spousal employment and mentorship to be more important than financial incentives^{11,12,13,14,15}. Our data aligns with these findings, however of those planning to stay, higher spousal satisfaction was not seen, despite being reported by both

groups as having a significant impact on the decision to stay. Based on this, one can contend that spousal satisfaction is more complicated in terms of retention prediction value than perceived previously.

Concerning remuneration, Saskatchewan family medicine residents have one of the higher rates of remuneration among residency salaries for Canadian provinces. It is possible that remuneration satisfaction may reflect relative dissatisfaction with Canadian living costs rather than inadequate pay in Saskatchewan. Of those who agreed that increased remuneration would motivate staying, many reported that they were planning to leave after the return of service. However, for those who were motivated by remuneration, only a minority were planning to stay. This may suggest that further investment in financial incentives offers an opportunity for greater retention.

It was found that SIPPA physicians on average were more confident to take on full scope of practice. This may be due to the greater previous number of years of practice compared to the family medicine residents (see Table 4). It is unclear whether other confounders exist in this regard.

The most consistent indicator by proportion of intention to stay by for those who disclosed that they planned to stay, was place of residence in the year prior to entering the respective entry pathway. This suggests there may be some retention benefit from a residence requirement prior to entering either of these programs. This may not be possible to implement, however.

A high proportion of those who identified their training community as having congruent features to their ideal place to live planned to stay, whereas not surprisingly, nearly all those who did not planned to leave. It would be interesting to determine what was missing that made a community less than ideal. Exploration of this may provide justification for the observed phenomenon for both the SIPPA and family medicine residents, whereby the later training groups (SIPPA graduate and second-year family medicine residents) had decreased rates of intention to stay versus the comparison groups from the earlier stages of training (see Table 1.)

The data was not adequately powered to perform inferential statistics. Given the small total number of respondents, it is possible that those who responded to the survey are not a representative sample of the practice intentions among all SIPPA and family medicine residents. This small sample size creates great limitations for the author's ability to discuss any trends meaningfully.

Conclusions

No convincing conclusions can be made about the hypothesis to suggest any differences between the practice intentions among SIPPA graduates versus internationally trained family medicine residency graduates in Saskatchewan due to limited overall participation and imbalanced participation between the two groups. However, the data collected identifies important themes.

Aspects important to both participant groups in the period prior to return of service include mentorship, spousal satisfaction, and financial incentives. At this point it is unclear how these same factors would influence practice intentions in the post-return of service setting. Unfortunately, neither pathway has remarkably high Saskatchewan-practice intention rates, and retention attitudes appear to deteriorate from earlier to later stages of training. Strategies to improve retention of internationally trained physicians in rural Saskatchewan must continue to be explored.

Recommendations

Future studies to evaluate the differences, if any, between SIPPA and family medicine residency trained physicians will ideally be able to look at practicing physicians who are beyond their return of service period for each of the two practice entry pathways. It would also be valuable to further evaluate whether the trend for decreasing intention to stay in the earlier versus later stages of SIPPA and family medicine residency is reproducible in other cohorts.

In view of the low survey uptake, it may be more beneficial to obtain this information through alternative methodologies for data collection.

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Certificate of Approval

Application ID: 4595

Principal Investigator: Mahmood Beheshti

Department: Department of Academic Family
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Funder(s):

Sponsor: Department of Academic Family Medicine

Title: Anticipated rural retention among internationally trained family physicians in
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Approval Of: Beh Application

Consent Form

Invitation Email

Survey

Acknowledgment Of: Letter of Support - SIPPA

TCPS2 CORE Certificate -Natasha Premji

Cara Fallis

Review Type: Delegated Review

CERTIFICATION

The University of Saskatchewan Behavioural Research Ethics Board (Beh-REB) is constituted and operates in accordance with the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans TCPS 2 (2022). The University of Saskatchewan Beh-REB has reviewed the above-named project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this project, and for ensuring that the authorized project is carried out according to the conditions outlined in the current approved protocol. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

ONGOING REVIEW REQUIREMENTS

Any significant changes to your proposed method, or your consent and recruitment procedures must be reported to the Chair through submission of an amendment for Beh-REB consideration in advance of implementation.

To remain in compliance, a status report (renewal of closure form) must be submitted to the Beh-REB Chair for consideration within one month prior to the current expiry date each year the project remains open, and upon project completion. Please refer to the Research Ethics Office website for further instructions and current forms.

*Digitally Approved by Pammla Petrucka
Chair, Behavioural Research Ethics Board
University of Saskatchewan*