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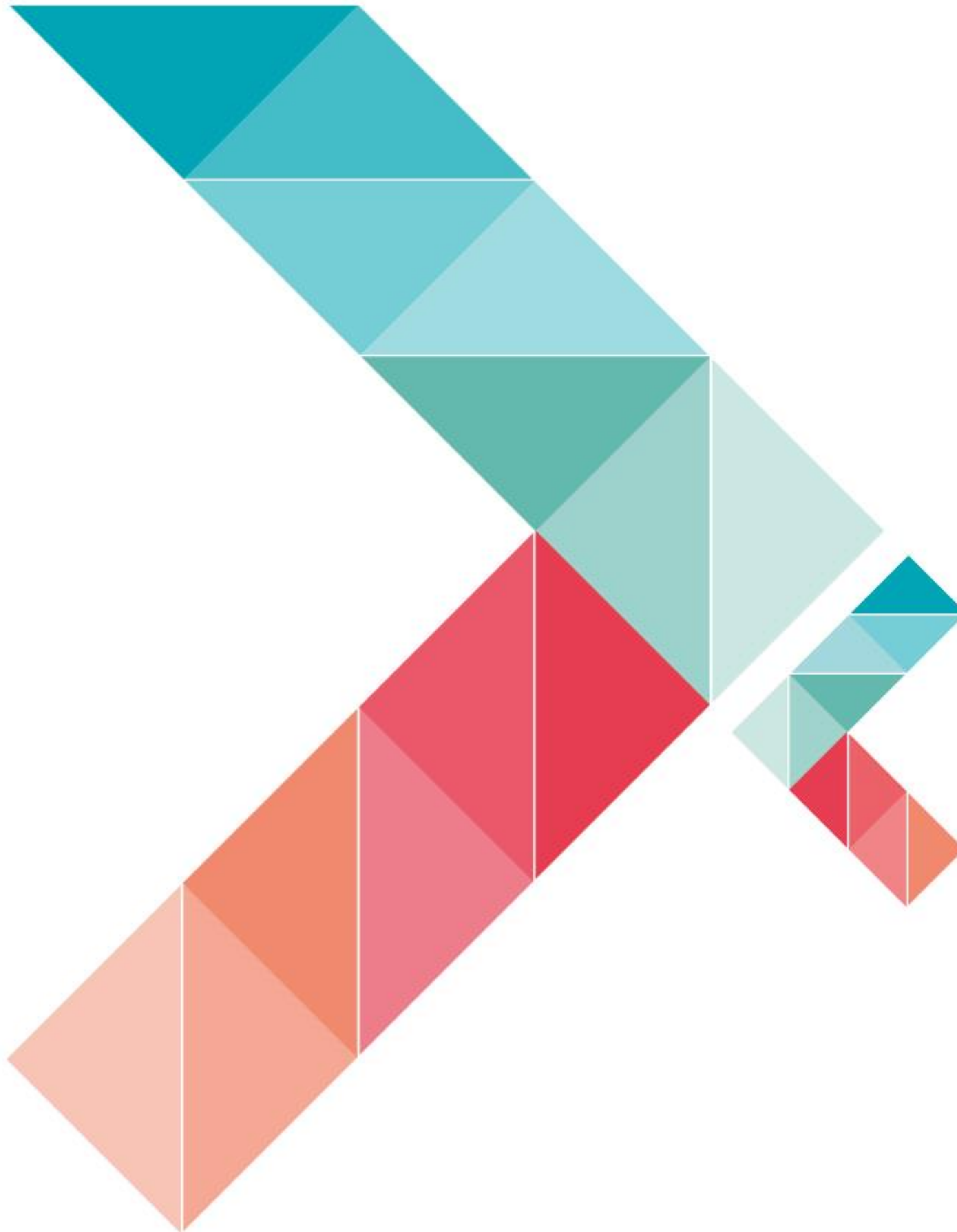

Evaluation of the Canada Student Loan Forgiveness for Family Doctors and Nurses Benefit

Canada Student Financial Assistance Program

Final report

October 19, 2023

Evaluation of The Canada Student Loan Forgiveness for Family Doctors and Nurses Benefit

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Accronyms and Abbreviations

List of Acronyms and Abbreviations	
CA	Census agglomeration
CMA	Census metropolitan area
CSD	Census subdivision
CSFA	Canada Student Financial Assistance program
ESDC	Employment and Social Development Canada
FPTCHW	Federal/Provincial/Territorial Committee on Health Workforce
NAGSFA	National Advisory Group on Student Financial Assistance
RAP	Repayment Assistance Plan

List of Key Terms and Expressions	
Designated communities	Under-served, rural or remote communities in Canada that are designated by the Program as meeting the eligibility requirements for doctors and nurses to receive the benefit
Communities	Canadian census subdivisions, defined by Statistics Canada as an area that is a municipality or an area that is deemed to be equivalent to a municipality for statistical reporting purposes
Beneficiaries	Doctors and nurses who received the loan forgiveness benefit
Non-Beneficiaries	The non-beneficiaries consisted of two groups: 1. All the Doctors and nurses with Canada student loan of any amount in good standing at the inception of the benefit. 2. Doctors and nurses currently in training (students) across medical and nursing schools in Canada.
Doctors	Family physicians and family medicine residents
Nurses	Registered nurses, registered psychiatric nurses and nurse practitioners
Key stakeholder groups	Managers of healthcare services in provinces and territories, healthcare institutions, medical student groups.
Applicants	Everyone who applied for the benefit, regardless of the results. All beneficiaries are applicants but not all applicants are beneficiaries.
The benefit	The Canada Student Loan Forgiveness for Family Doctors and Nurses Benefit is an initiative that falls under the Canada Student Financial Assistance program. Both terms will be used throughout the report for the same meaning.

Introduction

Canada Student Loan Forgiveness for Family Doctors and Nurses Benefit is a Government of Canada initiative instituted in fiscal year 2012 to 2013 in accordance with Budget 2011 announcement. The initiative falls under the Canada Student Financial Assistance (CSFA) Program which provides partial student loan forgiveness to eligible healthcare professionals, including family doctors, nurses and nurse practitioners, who practised in an under-served rural or remote community.

This is the first summative evaluation of the benefit's relevance and effectiveness since inception. It is based on four lines of evidence and covers the period spanning from fiscal years 2013 to 2014 and 2021 to 2022. The evaluation aims to determine the extent to which the benefit has achieved its objectives. To do so, three evaluation questions were developed to guide inquiry into the benefit. The full list of evaluation questions can be found in Appendix B.

Summary of Findings (with Recommendations)

Key Findings

There are eleven (11) main findings from the evaluation:

1. Intended beneficiaries learn about the benefit from different sources, with word-of-mouth being the most common source of information.
2. A low proportion of intended beneficiaries (non-beneficiaries) are aware of the details of the benefit. Additionally, there is varied awareness of the benefit among different professional and student sub-groups.
3. Beneficiaries found the application process and requirements to be straightforward, manageable, and attainable. Among the small number of rejections most were commonly due to application errors (35%) and resulting processing delays.
4. A large majority of key stakeholders in the Provinces and Territories have at least some awareness of the benefit. However, inadequate communication about the benefit was identified as a barrier to awareness.
5. The number of doctors and nurses receiving loan forgiveness increased between 2013 and 2021, particularly over the early years of the benefit.
6. Non-beneficiaries and other stakeholders report that the amount of the benefit may not be sufficient on its own to incentivise doctors and nurses to relocate to designated communities.
7. Factors other than the benefit, such as debt levels, cost of living, or personal motivations, contribute to influencing the decision to work in designated communities.
8. Since benefit inception, beneficiaries provided services to an increasing number of communities (611 in 2019) across the country.
9. The majority (69%) of the beneficiaries surveyed continued to work in the designated communities after they were no longer eligible for loan forgiveness.
10. Several factors, such as loan amounts, family status, distance from central metropolitan area, and province of work, contribute to how long doctors and nurses claim the benefit.
11. Key informants, including those from provinces and territories, were unable to comment on the contribution of the benefit to the expansion of primary healthcare services. However, a majority of professionals and students held the perception that it will.

Recommendations

Based on these findings, the evaluation provides the following two recommendations to the program:

1. The program should explore outreach opportunities to increase awareness of the benefit among key stakeholders, especially among intended beneficiaries.
2. The program should explore the development of tools to help consistently measure and monitor the program's benefit.

Management Response and Action Plan

Executive Summary

CSL forgiveness for doctors and nurses is a federal benefit administered by the Canada Student Financial Assistance (CSFA) Program in the Learning Branch of Employment and Social Development Canada (ESDC). As a program component, this benefit forgives a portion of federal loans for family doctors and residents, nurse practitioners, and nurses that practice in under-served rural and remote communities. Its objective is to attract and retain health providers in rural and remote communities by offering financial incentives.

Overall Management Response

This management response addresses the evaluation recommendations, provides information about recent actions undertaken by the Learning Branch and outlines plans for improvements based on the evaluation findings and recommendations.

Some key findings from the evaluation of the CSL forgiveness benefit emphasize the importance of increasing the level of awareness among intended beneficiaries and that the benefit on its own may not be sufficient to incentivise doctors and nurses to relocate to designated communities.

While the evaluation reports that the CSL forgiveness benefit does reach rural communities in Provinces and Territories and is achieving its intended results, two areas have been identified where improvement may be possible to enhance awareness and continued monitoring and assessment of this benefit.

Recommendation 1: The program should explore outreach opportunities to increase awareness of the benefit among key stakeholders, especially among intended beneficiaries.

Management Response

The Learning Branch generally agrees with this recommendation and will explore opportunities to integrate CSFA Program information about the CSL forgiveness benefit into broader awareness activities of the Branch to ensure increased awareness of this benefit among key stakeholders. The Learning Branch actively consults stakeholders and Provinces and Territories on CSL forgiveness for doctors and nurses, through communications, engagement, and information sharing activities on an ongoing basis. The Department's Public Affairs and Stakeholder Relations Branch (PASRB) will continue to support and complement outreach activities to increase public awareness of the program and its benefit.

The Program has leveraged the expertise of other government departments such as Health Canada (HC) in the context of policy development to ensure federal initiatives are aligned. The Program could also explore opportunities to continue leveraging HC's provincial/territorial health authorities stakeholder networks on strategies to expand awareness of the benefit.

Required Fields			Optional Fields	
Management Action Plan [List actions that will be undertaken to respond to the recommendation. Please identify who will implement the action and the expected completion date.]		Estimated completion date	Status [In progress, Yet to commence, or complete]	Accountable lead(s)
1.1	Explore ways to increase awareness of the CSL forgiveness benefit for doctors and nurses through work with the Public Affairs and Stakeholder Relations Branch to develop and implement a plan to raise awareness and outreach of all Learning Branch programs among potential beneficiaries.	Winter 2025	In progress	Director General, CSFA Program, Learning Branch
1.2	Engage with federal partners (e.g.: Health Canada), and provincial and territorial partners to expand awareness of the benefit and its enhancements among health care providers in rural and remote communities.	Winter 2026	In progress	Director General, CSFA Program, Learning Branch

Management Response and Action Plan

Recommendation 2: The program should explore the development of tools to help consistently measure and monitor the program's benefit.

Management Response

The Learning Branch agrees with this recommendation and will explore ways to measure and monitor the Program's benefit.

The current evaluation recognizes that the CSL forgiveness benefit for doctors and nurses is one of the many intergovernmental initiatives that seeks to improve health care access in rural and remote areas. Therefore, measuring impacts and changes to health care access because of this benefit alone is challenging.

The Learning Branch recognizes the importance of data collection to more effectively track, measure and monitor the benefit. As such, there is an opportunity to explore the feasibility of conducting a survey of CSL forgiveness beneficiaries in order collect the necessary data to consistently measure and monitor the program's benefit.

In addition, the feasibility of tracking additional variables could also be explored with provincial and territorial partners. The CSFA Program currently monitors the benefit through a number of internal key performance indicators. These indicators provide valuable information on the benefit, such as the benefit's uptake, usage length, and the amount of loans forgiven. The collection of additional disaggregated variables, such as more detailed program of study information, would allow the program to better measure the performance of the benefit.

Required Fields			Optional Fields	
Management Action Plan [List actions that will be undertaken to respond to the recommendation. Please identify who will implement the action and the expected completion date.]		**Estimated completion date**	**Status** [In progress, Yet to commence, or complete]	**Accountable lead(s)**
2.1	Explore the feasibility of conducting an annual survey of CSL forgiveness beneficiaries for the purpose of measuring and monitoring the effectiveness of the benefit.	Winter 2025	Yet to commence	Director General, CSFA Program, Learning Branch
2.2	Explore with provincial and territorial partners the feasibility of tracking additional variables, such as specific program of study variables, to better disaggregate intended beneficiaries.	Winter 2026	Yet to commence	Director General, CSFA Program, Learning Branch

Background

Canada Student Loan Forgiveness for Family Doctors and Nurses Benefit is a component of the Canada Student Financial Assistance Program developed by the Government of Canada initiative instituted in 2012-2013 in accordance with Budget 2011[1] announcement. The benefit provides partial[2] student loan[3] forgiveness to eligible healthcare professionals, including family doctors, nurses and nurse practitioners, who practised in an under-served rural or remote community.

The benefit's specific objectives are to:

- create financial incentive for family physicians, nurses and nurse practitioners to relocate or return to a rural or remote community and practice;
- further strengthen health care in Canada's under-served rural and remote communities;
- combat the shortage of health professionals in these communities; and
- complement initiatives already underway in the P/T to expand the provision of primary health services to Canadians in these communities.

Eligibility

Community Eligibility[4]

- Under-served, rural or remote communities in Canada defined as Communities located outside of Census Metropolitan Areas (CMAs), Census Agglomerations (CAs) with an urban core population of 50,000 or more, and provincial capitals. Including communities that provide healthcare services to First Nations and Inuit populations.

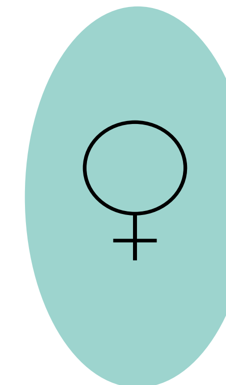
Healthcare professionals' Eligibility

- Be a family doctor, nurse or nurse practitioner;
- Be employed in designated under-served rural or remote communities on or after July 2011;
- Be employed for 12 consecutive months[5];
- Provide in-person services for a minimum of 400 hours; and
- Have a Canada Student Loan that is in good standing[6].

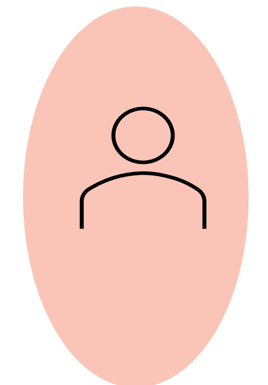
Profile of beneficiaries

From 2012 to 2020, 15,390 unique beneficiaries applied for the benefit (2,785 doctors and 12,605 nurses).

About 90% of the 2,785 doctors were family medicine residents, and 10% were family doctors.



Women more frequently applied for the benefit, with 56% of doctors and 88% of nurses identifying as female.



A large majority of applicants were under the age of 35 (91% of doctors and 81% of nurses).

Source: Canada Student Financial Assistance program data

[1] The next phase of Canada's Economic Action Plan: A low-tax plan for jobs and growth. Tabled in the House of Commons by the honourable James m. Flaherty, p.c., m.p. Minister of finance. June 6, 2011. https://www.budget.gc.ca/2011/plan/Budget2011-eng.pdf Budget appropriation of $9 million for Forgiving loans for new doctors and nurses in under-served rural and remote areas.
[2] The maximum loan forgiveness annual amount is $4000 up to a maximum of $20,000 over five years for nurses and $8000 up to a maximum of $40,000 over five years for doctors. For many applicants this benefit could provide full Canada Student Loan forgiveness in cases where the borrower has less debt than the benefit maximum.
[3] The loan forgiveness applies only to the federal portion of a student's loan.
[4] Eligibility criteria for communities were determined based on Statistics Canada's 2011 official classification for geographic areas in consultation with key stakeholders.
[5] Residents and those on parental/bereavement/etc. leave are exempt from needing to be employed for 12 consecutive months.
[6] Borrowers who are not in arrears or default or who do not have any restrictions from receiving Canada Student Financial Assistance program supports. Borrowers on the Repayment Assistance Plan and those in bankruptcy who have kept their payments up to date are also considered in good standing for this benefit.

Background

Benefits Amount

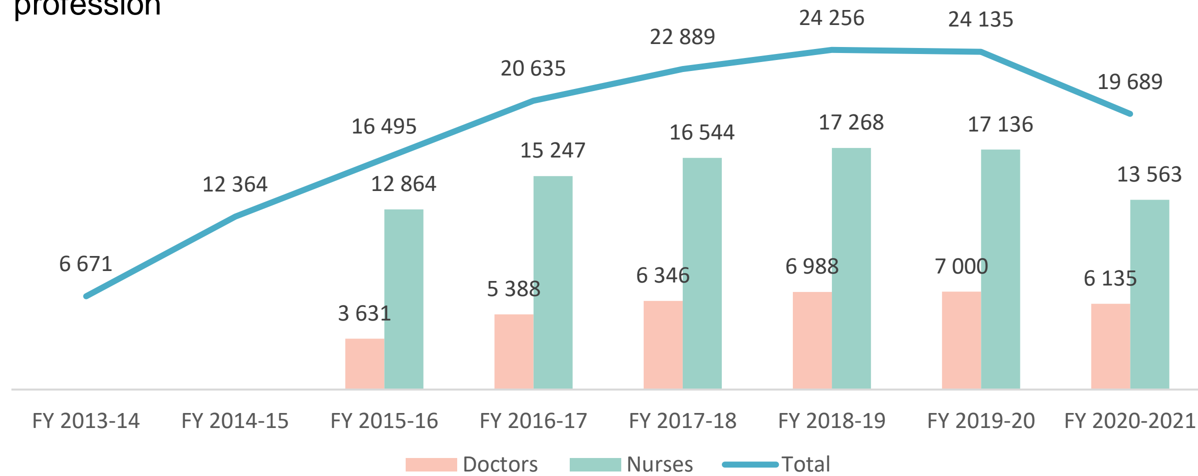
To incentivise healthcare professionals to relocate to and practice in designated communities, the benefit provides family doctors with student loan forgiveness of up to $8,000 per year to a maximum of $40,000 over five years. It also provides nurses and nurse practitioners with student loan forgiveness of up to $4,000 per year to a maximum of $20,000 over five years.

From 2013 to 2021, the benefit forgave over $140 million in Canada Student Loan debt.

Due to benefit design, the total amount forgiven in any given year is dependent on the number of eligible applications received.

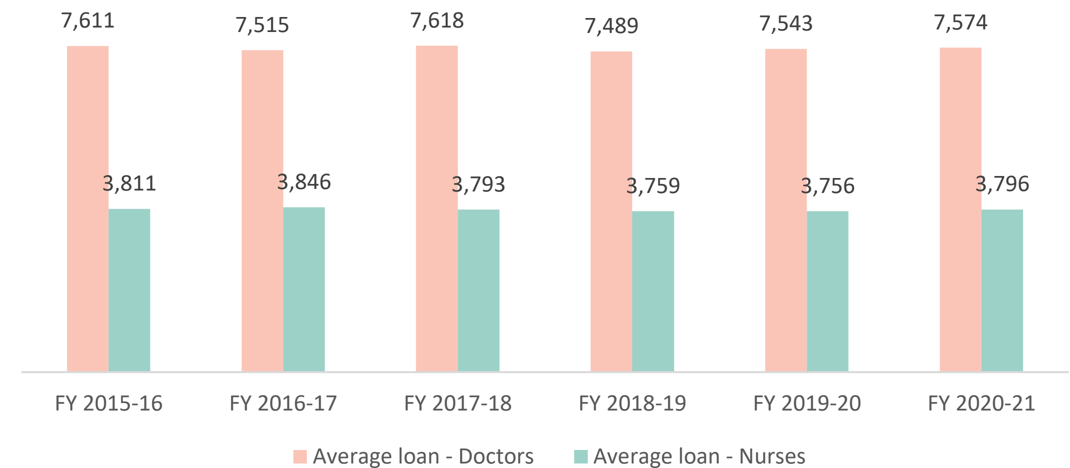
Since the inception of the Canada Student Loan forgiveness for family doctors and nurses (up to March 31, 2022), there have been 17,921 beneficiaries and $172.2 million in loan amount forgiven.
In 2021-22, $25 million of loans were forgiven for almost 5,400 recipients through the Canada Student Loan forgiveness benefit for family doctors and nurses. In the same fiscal year, there were $ 12.4 billion loans in repayment. The expenditures for CSL forgiveness for doctors and nurses represent 0.2% of the total loan portfolio within the CSFA Program.

Figure 1. Loan amount forgiven since inception of the benefit (in thousands of dollars) by profession

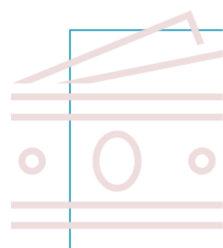


Note: The amount distribution between doctors and nurses for fiscal years 2013-2014 is not available.
Source: Student Financial Statistics https://www.canada.ca/en/employment-social-development/programs/canada-student-loans-grants/reports/student-financial-assistance-statistics-2019-2020.html and https://www.canada.ca/en/employment-social-development/programs/canada-student-loans-grants/reports/student-financial-assistance-statistics-2020-2021.htm

Figure 2. Average loan forgiveness amount (in thousands of dollars) by profession



Source: Student Financial Statistics https://www.canada.ca/en/employment-social-development/programs/canada-student-loans-grants/reports/student-financial-assistance-statistics-2019-2020.html and https://www.canada.ca/en/employment-social-development/programs/canada-student-loans-grants/reports/student-financial-assistance-statistics-2020-2021.htm



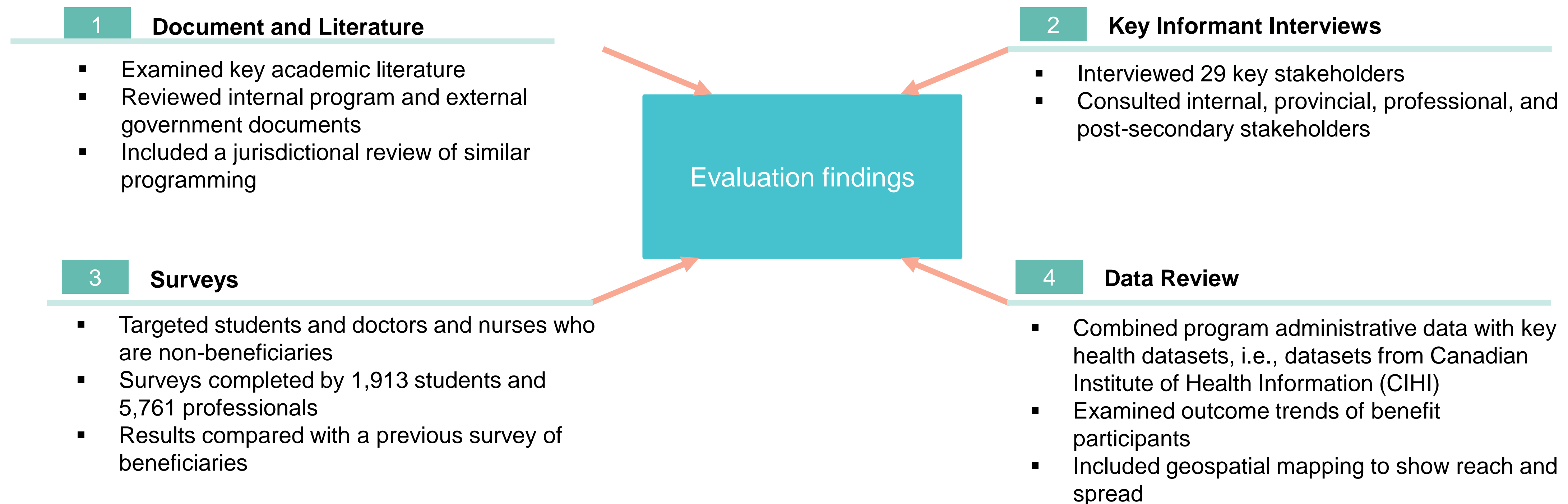
Most of the debt forgiveness granted has been directed towards nurses and nurse practitioners, even though their profession qualifies for a lower maximum amount of debt forgiveness compared to doctors. This is likely because the healthcare system employs a significantly larger number of nurses than doctors. For instance, in 2021, the count of physicians supplying healthcare services was 93,998, compared to 459,005 regulated nurses (CIHI). Due to this higher representation, more nurses have the potential to relocate and thereby become eligible to receive the benefit of debt forgiveness.

Approach

This summative evaluation uses a mixed-method approach with four key lines of evidence to evaluate the extent to which the benefit is achieving its objectives. Evidence from the lines of evidence were triangulated to identify key evaluation findings. Three questions were developed to guide the evaluation. They can be found in Annex B.

The evaluation covers the period from fiscal year 2013 to 2014 until fiscal year 2021 to 2022.

Figure 3. Collected evidence was triangulated to arrive at evaluation findings



Limitations

In some cases, the most recent datasets were unavailable as COVID-19 caused delayed data collection at CIHI, restricting the timeframe of the outcome analysis.

DNLF participants are not identified as part of the Canada Student Financial Assistance data shared with Statistics Canada. In addition, ESDC does not have the ability to integrate Canada Student Financial Assistance data with other administrative data sources. This limited the type of quantitative analysis that could be conducted to inform relocation decisions of doctors and nurses.

Unavailability of results metrics for the benefit introduced challenges to the assessment of the extent to which the benefit is achieving its goals.

There are several overlapping factors that affect the expansion of primary health care to underserved communities. Therefore, it was difficult to find direct evidence in support of the third evaluation question. The evaluation instead relied primarily on indirect evidence to discern potential benefit impact.

While Quebec, the Northwest Territories and Nunavut have their own student financial assistance program, the evaluation did not always consider the potential impacts of provincial differences on benefit outputs and outcomes.

Key findings: Evaluation question 1

1 Intended beneficiaries learn about the benefit from different sources, with word-of-mouth being the most common source of information.

The benefit's ultimate outcome is to expand primary care services in under-served rural and remote communities. According to the benefit's logic model, doctors and nurses must be aware of the benefit in order to be incentivized to relocate to designated communities.

Consultations and communication with key stakeholder groups [7] occurred as part of the regulatory development process in the fall of 2011[8].

Additional engagement with these stakeholder groups, as well as with the National Advisory Group on Student Financial Assistance (NAGSFA) occurred in Fall 2011 prior to the 30-day public comment period for the proposed regulations published in the Canada Gazette, Part I and the publication of amended regulations in the Canada Gazette, Part II.

Since these early engagement activities, there has been limited activity on the part of ESDC to create awareness of the benefit among intended beneficiaries or other key stakeholders. Program representatives indicated that awareness creation and stakeholder engagement have not historically been a focus of program activity but noted that stakeholder consultations are currently taking place at the time of writing the report in response to the Budget 2022 benefit enhancement announcement.

Level of participation in the consultation and engagement activities

While the early consultation and engagement activities likely contributed to creating awareness of the benefit among key stakeholder groups, more than a decade has elapsed since they occurred. Therefore, while a few (n=4) provincial/territorial key informants reported that their jurisdiction had been involved in stakeholder consultations during the design phase of the benefit, most (n=14) were unsure if their jurisdiction had been involved. All key informants representing student financial aid administrators and professional associations (n=7) were unaware of these initial consultations.

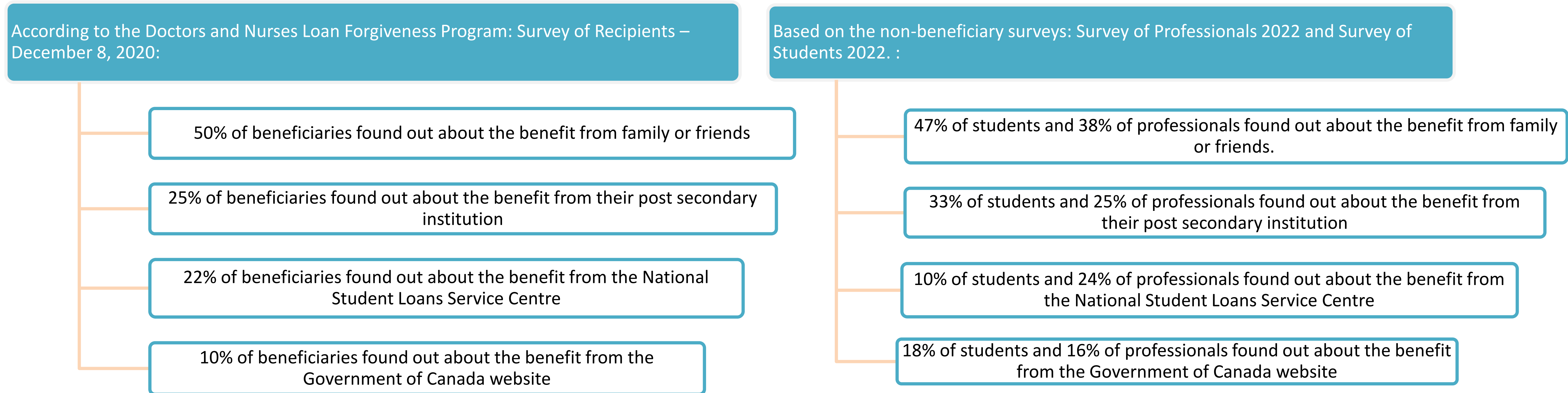
Only a few (n=3) provincial/territorial key informants out of 18 interviewed reported being involved.

[7] Key stakeholder groups: Managers of healthcare services in provinces and territories, healthcare institutions, medical student groups.
[8] Significant pre-budget and post-budget stakeholders consultation on the benefit enhancement were completed through 2022 and 2023.

Key findings: Evaluation question 1

1 Intended beneficiaries learn about the benefit from different sources, with word-of-mouth being the most common source of information. (continued)

Among intended beneficiaries (actual beneficiaries and non-beneficiaries), word-of-mouth (family and friends) is **the most common source** of information about the benefit followed by post-secondary institutions, the national student loans service centre, and the Government of Canada website respectively.



Results from both surveys of professionals (beneficiaries and non-beneficiaries) indicate that more doctors than nurses refer to their post-secondary institutions to learn about the benefit, while more nurses than doctors find out about the benefits from the National Student Loans Service Centre and from the Government of Canada website.

Considering a related provincial program can help identifying approaches for improving benefit communication which may also be applicable to the federal context. A survey conducted in 2017 with 131 recipients of the Saskatchewan Student Loan Forgiveness for Nurses and Nurse Practitioners indicates that most of the recipients learned about that program through the provincial government website (50%), followed by employers or co-workers (31%) and educational institutions or instructors (27%).

Respondent suggestions to improve program awareness and communications include:

- Government and institutions could provide more information, on both provincial and federal programs, and communicate via email and social media to students during their last program year and upon completion of their program.
- Health regions could provide information on jobs and recruitment packages, including loan forgiveness options.
- More information could be made available at institution and employment orientation programs.

KEY FINDINGS: EVALUATION QUESTION 1

2 A low proportion of intended beneficiaries (non-beneficiaries) are aware of the details of the benefit. Additionally, there is varied awareness of the benefit among different professional and student sub-groups.

Awareness of the benefit among non-beneficiaries

Among intended beneficiaries (non-beneficiaries [9]), 64% of professionals and 50% of students have at least some awareness of the benefit.

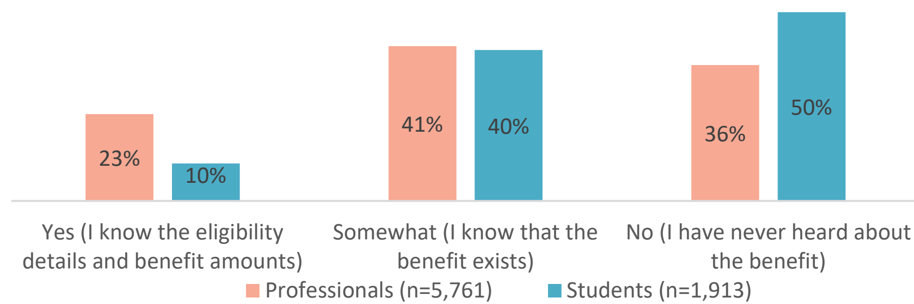


Figure 4. Awareness of the benefit among non-beneficiaries
Sources: Survey of Professionals 2022; Survey of Students 2022.

Among professionals, 41% know that the benefit exists, while 23% know the eligibility details and benefit amounts.

Among students, a similar proportion (40%) know the benefit exists, but fewer (10%) are familiar with the eligibility details and benefit amounts.

Over one-third (36%) of professionals and half (50%) of students have never heard about the benefit.

Awareness of the benefit: comparison among non-beneficiary groups

Among professionals, doctors are more aware of the eligibility details and benefit amounts than nurses (34% of doctors; 21% of nurses).

Among students, medical students are slightly more aware than nursing students about the eligibility details and benefit amounts (13% of medical students; 10% of nursing students).

Over one-half (55%) of nursing students and over one-third (36%) of nurses have never heard about the benefit.

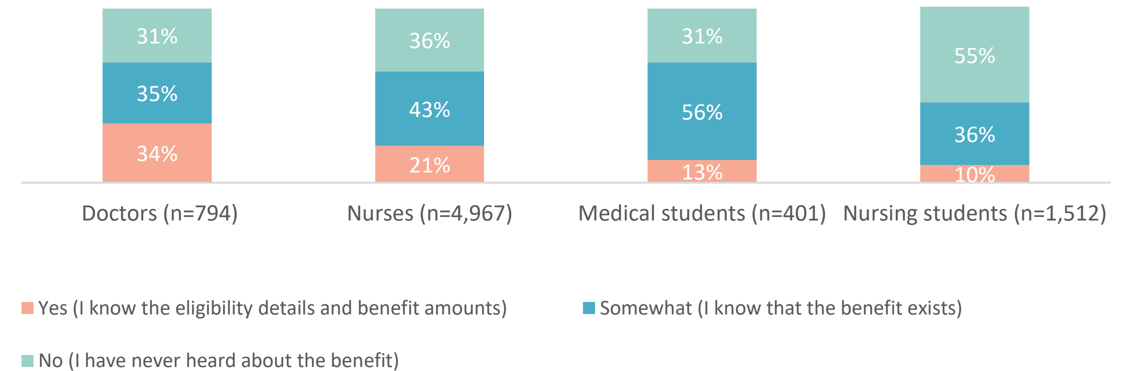


Figure 5. Comparison of awareness of the benefit among non-beneficiary groups
Sources: Survey of Professionals 2022; Survey of Students 2022.

The non-beneficiary surveys showed that among both professionals and students, awareness of the benefit varies by region and area.

Among both professionals and students, respondents who had ever lived in an area they would consider an under-served rural or remote community in Canada are more aware of the eligibility details and benefit amounts, compared to those who had lived in such a community outside of Canada and those who had never lived in such a community.

Among students, a larger share of respondents in British Columbia and Alberta are aware of the existence of the benefit and know the eligibility details and benefit amounts, compared to respondents from other regions.

Among professionals, respondents from the Atlantic region, British Columbia, Northern Canada, Alberta, and Saskatchewan are more aware of the eligibility details and benefit amounts compared to those from Ontario, Manitoba and Quebec. Awareness is lowest in Manitoba and Quebec, where over half of respondents in each jurisdiction have never heard about the benefit.

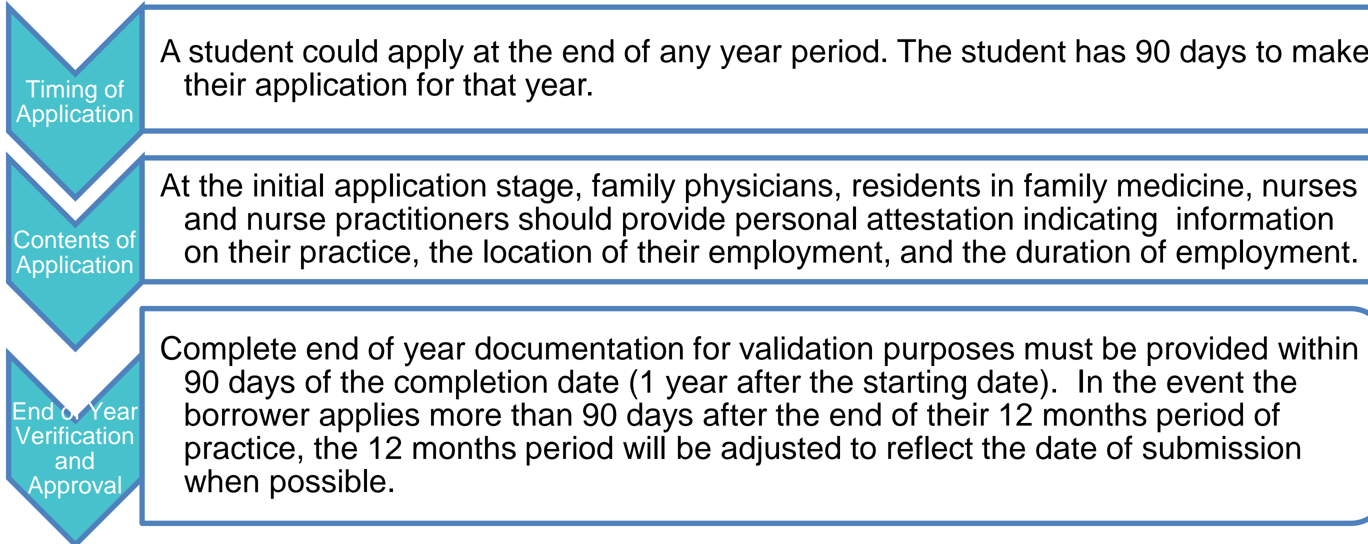
[9] Non-beneficiaries were chosen through saturation sampling. over 110,000 email survey invitations were sent to individuals categorized in the CSFA program as studying or having studied in the 'medicine' or 'health science' fields. In total, 1,913 student and 5,761 professional surveys were completed.

Key findings: Evaluation question 1

3

Beneficiaries found the application process and requirements to be straightforward, manageable, and attainable. Among the small number of rejections most were commonly due to application errors (35%) and resulting processing delays.

The application Process



Non-beneficiaries' experiences

The 2022 survey of professionals who are not beneficiaries offers further insight into the application process from the user's perspective. Only a few (17%) respondents reported that they currently work in a community they believe to be an under-served rural or remote community. Of these:

- Most (81%) did not apply for the benefit.
- Almost half (45%) of respondents who did apply did not know if their application was granted or not

Of the small number of respondents who applied for the benefit but were rejected, the most common reasons given were:

- errors in the application, such as missing, inaccurate, incomplete, or misplaced information (especially dates and signatures) (24%);
- not practicing in a designated community (16%); and
- lengthy processing times stemming from errors on the application, ultimately resulting in applications falling outside the timeframe for eligibility (11%).

Additionally, 18% of these respondents did not know why their application was rejected.

How the application process was perceived by beneficiaries (2020 survey)

The process of applying for the benefit is perceived by beneficiaries to be straightforward and manageable

- Almost all (90%) agreed that being employed for a full year in the under-served community was achievable.
- About three quarters (75%) reported that the application process is easy.
- Almost all survey respondents (94%) said it was easy to meet the requirement of having their Canada Student Loan in good standing.

The current application process is generally seen as straightforward and manageable with 'easy to meet' eligibility requirements. There were some application errors which led to benefit rejections and nearly half of applicants were unaware of their application status. It may therefore be **worth revisiting the application process** and **enhancing communication with applicants** to ensure the user experience is as streamlined as possible.

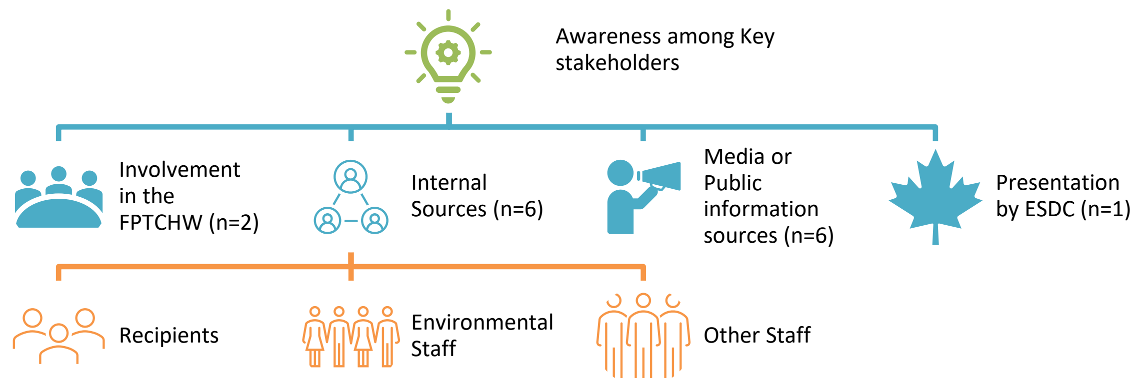
Key findings: Evaluation question 1

4 **A large majority of key stakeholders in the Provinces and Territories have at least some awareness of the benefit. However, inadequate communication about the benefit was identified as a barrier to awareness.**

Awareness of the benefit among key stakeholders

A large majority (n=21) of the stakeholders in the provinces and territories were familiar with the benefit and learned about it through various channels.

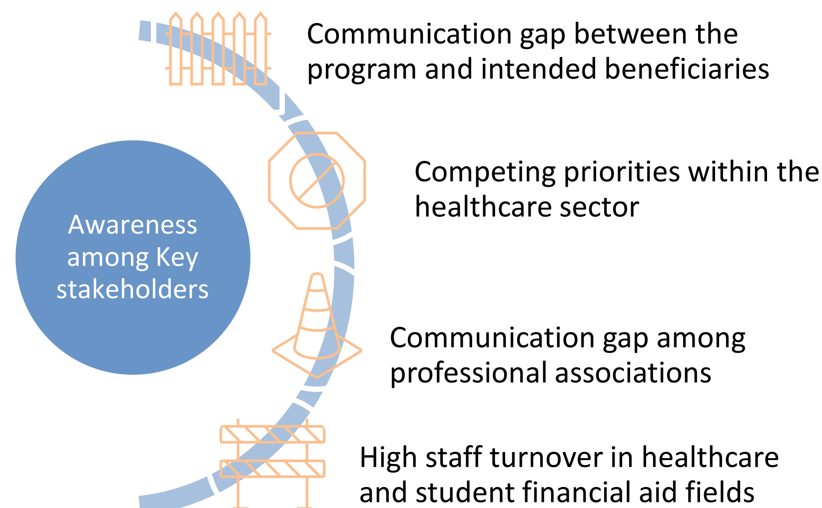
Figure 6. Channels where the provincial and territorial stakeholders hear about the benefit



Barriers to awareness of the benefit

The majority of these key informants perceive that the primary barrier to awareness of the benefit is information not being communicated to, or reaching, relevant stakeholders.

Figure 7. Barriers to awareness



- As already noted, the Program representatives indicated that creating awareness was not built into the benefit activity plans.
- The benefit has relied on word of mouth for the dissemination of information by key stakeholders in the provinces and territories including the financial advisors at the schools of medicine and nursing.
- There was a low response rate among student financial aid advisors. Feedback received suggests that it may be due to a lack of familiarity with the benefit, suggesting this group of key stakeholders may be less aware than others.

Strategies to improve awareness of the benefit

- This finding is consistent with those from a survey of recipients of a similar program to the federal benefit, Saskatchewan's Student Loan Forgiveness for Nurses and Nurse Practitioners. The need to increase awareness of both the provincial and federal programs was identified and the following strategies were suggested by recipients;
  - Social media posts from provincial and federal governments promoting the loan forgiveness benefit
  - Direct emails from the provincial and federal governments to students in their last year promoting the loan forgiveness program
  - Promotion of the benefit in job and recruitment packages, and employment orientations
  - Ambassador/mentorship programs to help recruit and retain nurses.
- Key informants in this evaluation made similar suggestions. Additionally, they proposed:
  - Delivering in-person presentations to students and faculty members (n=1)
  - Distributing information about the benefit in electronic and hard copy to stakeholder groups, including universities, recruiting groups, rural and remote health authorities, and doctor and nurse professional associations (n=14)
  - Posting information about the benefit on social media and related Federal government departments’ websites (n=3)
  - Creating promotional videos highlighting first-person accounts of the benefit and positive experiences practicing in rural and remote communities (n=1)

Key findings: Evaluation question 2

5 **The number of doctors and nurses receiving loan forgiveness increased between 2013 and 2021, particularly over the early years of the benefit.**

Given that there are no official benefit indicators, the evaluation considered how the number of beneficiaries has increased since inception to investigate how the benefit may be incentivising health professionals to work in designated communities.

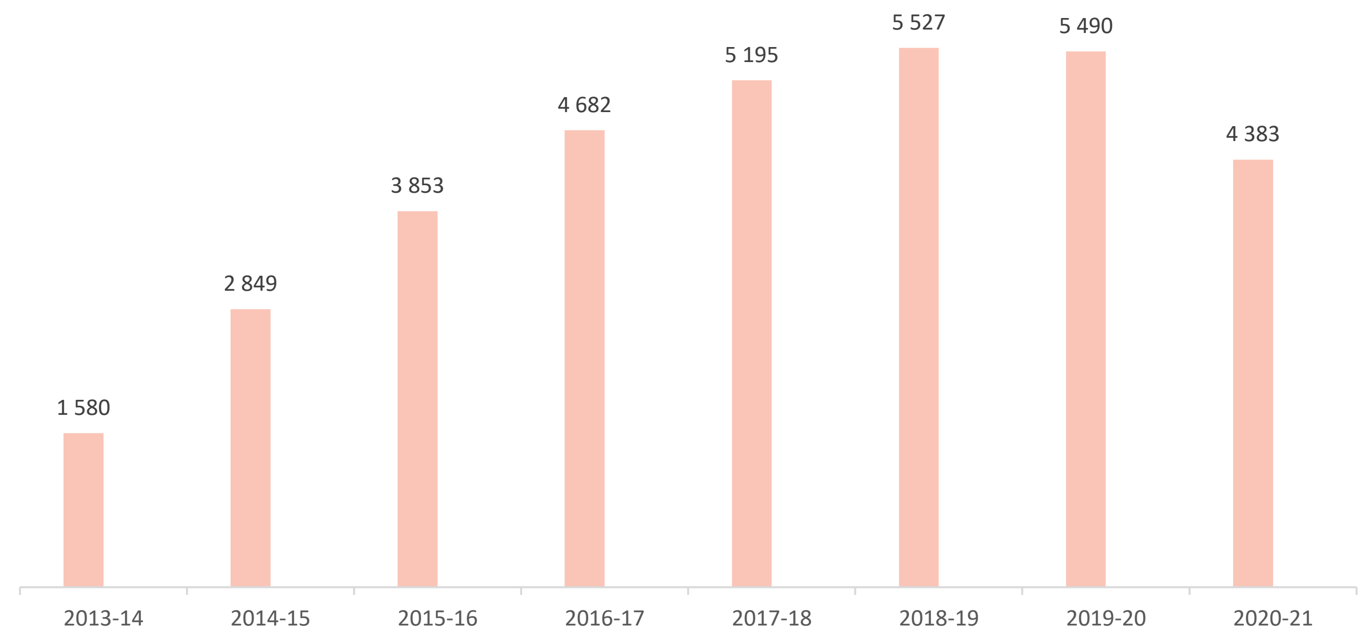
As of 2020, there have been 15,390 unique beneficiaries who applied for the benefit (2,785 doctors and 12,605 nurses).

Key informants suggest that benefit uptake could be increased further by:

1. Enhancing promotion of the benefit (n=9);

2. Expanding benefit eligibility to more health care professions (n=9);

Figure 8. Total number of beneficiaries by fiscal year.



Sources: The *2019 to 2020 Canada Student Financial Assistance Program statistical review* and the *2020 to 2021 Canada Student Financial Assistance Program statistical review.*

Figure 8 demonstrates that the number of beneficiaries has increased since fiscal year 2013 to 2014.

- The number of doctors and nurses who received student loan forgiveness by opting to work in designated communities increased by 247% between 2013 and 2020, with most of the increase observed over the early years of the program.
- Beneficiaries are required to work at least 400 hours in their designated community to be eligible for loan forgiveness. In fiscal year 2019 to 2020, they would have translated in at least 2.2 million work hours in underserved rural areas, given the total number of beneficiaries.

Key findings: Evaluation question 2

6 **Non-beneficiaries and other stakeholders report that the amount of the benefit may not be sufficient on its own to incentivise doctors and nurses to relocate to designated communities.**

Evidence from the academic literature suggests that while loan forgiveness programs can have a positive impact on recruitment of healthcare professionals to rural and remote areas, they are insufficient on their own to influence decisions to remain in those areas. In studies that attempted to estimate what a sufficient benefit would be to incentivize relocation, the proposed amount is usually vastly beyond what is offered by the program.[10]

This evidence is corroborated by the surveys of professional recipients and non-recipients of the benefit. Specifically, the evaluation found:

Beneficiaries

About a fifth (21%) of beneficiaries reported that the loan forgiveness benefit was “very impactful” to their decision to work in designated communities.

- Nurses more often reported the benefit to be “very impactful” than doctors (23% compared to 13%).
- Family medicine residents more often reported the benefit to be “very impactful” than family doctors (16% compared to 7%).

Without the benefit, 38% of doctors and 42% of nurses (41% combined) reported that they would be unlikely to move to a designated community.

Non-beneficiaries [11]

Less than half (45%) of non-beneficiary professionals agreed that the value of the loan forgiveness benefit is sufficient to incentivise them to relocate to designated communities.

- Younger, more recent graduates are more likely to consider the benefit amount sufficient.
- Nearly two-thirds of students (64%) agreed that the benefit amount is sufficient, with nursing students more likely to agree than medical students.
- There are significant regional differences in whether non-beneficiaries agree that the benefit is sufficient.

By contrast, 67% of doctors and 70% of nurses (69% combined) would be unlikely to move to designated communities without the benefit.

For students, 57% of medical students and 52% of nursing students (52% combined) would be unlikely to relocate for work if the benefit did not exist.

Key stakeholders provided further insight as to why this may be the case. Most key informants (n=19) reported that the value of the loan forgiveness benefit is insufficient to incentivise doctors and nurses to relocate to designated communities. The most frequent reason given (n=13) was that there are numerous other, larger incentives available. These include, for example:

- provincial or territorial incentives, such as return of service agreements
- higher earnings opportunities through overtime and travel work
- signing bonuses and relocation support

[10] For example, one paper (Ulrich et al., 2019) estimated that Canadian pharmacy students may require an additional $17,156 to their salary to be incentivized to work in rural areas. While pharmacology is not directly targeted by the program, its adjacency in the medical field suggests that the required financial incentive may be much larger than what is currently offered through the benefit.

[11] The non-beneficiaries consisted of two groups: 1. All the Doctors and nurses with Canada student loan of any amount in good standing at the inception of the benefit. 2. Doctors and nurses currently in training (students) across medical and nursing schools in Canada. Most of them are not living in the designated areas, hence the answers are highly conjectural and should be interpreted with caution

Key findings: Evaluation question 2

7	**Factors other than the benefit, such as debt levels, cost of living, or personal motivations, contribute to influencing the decision to work in designated communities.**

One reason why the benefit may not be sufficient on its own comes from the fact that there are several factors in addition to the benefit that affect individuals' choices. Evidence gathered in the evaluation supports this notion and reveals what factors are influencing decisions to work in designated communities.

Academic literature identifies several non-financial barriers to relocation which may impact doctors' and nurses' decisions to relocate to designated communities. These include:

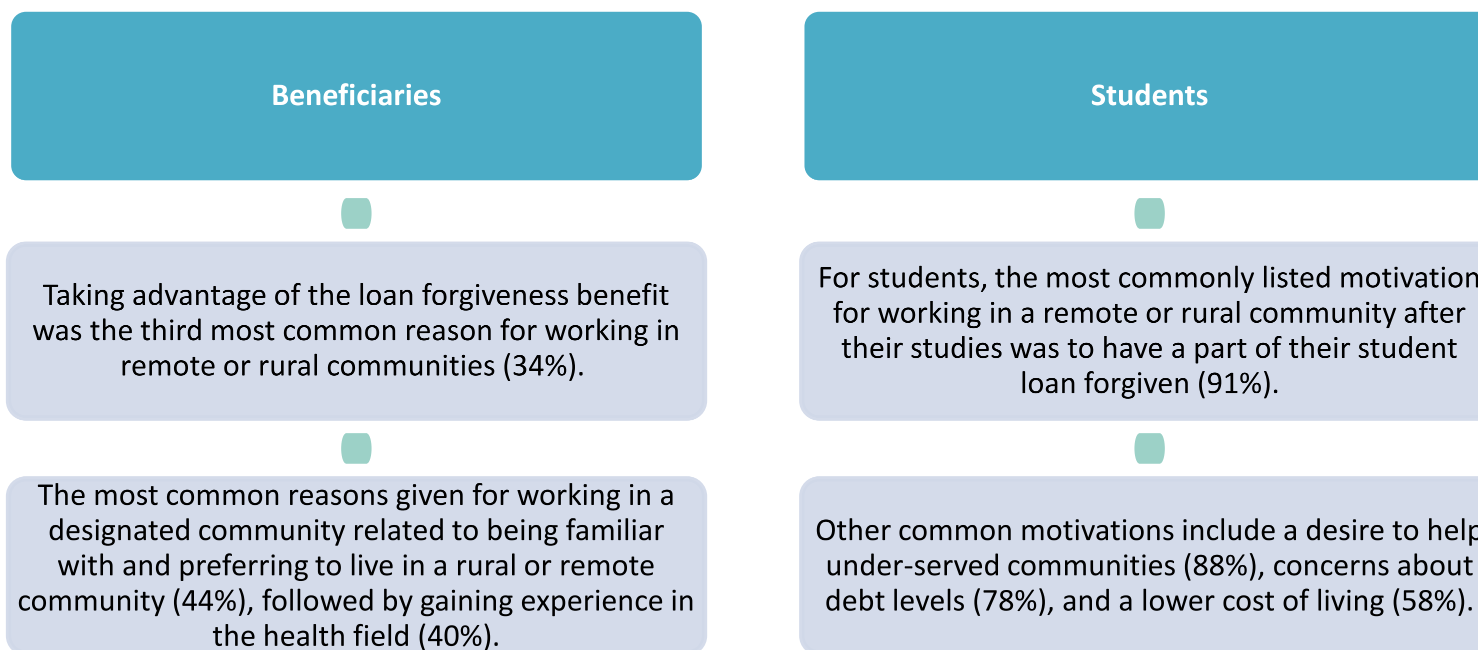
- Under-resourcing, workload, and staff management issues (staff shortages, heavy on-call burden, and so forth)
- Professional isolation and limited access to professional development opportunities
- Geographic isolation and limited access to services
- Fewer resources for patient care and/or less health infrastructure

Key informants identified a number of barriers to relocation, which may contribute to limited interest among doctors and nurses.

These include:

- A lack of affordable or appropriate housing
- Limited mentorship, training opportunities, and professional supports
- Limited employment opportunities for spouses
- Social isolation from family, friends, and peers
- A poor work-life balance
- Limited education, childcare, and recreation activities for children
- Uncompetitive compensation for the scope of practice

Survey data also highlights several factors influencing the decision to work in designated communities among beneficiaries and students.



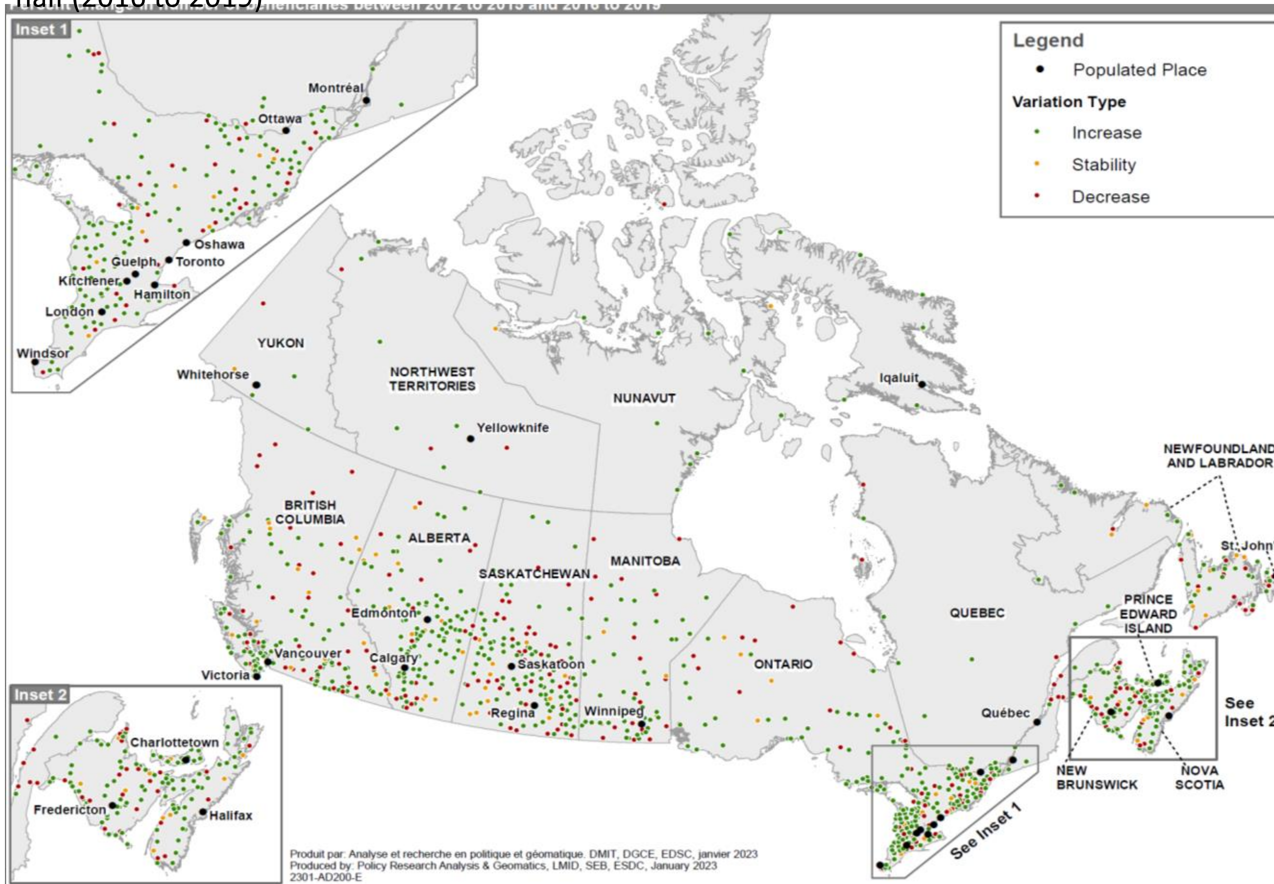
Key findings: Evaluation question 2.1

8 **Since benefit inception, beneficiaries provided services to an increasing number of communities (611 in 2019) across the country.**

Beneficiaries provided primary healthcare services in designated underserved, rural, and remote communities across the 13 Canadian provinces and territories. However, distribution of Quebec, the Northwest Territories and Nunavut should be interpreted differently than other provinces and territories as they have their own student financial assistance program. Both maps depicted in figures 9 and 10 demonstrate the considerable 'reach' of the benefit over the years. Note that the benefit is not designed with provincial-based targets.

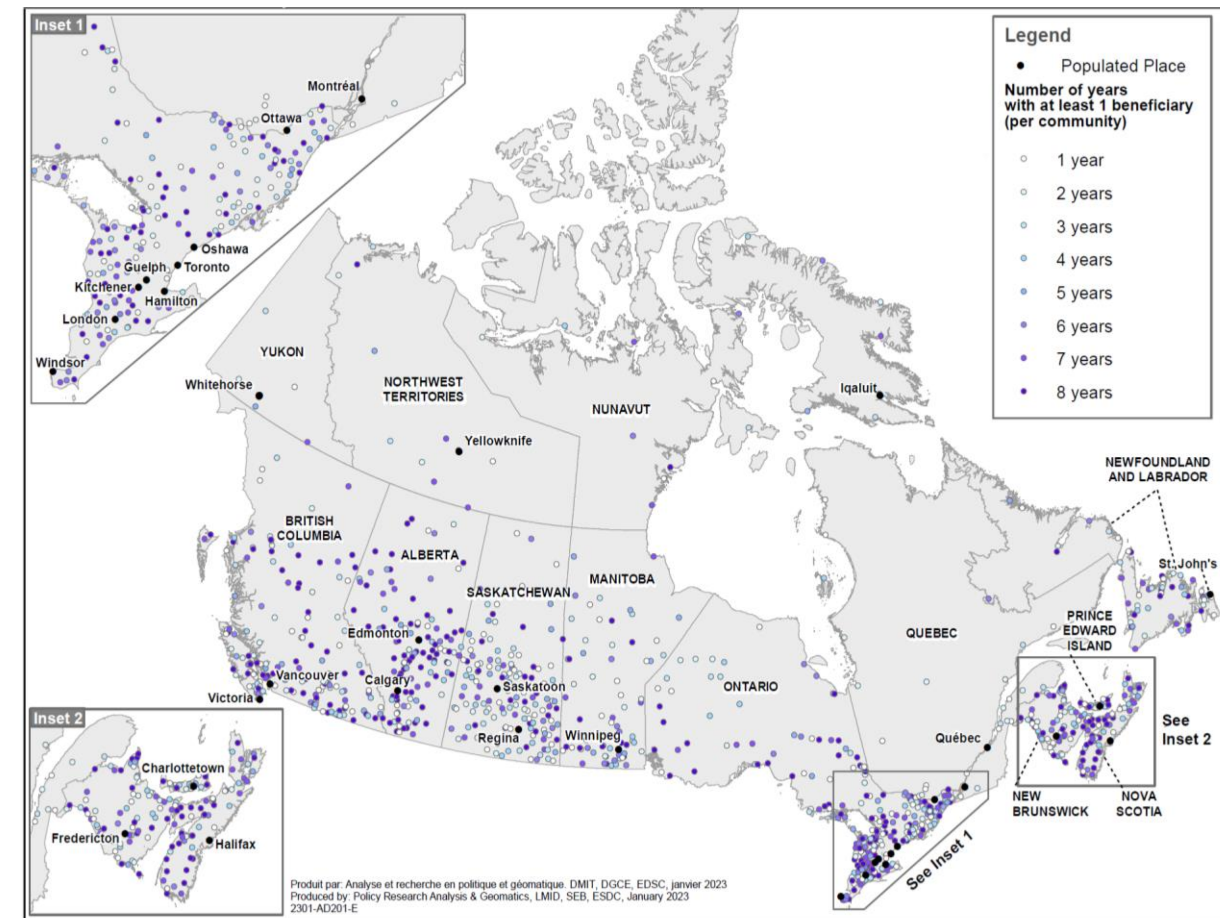
Figure 9 shows growth in the number of doctors and registered nurses working in the designated communities (each community represented by a point) over the 8-year period between 2012 and 2019. Growth is calculated by comparing the total number of beneficiaries working in a designated community in the first half of the benefit (2012 to 2015) with the number working therein during the latter half (2016 to 2019). The green dots represent increases in the number of beneficiaries in communities across Canada

Figure 9. Change in CSD coverage from the first half of the benefit (2012 to 2015) to the latter half (2016 to 2019)



Source: ESDC Geomatics team using the benefit's data on number of beneficiaries from 2012 to 2019

Figure 10. Number of years each CSD was serviced by at least one benefit recipient



Source: ESDC Geomatics team using the benefit's data on number of beneficiaries from 2012 to 2019

Figure 10 shows the extent to which the benefit is sustaining its reach into designated communities by highlighting how consistently a given community (represented by a point) was serviced from 2012 to 2019. Note that communities may be served consistently but with different individual beneficiaries for some years.

Key findings: Evaluation question 2.1

8 **Since benefit inception, beneficiaries provided services to an increasing number of communities (611 in 2019) across the country.**

Geographic spread

In 2019, 8% of doctors and 4% of nurses working in rural and remote communities were receiving the benefit.

Communities across the country were served by beneficiaries. For some Provinces and territories jurisdictions, these beneficiaries made up over 10% of all doctors and nurses in recent years.

From 2012 to 2020, 942 unique communities benefitted from having a nurse who was a beneficiary, and 501 communities benefitted from a doctor who was a beneficiary.

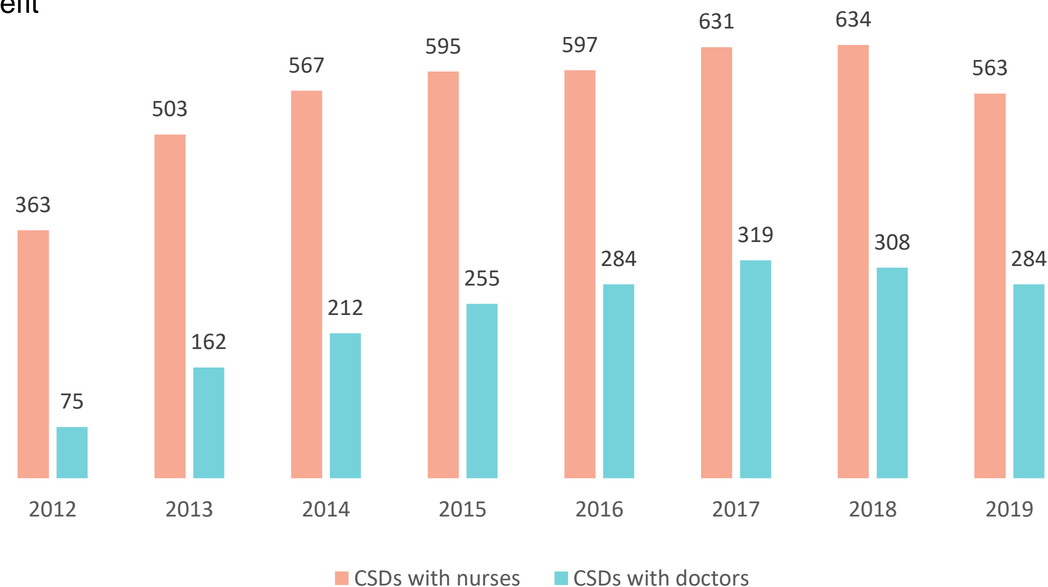
Beneficiaries worked in communities that are considerably far from census metropolitan areas:

↳ The median distance between the beneficiaries' work location and the closest central metropolitan area was 111km for doctors and 104km for nurses.

There is considerable variation by province, and Tables 1 and 2 in Annex E present further details.

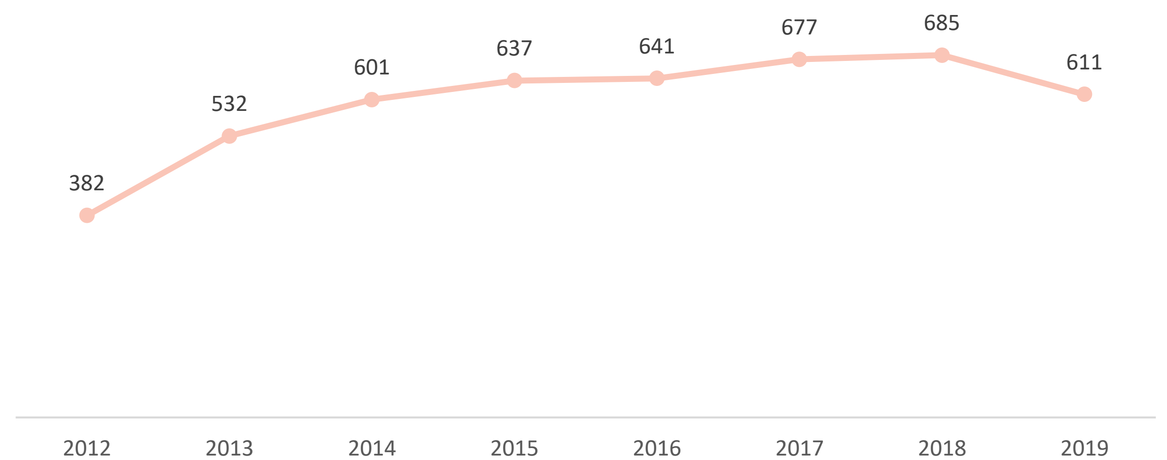
The total number of communities with at least one doctor or nurse beneficiary is generally trending upward. The increase was more noticeable as the benefit was developing from 2012 to 2015. The fluctuations observed in the latter years of the benefit may be due to several factors, but could not be determined within the scope of the evaluation. Figure 11 below depicts these trends disaggregated by profession. Figure 12 gives the overall trend. Note that the total number for a given year is less than the sum of doctors and nurses as both may be working in a given community.

Figure 11. Number[13] of census subdivisions being served by doctors and nurses on the benefit



Source: Canada Student Financial Assistance program data

Figure 12. Total number of unique census subdivisions being served by doctors and nurses on the benefit



Source: Canada Student Financial Assistance program data

[12] For the purposes of this evaluation, each census subdivision is considered to be a unique community. Based on a 2011 baseline, 4690 census subdivisions meet the benefit eligibility criteria. The benefit covered 13% of it.

[13] Census subdivisions may have been served by both a doctor(s) and a nurse(s), and as such the total number of communities served is less than the sum of the two columns for a given year.

Key findings: Evaluation question 3

9 The majority (69%) of the beneficiaries surveyed continued to work in designated communities after they were no longer eligible for loan forgiveness.

The evaluation was not able to track beneficiaries beyond their time on the benefit, nor was it designed to track behaviour of all beneficiaries longitudinally over a period of time. However, survey evidence provides insight into beneficiary behaviour beyond the time spent on the benefit.

In the 2020 survey of beneficiaries, a majority (69%) of those who were no longer on the benefit continued to remain in a designated community after their benefit eligibility expired (63% of Doctors and 70% of Nurses). Of note:

More than half (54%) of all beneficiaries continued to work in the same designated community where they first qualified for loan forgiveness:
- 36% of Doctors continued working in the same designated community
- 57% of Nurses continued working in the same designated community

15% of all beneficiaries continued working in a different designated community:
- 27% of Doctors continued working in a different designated community
- 13% of Nurses continued working in a different designated community

The doctors and nurses who were no longer working in a designated community left rather quickly with:
- 76% of Doctors are leaving less than one year after receiving their maximum benefit amount
- 48% of Nurses are leaving less than one year after receiving their maximum benefit amount

Key findings: Evaluation question 3

10 **Several factors, such as loan amounts, family status, distance from central metropolitan area, and province of work, contribute to how long doctors and nurses claim the benefit.**

Beneficiaries can receive the benefit for a maximum of 5 years. By performing an odds ratio estimates from a logistic regression on program administrative data, it was possible to determine the socio-demographic and loan characteristics influencing beneficiaries' decisions to remain on the benefit over multiple years.

Higher loan amounts were correlated with more time spent on the benefit for both doctors and nurses. However, higher grant amounts resulted in less time on the benefit.

Doctors working between 250 and 499km from a central metropolitan area were twice as likely to spend an additional year on the benefit than those living less than 50km away. Those working between 500 and 999km were more than 3 times as likely.

This effect was of a lesser magnitude for nurses.

Having a spouse or dependents increased the time spent on the benefit, unless the spouse was also contributing to household income.

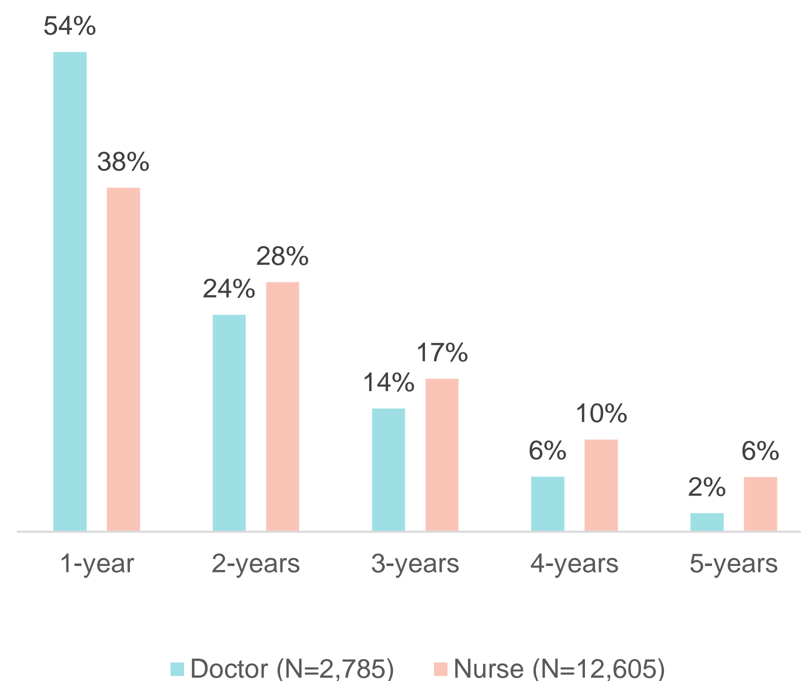
Individuals moving to work in more remote locations intend to stay longer in these areas:

The full logistic regression results for doctors and nurses can be found in Figures 14 and 15 in Annex E.

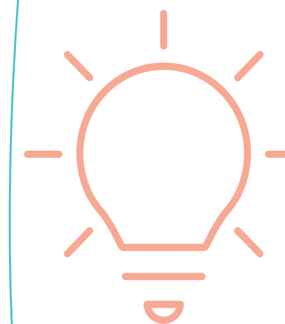
- Figure 13 depicts the number of years that doctors and nurses spent on the benefit while working in designated communities.

- On average, doctors spent 1.8 years on the benefit while nurses spent 2.2 years.
- More than half of all doctors who received the benefit spent only one year on the benefit.

Figure 13. Number of years claiming the benefit, by profession



Source: Canada Student Financial Assistance program data



There is some evidence of differential impact among the beneficiaries (finding 6). In addition, there are other factors besides the benefit which seem to influence doctors' and nurses' decisions to relocate (finding 7) and stay (finding 10) in designated communities. The propensity of some of these factors also seem to vary across different groups. It may therefore be **worth investigating** further to discern whether there are **opportunities to adjust the benefit** in better attracting doctors and nurses from different backgrounds.

11 **Key informants[14], including those from provinces and territories, were unable to comment on the contribution of the benefit to the expansion of primary healthcare services. However, a majority of professionals and students held the perception that it will.**

Ultimately, the loan forgiveness benefit is expected to contribute to the expansion of primary healthcare in designated communities, where "expansion" refers to the number of family doctors and nurses working in these communities.

Perceived contribution of benefit to expansion of healthcare services, by profession – professionals (non-beneficiaries)

Among doctors, 66% of residents believe it is either somewhat or very likely that the benefit will contribute to expansion of healthcare services, compared to 46% of doctors

Perceived contribution of benefit to expansion of healthcare services – students (non-beneficiaries)

Among students, nursing students more often than medical students consider it very likely that the benefit would contribute to expansion of healthcare services in under-served communities (34% nursing students, 21% medical students)."

Overall, 55% of professionals and 74% of students consider it likely that the benefit will contribute to expansion of the primary healthcare services.

Key stakeholders were mostly unable to comment on the extent to which the benefit is contributing to the expansion of primary healthcare services.

- Most (n=21) interviewed provincial and territorial partners, program staff, and representatives of professional associations were unable to report on the benefit's contribution.
- A few (n=2) provincial and territorial representatives reported that financial incentives are not fundamental to expanding services as they do not address the challenges in practicing in the designated communities (see key informants identified barriers in Slide 7)
- A few (n=3) provincial and territorial representatives reported that the benefit helped with recruitment, but there was little evidence that it also helped retain doctors and nurses in designated communities.
- A few (n=5) stakeholders identified the need for better data to be able to discern whether the benefit is contributing to the expansion of primary health care in designated communities.

It should also be noted here that key informants were asked to comment on the impact of growing adoption of telemedicine on the movement of family physicians and nurses to designated communities for the provision of primary health care services. Most key informants (n=15) reported that the intention of using telemedicine in their jurisdiction was not to replace in-person care. Some key informants (n=7) viewed telemedicine as an opportunity to increase the number of doctors and nurses relocating to designated communities, addressing some of the stress associated with being the only health care practitioner in the community.

[14] Key informants included 18 provincial and territorial representatives, 4 representative from professional associations, 3 student financial aid administrators, and 4 ESDC program officials.

Conclusion

Conclusion: Mapping of recommendations and findings

Recommendation 1: The program should explore outreach opportunities to increase awareness of the benefit among key stakeholders, especially among intended beneficiaries.

Evidence collected during the evaluation suggests that the program undertook extensive consultations prior to launching the benefit. Detailed information about the benefit eligibility, and the application process is easily accessible online on the government website. However, since its launch awareness-creation has not been a key component of the benefit. As such, word-of-mouth has been the most common means of communication about the benefit among students and professionals [Finding 1]. This has resulted in a majority of intended beneficiaries not being aware of the benefit and disproportionate levels of awareness among certain groups [Finding 2]. Key provincial and territorial stakeholders are aware of the benefit, but they identified inadequate communication to be a barrier to awareness. [Finding 4]. They further suggest that increased promotion of the benefit may increase take-up beyond its increased uptake since inception [Finding 5]. Engaging in targeted awareness promotion of the benefit, especially among intended beneficiaries who are least aware of the benefit, will likely lead to an increase in the number of applications and ultimately in the number of doctors and nurses relocating to designated communities.

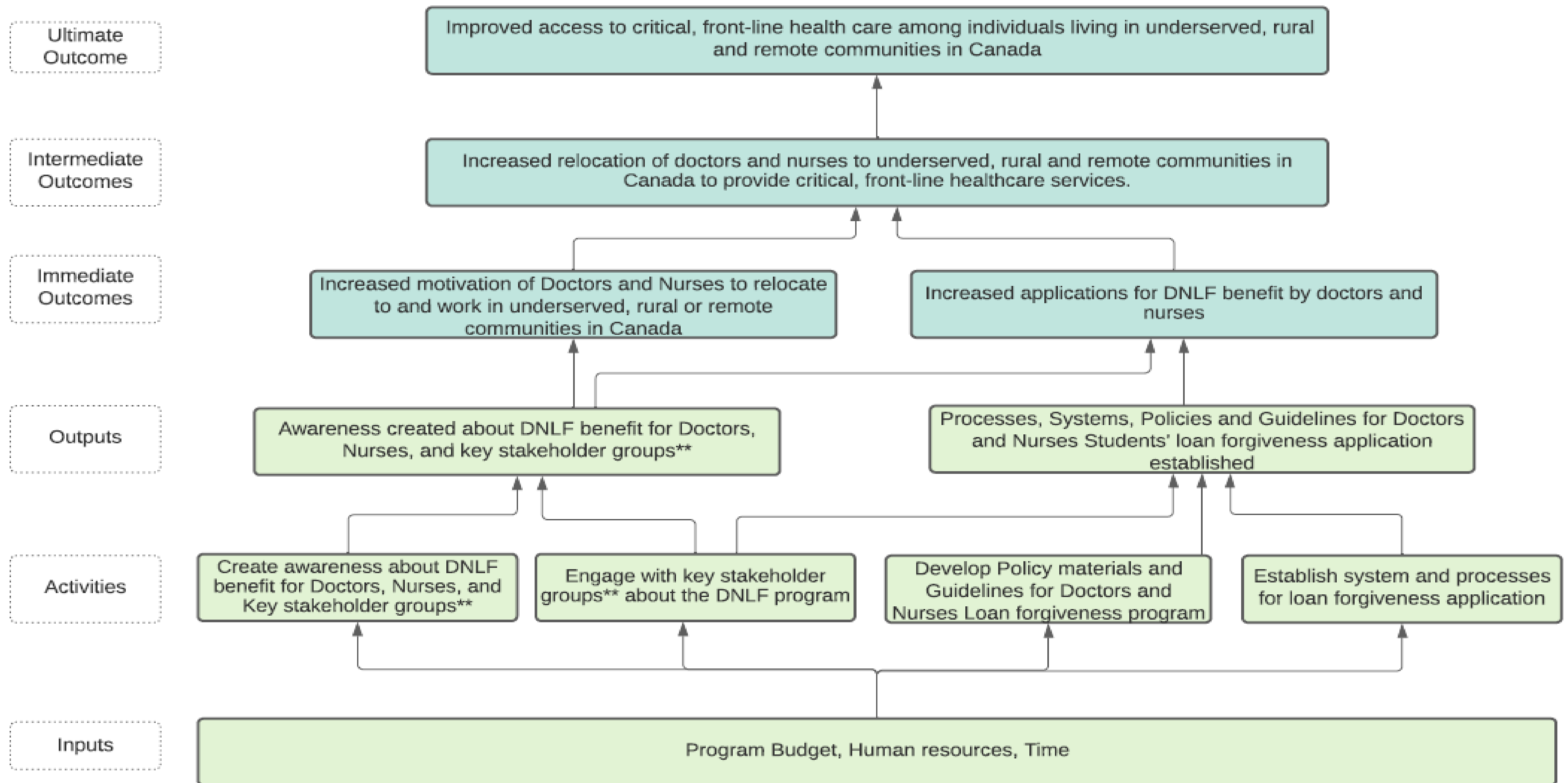
Recommendation 2: The program should explore the development of tools to help consistently measure and monitor the program's benefit.

Results metrics were not identified for the program, which introduced challenges to the extent to which the evaluation may comment on the success of the benefit in meeting its objectives [Annex C]. To assess the extent to which the benefit is meeting its goals, evaluation collaborated with the program to develop a logic model and was able to identify several findings which indicate the extent to which the benefit is succeeding. These include:

- increased benefit uptake since inception [Finding 5],
- the insufficiency of the benefit on its own to motivate relocation to remote communities [Finding 6]
- the perception that the benefit is likely to increase access to health services in these communities [Finding 11]
- several other factors which likely contribute to incentivizing relocation [Finding 7] and retention [Finding 10]
- the benefit reaches communities in all 13 Canadian provinces and territories. [Finding 8]; and
- that most beneficiaries appear to continue working in designated communities after losing eligibility for the benefit. [Finding 9]

Identifying result metrics and strengthening data integration strategy would allow the program to take indicators such as those found in the evaluation and make proper judgements about the successes of the benefit. It would better allow for improved data integration to inform policy analysis, research, and evaluation.

Annex A: Benefit Logic Model



**Key stakeholder groups: Provinces and territories, National Student Loans Service Centre (NSLSC), Student groups, University/college organizations, Student financial aid administrators (SFAA)

Annex B: Evaluation Questions

The evaluation questions for this evaluation are as follows:

1. To what extent are recent medical doctor and nurse graduates, family doctors, nurses and key stakeholder groups aware of the benefit?

2. To what extent does the benefit incentivise family doctors and nurses to work in under-served, rural and remote communities?

2.1 What is the geographical reach of the benefit?

3. To what extent does the benefit contribute to expanding primary health care services in under-served rural and remote communities in Canada?

Annex C: Structural Limitations

Unavailability of results metrics and a strong data integration strategy for the benefit introduced challenges to the assessment of the extent to which the benefit is achieving its goals and the ability of the evaluation to answer the evaluation questions relating to impact.

The unavailability of results metrics introduces a pair of challenges:

It is difficult to tell where the benefit is succeeding

Without targets and benchmarks, it is difficult to assess with program data whether the benefit is expanding access to medical services.

It is difficult to tell where the benefit is needed

Because there are no explicit targets, all designated communities are treated equally. It is not possible to tell with program data whether there are differing needs across communities.

The purpose of a data integration strategy

A strong data integration strategy would allow for better informing policy analysis, research and evaluation.
A data integration strategy ensures unified and accurate data for informed decision-making. Without it, fragmented data might lead to inefficiencies and missed opportunities.

Due to its nature as a benefit, no performance information profile or other performance measurement framework was developed.

The program collaborated with the evaluation directorate during the planning phase of the evaluation to develop a logic model for use in the evaluation.

While benefit outputs, outcomes, and objectives could be identified through the logic model, no benefit indicators were developed.

Why is there no performance measurement framework already?

The *Policy on Results* requires a Performance Information Profile to be developed for all programs listed in the departmental Program Inventory. Because the benefit is not listed in the inventory, it is not required to develop one.

Annex D: Methodology

The evaluation of the Loan Forgiveness for Family Doctors and Nurses benefit used a mixed-method approach including 4 lines of evidence. This approach ensured adequate data triangulation to support robust evidence-based findings, conclusions, and recommendations.

	Lines of Evidence	Key Limitations
Document and Literature Review	The document and literature review included: • Program documents (program planning, implementation, delivery, and benefit management documents) • External documents and literature including academic literature, provincial documents, and literature from external governments and organizations. A review of approaches and best practices from other jurisdictions (Canadian and international) was also conducted.	There was a relatively small number of internal documents available for review. As a result, the extent to which the document review could contribute to addressing the evaluation questions was limited.
Key Informant Interviews	A total of 29 interviews were conducted with a diversity of key stakeholders: • Provincial and territorial representatives (including from the Federal-Provincial-Territorial Committee on Health Workforce) (n=18), • ESDC program officials (n=4), • Representatives from professional associations (n=4), and • Student financial aid administrators (n=3). The evaluation used a sampling plan that targeted a specific number of individuals within the above categories of key stakeholders.	Despite many individuals (n=92) being identified, invited to participate, and contacted multiple times, fewer than the 36 targeted interviews were completed. Feedback suggests that a lack of familiarity with the benefit was a perceived barrier to participation for some. Of note: • While a total of 32 individuals within the student financial aid administrator category were invited for an interview, only three chose to participate. • Despite multiple attempts, provincial representatives from Ontario and Quebec did not participate in any interviews. • Most provincial and territorial key informants were not directly involved with hiring and could not identify relevant individuals who are. This meant they could not speak to certain interview questions, such as whether the benefit is used as a recruitment tool in their jurisdiction.

Scale used to report the findings
“Large majority/most” – findings reflect the views and opinions of at least 75% but less than 90% of key informants in the group.
“Majority” - findings reflect the views and opinions of at least 51% but less than 75% of key informants in the group.
“Some” - findings reflect the views and opinions of at least 25% but less than 50% of key informants in the group.
“A few” - findings reflect the views and opinions of at least two respondents but less than 25% of key informants in the group.
“One” – findings of one highly knowledgeable key informant.

Annex D: Methodology

	Lines of Evidence	Key Limitations
Surveys of Professionals and of Students	Two distinct surveys of benefit non-recipients were carried out over the course of the evaluation: • A survey of nursing and medical students • A survey of professional doctors and nurses who are non-beneficiaries, to complement a 2020 survey of beneficiaries For both surveys, a census strategy with saturation sampling was employed given available databases could not identify the target population. Thus, over 110,000 email survey invitations were sent to individuals categorized in the CSFA program as studying or having studied in the 'medicine' or 'health science' fields. Attempted responses by individuals not in the target population were screened out in the surveys. In total, 1,913 student and 5,761 professional surveys were completed. The data was then cleaned to ensure accuracy and analysed in frequency tables and select cross-tabulations. For the text responses, a systematic random sample was chosen for coding.	While every effort was made to compare the results from the 2020 survey of beneficiaries and 2022 survey of non-beneficiary professionals, the survey questions were not identical. Comparisons were made where similarities were present, but caution is required when making direct comparisons between beneficiaries and non-beneficiaries based only on the survey reports. The pool of non-beneficiaries was drawn from CSFA program data, which necessarily excludes doctors and nurses who never engaged with the program during their studies. As such, the opinions of this sub-group of non-beneficiaries is not accounted for in the professional survey.
Administrative and Data Analysis	The administrative data analysis combined data from various sources to examine outcome trends of family doctors and nurses who participated in the CSFA loan forgiveness benefit from fiscal year 2013 to 2014 and 2018 to 2019, the most recent data available at the time of analysis. The data analysis combined data from two primary sources: • Canada Student Financial Assistance program data • Canadian Institute for Health Information data Due to time constraints, the evaluation could not secure an approval to link data from Canada Revenue Agency T1 and T4 files with the CSFA data. This kind of linkage could have had the potential to enrich the analysis with additional data on labour market history and sociodemographic characteristics, subject to an adequate sample size following the linkage. **A regression analysis to examine factors influencing the time spent on loan forgiveness** Given that the available data consists only of beneficiaries, the extent to which the benefit incentivises doctors or nurses to work in under-served, rural or remote communities was limited. To perform such an analysis, a comparison group comprised of eligible non-beneficiaries would have been needed. Instead, factors influencing the length of time spent on the benefit was examined using a logistic regression model under the premise that more time spent on the benefit implies-longer time spent in a rural or remote community. The results allowed for the identification of factors likely exerting influence on the decision making of doctors and nurses when working in rural or remote communities. By design, health care professionals are required to relocate first and work in the designated remote and rural areas for a year before receiving the benefit. In some cases, this translates in the application for the benefit occurring years after graduation. This means that the loan information from student records may be out of date by several years. To address this issue, the sample of doctors and nurses was limited to only those who opted for the benefit within their first year after graduation. This increases the likelihood that the loan application data used is current and valid. **The use of Geomatics** The consolidated data file was also used by ESDC's geomatics team to produce several geo-spatial maps to visually represent the program's reach and spread across the country.	**Examining financial incentives to move and work is complex** The analysis of doctors and nurses' decision to move and work in a remote and rural areas is inherently complex, involving several variables which could influence their decision. Program beneficiaries and stakeholders (e.g., Provincial and Territorial representatives, Federal-Provincial-Territorial Committee on Health Workforce, representatives from professional associations and student financial aid administration) identified some of these variables, including: • observable variables[15]: compensation packages, debt levels, family ties, availability of affordable/appropriate housing, as well as access to education, childcare, and recreation activities for children. • non-observable variables[16]: personal motivations and work-life balance. Future policy analysis, research and evaluation activities would benefit from exploring how these variables could be further informed, e.g., through data linkages opportunities and/or other data strategies. A richer dataset would enable more refined quantitative analysis, including a potential incremental impact analysis using comparison groups. Nevertheless, while the feasibility of building a valid comparison group (eligible non-beneficiaries) could be further explored, its identification would remain challenging since the benefit is available across the country to all eligible nurses and doctors who have a loan with the Canada Student Financial Assistance program.

[15] An observable variable is a variable that can be observed and directly measured, or quantified.
[16] A non-observable variable is a variable that cannot be directly measured or quantified due to its nature, often involving abstract concepts or internal states.

Annex E: Additional Data

The following tables present additional detail to supplement the data presented in the main body of finding 9.

- The tables display average and median distances from census metropolitan areas in kilometers, as well as the total number of beneficiary doctors in each province.
- The frequency for various distance ranges is also provided. Table 1 presents the data for doctors, and Table 2 for nurses.

Table 1. Distance from work address to closest CMA in kilometers (km) - doctors

Distance to closest CMA (number)	AB	BC	MB	NB	NL	NS	NT /NU	ON	PE	QC	SK	YK	National
0 to 49 kilometers	67	95	20	19	5	0	0	372	0	0	0	0	578
50 to 99 kilometers	152	69	24	39	2	67	0	266	27	0	26	0	672
100 to 249 kilometers	101	164	36	51	49	69	0	289	2	11	103	0	875
250 to 499 kilometers	81	41	33	0	84	39	0	110	0	2	27	0	417
500 to 999 kilometers	1	68	14	0	24	0	5	42	0	1	1	0	156
Over 1000 kilometers	0	0	3	0	0	0	43	0	0	0	0	19	65
Total number of doctors	402	437	130	109	164	175	48	1079	29	14	157	19	2763
Average distance (kilometers)	139	219	238	108	344	148	1693	127	94	246	180	1442	201
Median distance (kilometers)	79	149	185	91	264	106	1715	78	88	225	137	1442	111

Source: Canada Student Financial Assistance program data linked to PCCF (calendar year 2012-2020)

Table 2. Distance from work address to closest CMA in kilometers (km) - nurses

Distance to closest CMA (number)	AB	BC	MB	NB	NL	NS	NT /NU	ON	PE	QC	SK	YK	National
0 to 49 kilometers	275	839	83	131	55	3	0	1367	0	1	1	0	2755
50 to 99 kilometers	732	463	74	162	13	485	0	946	179	1	162	0	3,217
100 to 249 kilometers	463	647	184	438	142	550	0	676	67	3	626	0	3,796
250 to 499 kilometers	421	159	125	0	244	358	0	375	0	2	102	0	1786
500 to 999 kilometers	47	351	59	0	53	0	69	81	0	1	7	0	668
Over 1000 kilometers	0	4	7	0	4	0	127	0	0	2	0	108	252
Total number of nurses	1938	2463	532	731	511	1396	196	3445	246	10	898	108	12474
Average distance (kilometers)	165	190	241	128	328	156	1452	122	108	469	170	1444	196
Median distance (kilometers)	89	93	207	112	264	108	1470	75	88	290	137	1442	104

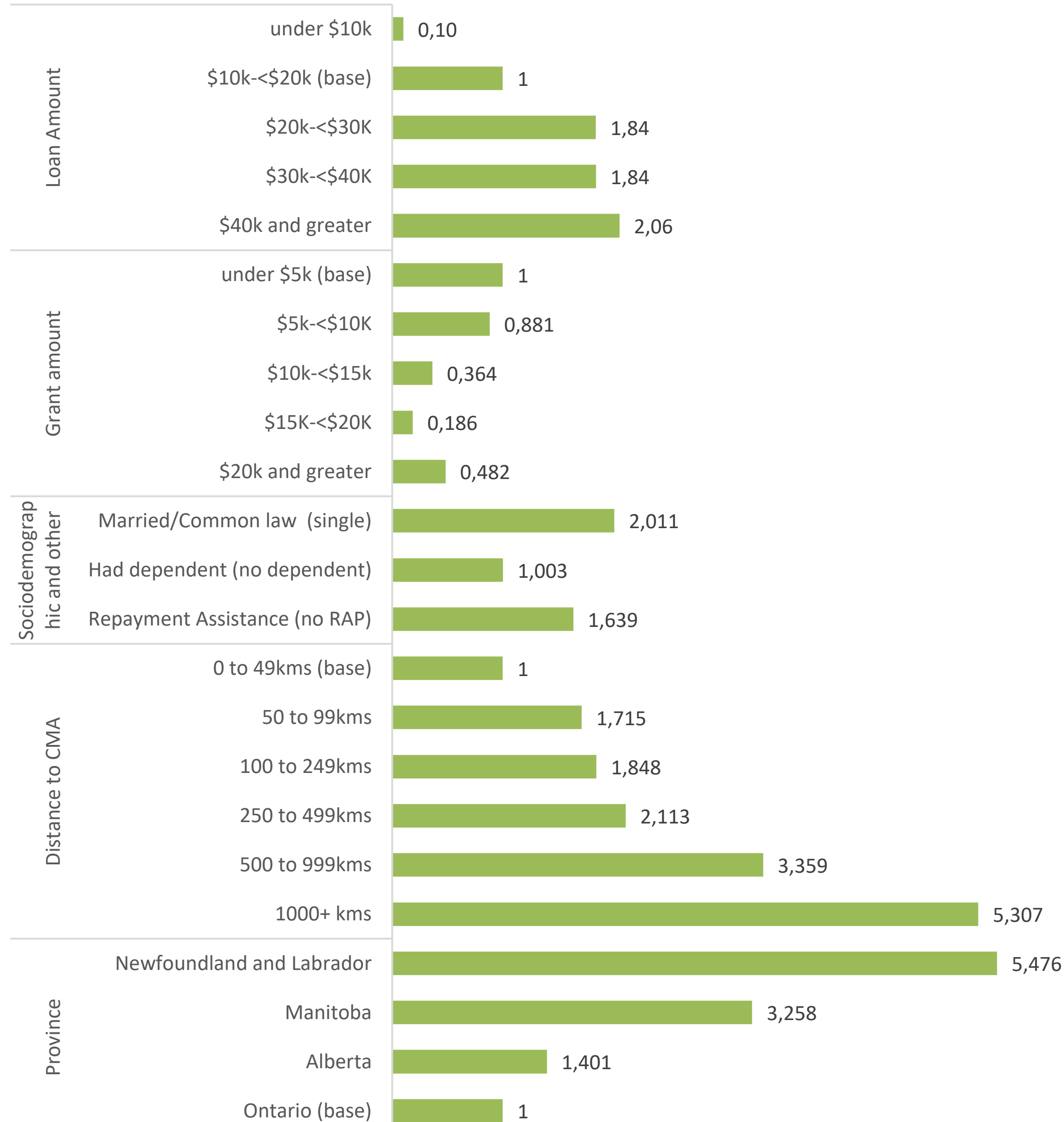
Source: Canada Student Financial Assistance program data linked to PCCF (calendar year 2012-2020)

Annex E: Additional Data

The following tables present additional detail to supplement the data presented in the main body of finding 10.

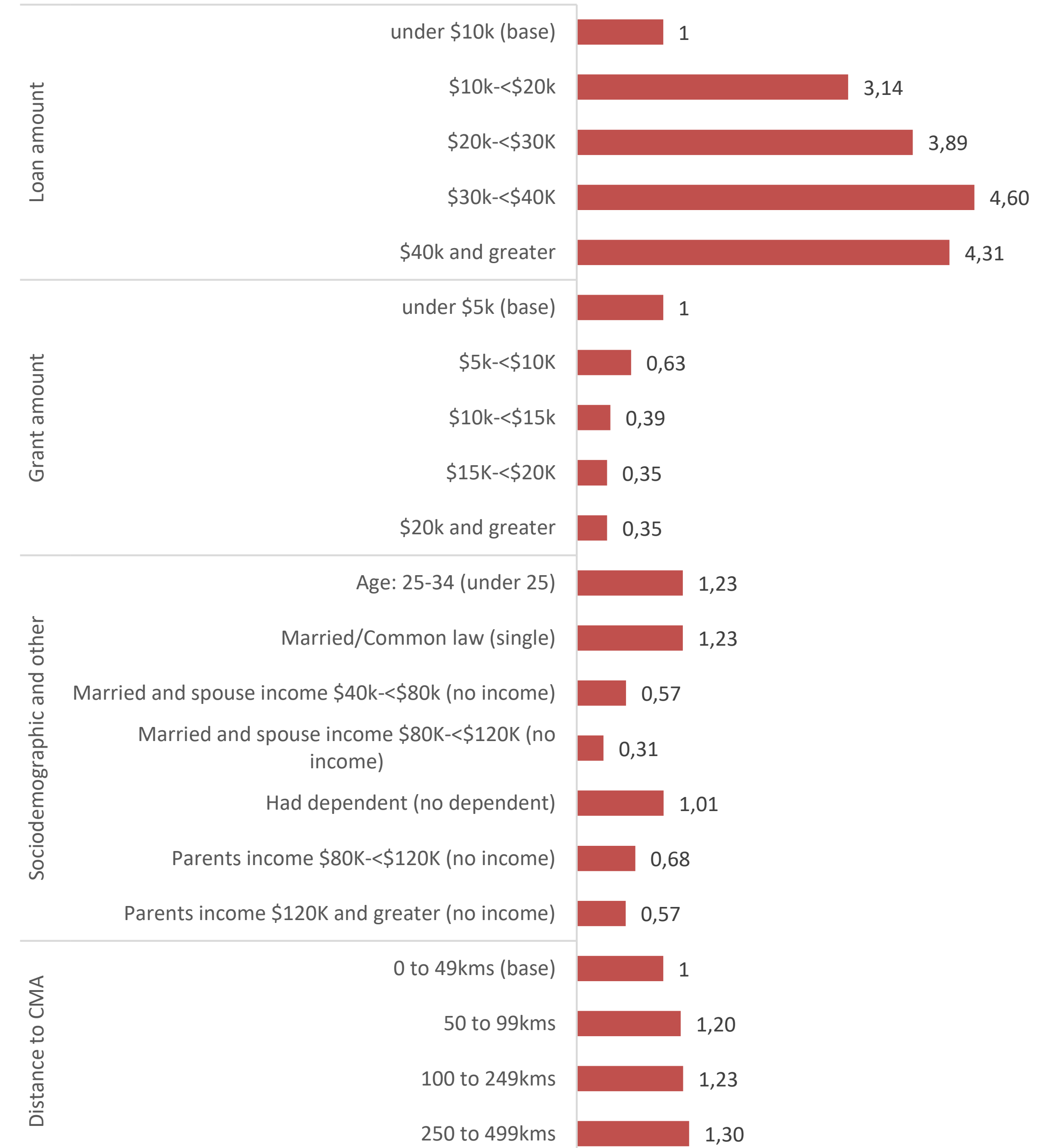
- The figures display the odds ratio estimates of spending one additional year on the benefit for various socio-demographic and loan characteristics of beneficiaries. If the odds ratio is less than one, then the odds of spending an additional year on the benefit are reduced. For odds ratios greater than one, the odds of spending an additional year on the benefit are increased.

Figure 14. Odds ratio estimates from logistic regression - doctors



Source: Canada Student Financial Assistance program data

Figure 15. Odds ratio estimates from logistic regression - nurses



Source: Canada Student Financial Assistance program data