"Closed books": restrictions to primary healthcare access in Aotearoa New Zealand—reporting results from a survey across general practices

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ABSTRACT

AIM: In Aotearoa New Zealand, primary care is organised by enrolling patients with a primary care provider. However, the benefits of this arrangement are frustrated when providers "close their books" due to insufficient capacity for new patients. We investigated the extent, evolution and impact of this situation on health access and equity in access to primary healthcare.

METHOD: We distributed a survey for general practice personnel in 2022, yielding 227 valid responses. We examined responses across respondents' practice characteristics, including practice size, rural–urban setting, average co-payments, region and ethnic composition of the catchment population.

RESULTS: Most general practices are selectively enrolling their patients. In 2022, only 28% of respondents freely enrolled new people. Since 2019, most respondents (79%) had "closed books" or limited enrolments at some point. The situation worsened between 2019 and 2022, compromising equal opportunity and access in healthcare.

CONCLUSION: Restricted enrolment poses a widespread barrier to health access and equity, and it worsened since the beginning of the COVID-19 pandemic. Addressing closed books and limited enrolments in general practice could significantly improve health services' access and equity. The study aims to inform ongoing health reforms.

Primary healthcare (PHC) is key to improving population health and equity in health.[1,2] Countries organise their health systems in many ways. One of them is to have people associated with a particular primary care provider, so that caring responsibilities are clearly assigned to that provider. This system is followed in Aotearoa New Zealand, and common across countries of the Organisation for Economic Co-operation and Development (OECD).

Although enrolling is optional for both patients and practices in Aotearoa New Zealand, it is also highly incentivised. General practices receive government capitation funding for each person enrolled (rather than being funded on a fee-for-service basis), and people who are enrolled benefit from lower consultation fees, prevention initiatives and more coordinated care. We have demonstrated adverse impacts of non-enrolment on healthcare utilisation and outcomes in earlier work.[3,4]

Practices can, and sometimes do, stop accepting new enrolees; this is commonly referred to in Aotearoa New Zealand as "closing the books". Closed books have been experienced before.[5,6] However, we suspect the issue has been aggravated in Aotearoa New Zealand by COVID-19, through an increase in demand for health services and the hindering of recruitment of overseas medical personnel. This would bring extra urgency to the need for addressing the challenge of closed books.

Closed books are a fundamental barrier to improving access to care and reducing health inequities, both key goals of Aotearoa New Zealand's Primary Health Care Strategy.[7] Accessing and maintaining links with a usual practice or practitioner is instrumental in providing healthcare.[7] This is even more so in Aotearoa New Zealand where PHC practitioners are "gatekeepers" into the rest of the health system, e.g., through referrals for publicly financed prescribed medicines, diagnostic tests and specialist services. When closed books impede this connection to PHC, it makes it more difficult for people to access health services when needed, potentially worsening health outcomes. Lack of access to PHC can also place more pressure on hospital services, such as emergency departments (EDs), when people visit EDs when

they cannot access PHC.

Māori experience poorer access to high-quality healthcare.[8] This contravenes the commitment to equity, as guaranteed through Te Tiriti o Waitangi. Our earlier research showed that about 6% of the Aotearoa New Zealand population was not enrolled in 2019, and that enrolment was lower for some population groups, particularly Māori, young people (15–24 years old) and those living in highly-deprived areas.[3] That research suggested that closed books are a key factor associated with this enrolment gap and with inequities, particularly inequities for Māori.

Previous investigations into closed books are limited in scope,[6,9] failing to identify the evolution of the issue over time or the impact on practices. This research investigates and provides evidence on the extent of general practice personnel's perceptions of closed books and its impact and identifies practice characteristics associated with the issue. The purpose is to better understand how enrolment systems may work to assist the reform of the health and disability system.

Method

We define closed books as the situation where a general practice is not able to enrol any new patients, and limited enrolment as where they enrol only selected new people.

We developed a cross-sectional survey and refined it based on findings from 12 interviews across primary care stakeholders (interview details to be reported elsewhere, in an email from N Mohan [nisalijo@ymail.com] in February 2024). The call for the survey was distributed through the weekly newsletters of the Royal New Zealand College of General Practitioners (RNZCGP, "e-pulse", about 5,500 recipients) and the Practice Managers and Administrators Association of New Zealand (PMAANZ, "e-blast", about 1,000 recipients), inviting members to take the survey. The survey included mostly closed-ended questions, but also some open-ended ones, and was tested before launch with the RNZCGP collaborating team.

The finalised survey contained 31 questions (see Appendix 1) and was open for 7 weeks (22 August to 9 October 2022) and accessed via the Qualtrics online platform. The criteria for being included were: answering from within Aotearoa New Zealand or, if answering from outside, that the respondent gave clear evidence of understanding the national context (e.g., being able to correctly match the PHO to which they belonged with the correct district health board [DHB], giving meaningful text answers) and engaged with the survey (e.g., they had to answer more than two questions after consenting). This strict level of inclusion became necessary when the survey was completed by numerous respondents from overseas over the course of 10 days.

We asked respondents about their practice characteristics and the ethnic composition of the population served by their practice. We used that information to compare responses across different population profiles and practice characteristics. Practice characteristics included size (number of enrolees), rural–urban setting, average co-payments charged (over or below NZ$40 for an average adult consultation without any targeted subsidies), ownership model (practice owned by GPs [73%] or by other organisations such as corporates, community groups or government agencies) and Very Low Cost Access practice (VLCA) or non-VLCA. VLCA practices are those whose enrolled population includes at least 50% of Māori, Pacific Peoples, or those living in the highest quintile of the deprivation scale, and they opt to receive higher capitation funding in return for capped patient co-payments. The survey sample size was not sufficient for meaningful breakdown across the 20 DHBs; therefore, we aggregated them into four regions: Northern, Midlands, Central and Southern regions.[10]

Practices were called "ethnically enriched" if respondents reported higher than expected percentages of patients of a particular ethnicity. For Māori and other minority ethnic groups, the threshold percentage was 16%, while for European New Zealanders it was 61%, to reflect the 2018 Census population figures.[11] Practices could be enriched for more than one ethnic grouping.

The responses analysed here were all from closed-ended questions, but some had the option of "other" to allow for responses that were wider than the options given. For the purposes of analyses, these "other" responses were either re-classified into the groups given, put in a new classification category or dropped if they were out of scope. For example, the question on waiting time for a GP appointment gave a number of responses that were longer than the initial categories allowed.

Cross-tabulations were performed of the survey variables. If there were missing values for a question, then those responses were not included in the analysis and the results show the specific number of responses for each survey

variable. As this was an opt-in survey, rather than a sample survey, there is no sampling variance and no confidence intervals. However, as a point of reference, a simple random sample of this size would have a margin of error of 6%.

Results

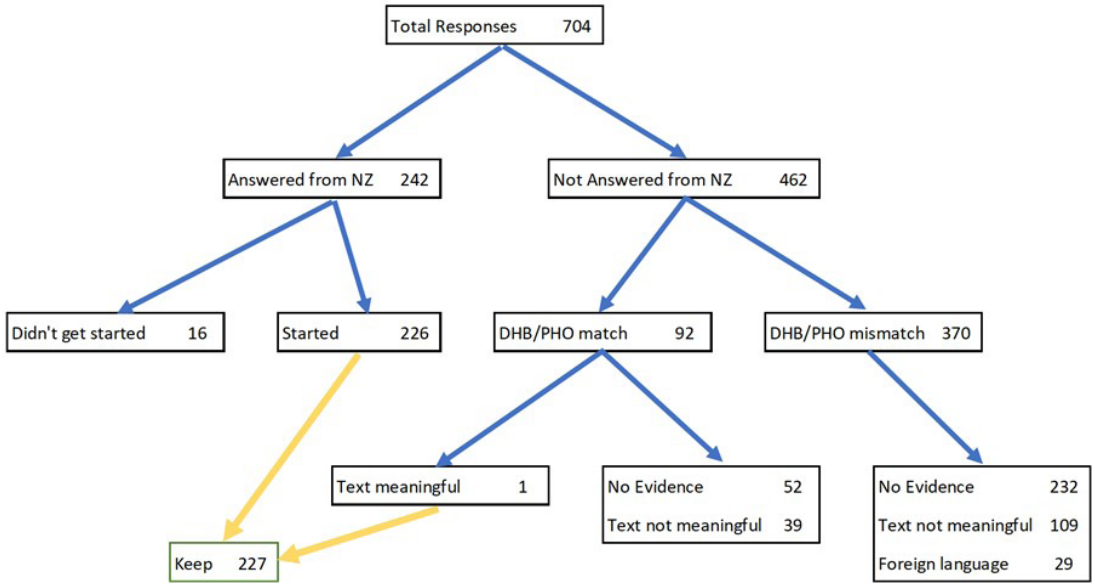
Sample description

The survey received 704 responses. After examining all the responses to see if they met the inclusion criteria, the final sample was 227 responses (see Figure 1).

Out of the 227 survey respondents, most were Practice Managers (n=119), then general practitioners (GPs, n=85), practice owners (n=52) and administration/management staff (n=20), some with multiple roles. Assuming the 119 Practice Managers belonged to different practices, the sample covered more than 10% of the approximately 1,070 general practices in the country (Ministry of Health data for June 2022).[12]

Respondents' practices reflected the national practice profile generally. Most respondents were from urban or suburban practices (67%). About 30% of respondents belonged to a VLCA practice. The most common fees for GP consultations for enrolled non-Community Service Card (CSC) adults during standard opening hours were $41–60 (56%), with more than one third having lower fees (35%) and one tenth having higher (10%).

Figure 1: Survey sample selection.

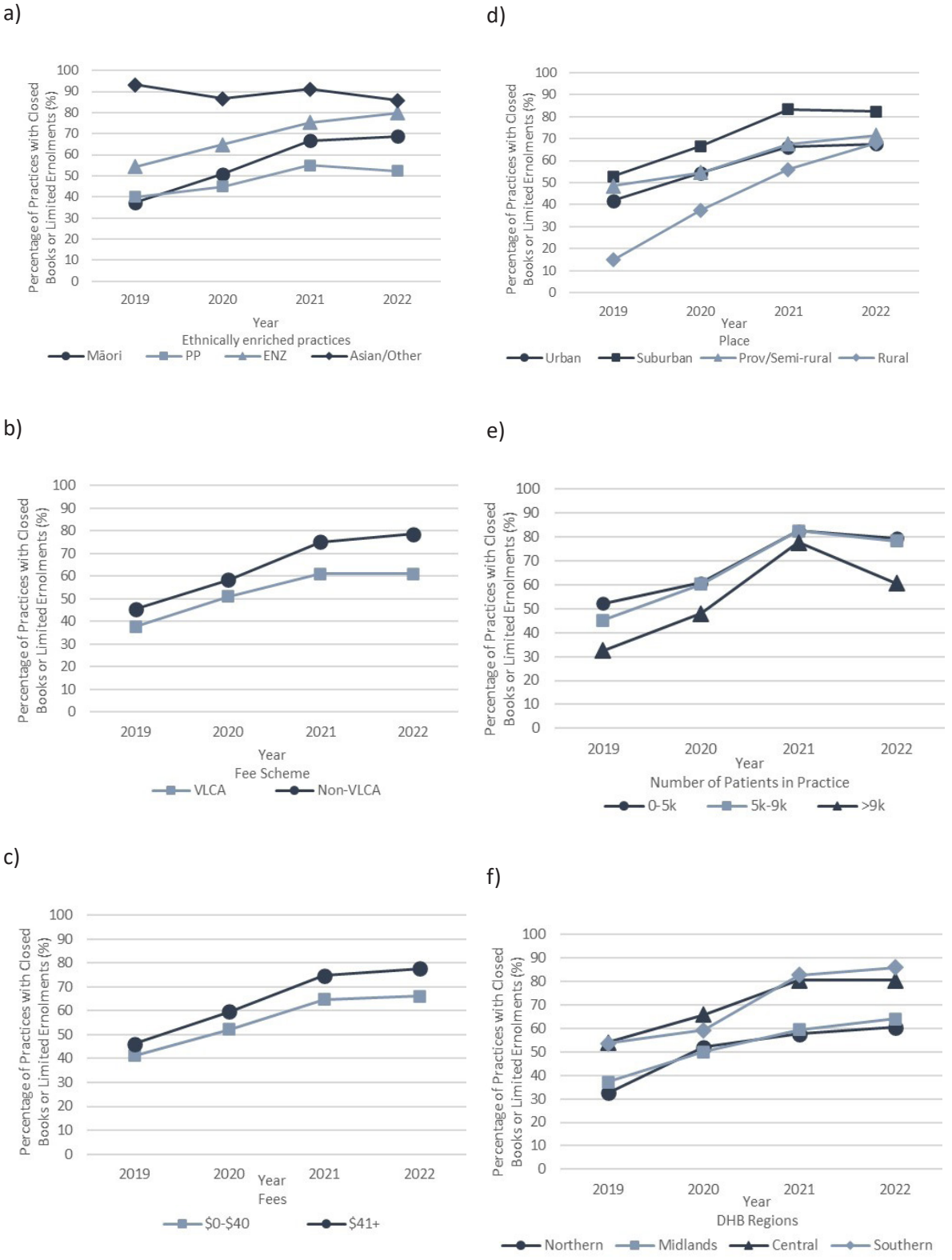


"No evidence" refers to the respondent providing no text responses on which to base a judgement. "Text not meaningful" refers to providing text responses that were either not coherent or not applicable to the Aotearoa New Zealand context.

Table 1: Proportion of practices with closed books and limited enrolment 2019–2022 (n=225 respondents).

	2019	2020	2021	2022
Fully closed	7%	14%	21%	27%
Fully open	57%	44%	31%	28%
Limited enrolment	36%	42%	48%	45%

Figure 2: Evolution of closed books/limited enrolment prevalence (%) by a) ethnicity-enriched practices (n=193); b) VLCA status (n=197); c) average consultation fees (n=197); d) urban–rural setting (n=193); e) number of enrolees (n=198); and f) region (n=197).



How prevalent and persistent are closed books/limited enrolment?

About 79% of respondents reported closed or limited enrolments at some point between 2019 and 2022. Table 1 shows the situation has worsened over time; the proportion of practices with fully closed books in 2022 was nearly four times greater than that in 2019, and the proportion of practices with fully open books in 2022 decreased to about half that in 2019. Results were similar when based on data reported by Practice Managers only (data not shown).

Which populations/practices are most affected by closed books/limited enrolment?

Figure 2a shows the evolution of the prevalence of closed books or limited enrolments according to the ethnicity-enriched profile. Pacific- and Māori-enriched practices show lower prevalence of closed books or limited enrolments than European New Zealand-enriched practices. Practices with large proportion of Asian/Other ethnicity group had the largest prevalence throughout the period; this decreased slightly over time, although caution is needed as the sample size for this group is small (n=32). We obtained similar results for closed books only (i.e., excluding limited enrolments).

When data were categorised by VLCA status (Figure 2b), non-VLCA practices had a higher prevalence (79% over 61% in 2022), and the difference grew over the period.

Practices charging lower fees (<$40) had a lower prevalence (66% versus 78% in 2022), and the difference increased slightly (Figure 2c).

By settings, the highest prevalence was found in suburban practices (over 80% in 2021–2022), but it is rural practices where the rates of closed books/limited enrolments grew the most, from 16% to 68% between 2019 and 2022 (Figure 2d).

The largest practices (>9,000 enrolees) were more robust to keeping enrolments open; they had the lowest prevalence of closed books/limited enrolments: 61% compared to 78–79% in smaller practices (Figure 2e).

Central and Southern regions had a larger prevalence than Northern and Midlands (approximately 80% to 60%) (Figure 2f).

We also examined prevalence across ownership models and the prevalence rates were almost identical.

Impact of closed books/limited enrolment on access to primary care and COVID-19 services

About 63% of respondents reported they did not see unenrolled patients, either at all (45%) or only in exceptional circumstances/emergencies (18%). When seen by a GP, unenrolled patients needed to wait longer for an appointment: unenrolled patients were less likely to have an appointment within a week compared to the enrolled (13% vs 44%) and for same/next day (6% vs 26%). Enrolled patients were also affected by the pressures on general practice. Eight percent of respondents said enrolled patients needed to wait longer than 2 weeks for an appointment, and around 19% added the comment that they operated some form of triage system for enrolled patients who needed urgent care.

Most COVID-19 related services offered to enrolled patients were not offered to unenrolled patients by a large proportion of practices, such as vaccinations (50%), telehealth (32%), eligibility for antivirals (25%), COVID-19 related follow-ups (24%) and free consultations for people with COVID-19 (23%).

Discussion

Prevalence and persistency

We have shown that closed books/limited enrolment is a common and increasing barrier to PHC provision in Aotearoa New Zealand. Internationally, Canada reported similarly high rates of about only 20% of GPs/family physicians accepting new patients in early 2000, a situation subsequently targeted by policy reforms introducing new models of care.[13]

The situation in Aotearoa New Zealand has clearly worsened over the last 3 years, as expected given the multiple impacts of the COVID-19 pandemic: a higher demand for services for COVID-19 detection and care and of mental health services,[14] longer times required for consultations under COVID-19 protocols, staff getting sick and border restrictions preventing the inflow of the medical workforce, adding to the already existing shortage of GPs and nurses. Aotearoa New Zealand is highly dependent on overseas health personnel, with around 46% of GPs having been trained overseas.[15] This rate is even higher in rural areas, 56% compared to 39% in main urban areas,[16] which may explain the increases in closed books/limited enrolments in rural areas while

Aotearoa New Zealand's borders were closed due to COVID-19 pandemic restrictions.

The prevalence of closed books in 2022 in the survey (27%) is similar but lower than the prevalence of closed books calculated from administrative data as part of the same study (33% in 2022),[17] and lower than two workforce surveys.[6,18] This is probably because those sources only considered open or closed books, excluding limited enrolments as an option. Considering only open or closed books fails to capture the complexity of the issue and overlooks what emerged as the most common situation in 2021 and 2022: general practices are being selective in accepting new enrolees.

From the provider perspective, having closed books/limited enrolment means that practices are left in the difficult position of having to reject people's applications to enrol. This is likely to add to the existing demoralisation and burnout among health personnel. In an earlier study,[15] nearly a third of RNZCGP members reported being burnt out. We also know that the effects of the COVID-19 pandemic linger in general practice through the effects of delayed presentation, interrupted treatments, increases in demand from those who had COVID-19 and who want more care and increases in demands for mental health consultations, adding to the work of primary care providers.[19,20]

Populations and practices most affected

Despite initial assumptions that Māori populations would be more affected by closed books, a lower prevalence of closed books/limited enrolments was found in Māori- and Pacific-enriched practices. This counterintuitive finding could be due to regional variations and limitations in classifying Māori- or Pacific-enriched practices. Māori are more likely to live in the Northern and Midlands regions where closed books/limited enrolment are lowest.[17] Besides, a recent study shows that the majority of Māori and Pacific populations in absolute terms are enrolled in practices where they would only make up a small proportion of enrolees, thus not being counted as Māori- or Pacific-enriched practices in our classification.[21] This seems also to suggest that Māori and Pacific populations are less likely to experience barriers to enrolment in Māori and Pacific practices than from traditional practice models. This is congruent with reports on the significant advantages of Māori and Pacific providers in providing health and social care to people with COVID-19.[22]

Similarly, despite higher workforce shortages, rural areas had lower rates of closed books (except in 2022), possibly linked to unique local values and financial sustainability concerns. VLCA and lower fees practices may need to keep their books open to remain financially sustainable, particularly as a result of the extra financial pressures in practices serving patients with high needs.[20,23] These findings underscore the need to carefully monitor healthcare access disparities, especially during times of healthcare reforms, to avoid unintentionally exacerbating inequities.

Impact on health access and ability to care

Survey data indicate that the unenrolled population typically is not seen by a GP at all or only in exceptional or urgent circumstances/emergencies. When they secure a consultation, they need to wait a longer time for an appointment than those enrolled. Primary care wait times have detrimental consequences on continuity of care and on patients' health outcomes, which are precisely what the enrolment system aims to promote, and leads to higher ED utilisation.[24,25]

A new impact we found is that most COVID-19 services like vaccinations and free COVID-19 consultations are often not available to unenrolled individuals. Similarly, a study in Ontario, Canada, found attachment with a PHC provider increased COVID-19 vaccination uptake: 20% of population attached to a PHC provider were not vaccinated, compared to 40% in the "uncertainly attached" population.[26] Restrictions to accessing COVID-19 services not only compromises basic health rights, but it also weakens the national pandemic response.

From a technical perspective, closed books/limited enrolment undermine the enrolment rate as a valid measure of "access to primary care" currently used by Manatū Hauora – Ministry of Health.[27] This is because people may not be able to enrol in their preferred/closest practice, and, thus, even if enrolled, their practice may not be truly accessible when far away or not a real choice. It is important to identify a more accurate proxy for PHC access, potentially modelled after Ontario's "unattached" population metric.[28]

Equity implications of limited enrolments

The key finding that most general practices are selecting who they enrol raises questions around what enrolment criteria are used, and how this

selection may further exacerbate existing inequities in health. We know that Māori and Pacific Peoples face barriers in access to care, arising from institutional racism, cultural differences and financial burdens.[1,29,30] Hence, we expect that the selection process for enrolments is also likely to affect those who are already most discriminated against.

Patient selection, also termed "cream skimming" of patients, is often found in primary care for multiple reasons, sometimes even as unintended consequences of well-meaning incentives. In California for example, practices disenrolled noncompliant patients to avoid low marks in clinical indicators used for quality assessments.[30] In Aotearoa New Zealand, there is concern that general practices are not enrolling higher-needs people where capitation formula are seen to not sufficiently compensate the higher costs associated with higher-needs enrolees,[20,23] and this experience is echoed internationally.[31]

The study points at the breach of national enrolment policy: "*No individual is to be refused enrolment on the basis of health status, anticipated need for health service or any form of discrimination*" (p 5).[32] Regular audits of Primary Health Organisations (PHOs) are essential for policy compliance. Various international approaches exist to address this issue: the UK's Primary Care Trust (currently Integrated Care Boards) could mandate patient acceptance; in Denmark, assigning patients to a practice or GP is an option,[33] and a study in Ontario found centralised wait lists effective.[34]

We recommend investigating fairer patient intake methods.

Limitations and further research

Our study has limitations, including survey size and self-selection; the survey is likely to be less representative than population data or random samples. Nonetheless, comparisons with other datasets suggest representativeness.[17] The voluntary nature of the survey may attract respondents with stronger opinions on closed books. Resource constraints limited our focus to GPs and Practice Managers; the study would benefit from wider representation of the PHC workforce, including nurses and nurse practitioners, often underrepresented in informing healthcare reforms.[35] In hindsight, additional questions on waiting lists, practice care models and disadvantaged populations could have further enriched our findings.

Conclusions

This study has explored how limiting new enrolments is a widespread barrier to health access in Aotearoa New Zealand. The problem existed previously but has been exacerbated by the COVID-19 pandemic. The most common situation is that practices select which patients they enrol or not, which adds extra concerns for equity in healthcare.

The study adds to the existing body of evidence on the difficulties and pressures experienced by the PHC sector. We believe tackling the issue of closed books and limited enrolment in general practice would lead to significant improvements in access to health services, ability to care and health equity. We hope these findings will contribute to the re-design of a more equitable health system through the ongoing Health and Disability System Reforms. Lastly, we anticipate the evidence generated will be informative for other countries with enrolment systems who are experiencing GP shortages by identifying ways to promote health outcomes and equity.

COMPETING INTERESTS
The authors declare that they have no competing interests. Ethics approval was obtained from Te Herenga Waka—Victoria University of Wellington Human Ethics Committee on May 3, 2022 (Approval 30193). All survey participants consented to the study. This work was funded by the Lottery Health Research Funding (Aotearoa New Zealand) (grant LHR-2022-186638). Additional funds from the Health Services Research Centre, VUW to pay for study participants' token monetary compensation. The Lottery did not have any role in the design, collection, analysis, interpretation of data or writing and submission of manuscript.

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Appendix 1: Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

Start of Block: Information and Consent

Q1 The survey will take only 10–15 minutes to complete. Please read the Information Sheet for survey participants for more details.

Do you consent to take part in this survey? By consenting to take part in this survey you agree to the following: You have read the information sheet for survey participants, You understand that you can contact the research team to ask questions and You understand that your information will be kept confidential.

- Yes (3)

End of Block: Information and Consent

Start of Block: Closed books Experience

Q2 What is your role in the practice?
(If you work in more than one practice, or own more than one practice, please answer all the questions based on the information from the practice that you last worked).

- GP (1)
- Practice owner (2)
- Practice manager (3)
- Other, please specify (4) _____

Q3 Have you closed or limited enrolments any time in your practice since 2019?
*(By **closed enrolment** we mean not able to enrol any new patients in your practice. By **limited enrolment** we mean enrolling only some selected new patients in your practice).*

- Yes (1)
- No (2)
- I don't know (4)

Skip To: End of Block If Have you closed or limited enrolments any time in your practice since 2019? (By closed enrolment w... = No

Skip To: End of Block If Have you closed or limited enrolments any time in your practice since 2019? (By closed enrolment w... = I don't know

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Page Break

Q4 In which of the following years did your practice have closed or limited enrolments for new enrolees?

	Fully open (1)	Limited enrolment (2)	Fully closed (3)
2019 (10)	○	○	○

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

2020 (35)	○	○	○
2021 (36)	○	○	○
2022 until 10 August (37)	○	○	○

Q5 Is your practice able to enrol new patients at the moment?
- Yes (2)
- Yes, but limited enrolment (5)
- No (1)

Q6 If you have/had limited enrolment in your practice currently or in the past, how did you decide whether to enrol a patient or not? *Please select all that apply.*
- We enrol those who live or work in close proximity to the practice (1)
- We enrol those who are family members of already enrolled patients (2)
- We enrol those with chronic or long-term health needs (3)
- We enrol those with immediate or acute health needs (4)
- We enrol those with few health needs (5)
- Other (6) _____
- Not applicable (7)

Q7 What are/were the reasons for not accepting new enrolees currently or in the past?
Please select all that apply:

	Yes (1)	No (2)
Too much workload at the time (14)	○	○
GP retired (9)	○	○
GP resigned (10)	○	○
GP moved overseas (13)	○	○
Nurse left practice (17)	○	○
Other staff left practice (18)	○	○
We couldn't recruit GPs (6)	○	○
We couldn't recruit nurses (7)	○	○
We couldn't recruit other staff (8)	○	○
Inadequate capitation funding (3)	○	○
Insufficient physical space/consultation rooms (4)	○	○

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

Impacts of COVID-19 (20)	○	○
Other (19)	○	○
Please specify (23)	○	○

Q8 Did you resolve the issue of closed or limited enrolment in your practice by employing new staff? *Please select all that apply:*

	Yes (1)	No (2)
Employed new GP (6)	○	○
Employed new nurse (7)	○	○
Employed new pharmacist (9)	○	○
Employed new manager (15)	○	○
Employed more administrative staff (10)	○	○
Other, please specify (4)	○	○
The issue of closed or limited enrolment still exists (5)	○	○
The issue of closed or limited enrolment has been resolved partially (20)	○	○

Q9 Did you resolve the issue of closed or limited enrolment in your practice by any other changes? *Please select all that apply:*

	Yes (1)	No (2)
Acquired more funding (1)	○	○
Increased fees (2)	○	○
Decreased consultation time (3)	○	○
Offered more telehealth services (4)	○	○
Developed more space/physical consultation rooms (8)	○	○

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

Developed alternative work processes to allow more enrolments (9)	○	○
Rearranged staff work roles (10)	○	○
Other, please specify (5)	○	○
The issue of closed or limited enrolment still exists (6)	○	○
The issue of closed or limited enrolment has been resolved partially (7)	○	○

Q10 What type of support would your practice need to manage the problem of closed or limited enrolment?

_____
_____
_____
_____

End of Block: Closed books experience

Start of Block: Practices who have not closed or limited enrolments to new patients

Display This Question:
If Have you closed or limited enrolments any time in your practice since 2019? (By closed enrolment w... = No

Q11 Has your practice put any strategies in place to avoid closed or limited enrolments?
- Yes. If so, what were they (4) _____
- No (5)

End of Block: Practices who have not closed or limited enrolments to new patients

Start of Block: Questions for Practice Managers

Q12 In your opinion, which AGE groups may have been **more** affected by closed or limited enrolments in your practice?
Please select all that apply.
- 0–17 years old (1)
- 18–24 years old (2)
- 25–49 years old (3)
- 50–64 years old (4)
- 65–75 years old (5)
- 75+ years old (6)
- All groups are equally affected (7)

Q13 In your opinion, which ETHNIC groups may have been **more** affected by closed or limited enrolments in your practice?
Please select all that apply.
- Māori (1)
- Pacific Peoples (2)

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

- European New Zealander/Pākehā (4)
- Indian (3)
- Chinese (6)
- Other Asian (10)
- Other (9)
- All groups are equally affected (11)

Q14 In your opinion, which INCOME groups may have been **more** affected by closed or limited enrolments in your practice?

Please select all that apply.

- Low income (Up to $25,000 per annum) (1)
- Below middle income ($25,001–$50,000 per annum) (2)
- Above middle income ($50,001–$75,000 per annum) (4)
- High income ($75,001 or more per annum) (3)
- All groups are equally affected (5)
- Patient's income unknown (6)

Q15 In your opinion, which NEEDS groups may have been **more** affected by closed or limited enrolments in your practice?

Please select all that apply.

- High needs population (many or complex chronic diseases) (1)
- Moderate needs population (few or easily managed chronic diseases) (2)
- Low needs population (regular check-ups and occasional ailments) (3)
- Very low needs population (occasional ailments) (4)
- All groups are equally affected (5)

End of Block: Questions for Practice Managers

Start of Block: Impact of COVID-19 on patient enrolments

Q16 Has COVID-19 impacted on your practice's capacity to enrol new patients?

- Yes. Please explain how: (1) _____
- No (2)

Q17 What COVID-19 related services that you provide to enrolled patients in your practice were inaccessible to unenrolled patients?

	Accessible to unenrolled (1)	Not accessible to unenrolled (2)
Vaccination (1)	○	○
Telehealth (2)	○	○
Eligibility for antivirals (4)	○	○
COVID-19 related follow ups (6)	○	○

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

Free consultations for people with COVID-19 (7)	○	○
Other (3)	○	○

End of Block: Impact of COVID-19 on patient enrolments

Start of Block: Recommendations

Q18 What would you recommend to the Ministry of Health and new authorities to address closed or limited enrolments?

Please select all that apply:

	Yes (1)	No (2)
Increase the number of GP training practices (15)	○	○
Recruit more overseas trained GPs (9)	○	○
Make the registration pathways simple for overseas trained doctors (21)	○	○
Support pay equity for GPs (20)	○	○
Increase the number of trainee nurses/nurse practitioners (6)	○	○
Recruit more nurse/nurse practitioners in practices (13)	○	○
Support pay equity for primary care nurses compared to hospital nurses (7)	○	○
Place more medical students in primary care (8)	○	○
Increase the number of medical students (14)	○	○
Re-orient the curriculum for medical students (10)	○	○
Increase the number of health improvement practitioners (19)	○	○
Employ more staff to support admin work of GPs (5)	○	○
Provide more funding for primary care (17)	○	○
Provide more government investment in building/resource (18)	○	○
Provide more software support to do admin work of GPs and practices (11)	○	○
Provide more telehealth support and infrastructure (16)	○	○
Other (12)	○	○

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

Q19 Do you have any other comments/thoughts about closed or limited enrolments?

_____
_____
_____
_____
_____

End of Block: Recommendations

Start of Block: Practice Profile

Q20 Former DHB your practice belonged to:
(Please select from the list)
- Auckland DHB (4) … Whanganui DHB (23)

Q21 PHO your practice belongs to:
(Please select from the list)
- Alliance Health Plus Trust (4) … Other (34)

Q22 What type of population does your practice typically serve?
Your answer to this question doesn't need to be based on your eligibility for rural funding support.
- Urban (1)
- Suburban (4)
- Provincial (5)
- Semi-rural (6)
- Rural (2)
- Other, please specify (3) _____

Q23 How many patients are enrolled in your practice?
- Up to and including 3,000 (1)
- 3,001–5,000 (2)
- 5,001–7,000 (3)
- 7,001–9,000 (5)
- 9,001–11,000 (6)
- 11,001–13,000 (7)
- 13,001–15,000 (8)
- 15,001 or more (9)

Q24 How many GPs work in your practice?
- 1 (8)
- 2 (11)
- 3 (12)
- 4 (13)
- 5 (14)
- 6 (15)
- More than 6, please specify the number (10) _____

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

Q25 How many FTE GPs work in your practice?
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- More than 6, please specify the number (7) _____

Q26 What is the ownership model of your practice?
- GP owned (1)
- Community owned or owned by a charity or trust (2)
- Fully or partially corporate owned (3)
- Fully or partially owned by a PHO or a GP organization (4)
- Fully or partially owned by a DHB (5)
- Fully or partially owned by an iwi (6)
- Owned by a university (7)
- Other, specify (8) _____

Q27 Is your practice:
- VLCA (1)
- Non-VLCA (2)

Q28 What is the fee for a standard GP consultation in your practice for an enrolled non-Community Service Card holding adult (18–64 years) during standard opening hours?
- Free (1)
- Up to $20 (2)
- $21–$40 (3)
- $41–$60 (4)
- $61–$74 (5)
- $75–$89 (6)
- More than $90 (7)

Q29 How soon can a typical ENROLLED patient get an appointment with a GP in your practice?
- Usually the same day/next day (1)
- Usually within a week (2)
- Usually more than a week (3)
- We have walk-in consultations only (4)
- Other (5) _____

Q30 How soon can a NON-ENROLLED patient get an appointment with a GP in your practice?
- Usually the same day/next day (1)
- Usually within a week (2)

Appendix 1 (continued): Survey about closed books or limited enrolments in primary care in Aotearoa New Zealand

- Usually more than a week (3)
- We have walk-in consultations only (4)
- Other (5) _____

Q31 What is the ethnicity profile of the population served by your practice?

	0–15% (1)	16–30% (2)	31–60% (3)	61–100% (4)
Māori (1)	○	○	○	○
Pacific Peoples (2)	○	○	○	○
European New Zealander/ Pākehā (3)	○	○	○	○
Indian (4)	○	○	○	○
Chinese (5)	○	○	○	○
Middle Eastern (7)	○	○	○	○
Latin American (8)	○	○	○	○
African (9)	○	○	○	○
Other (10)	○	○	○	○

End of Block: Practice Profile

Start of Block: Prize Draw

Q32 Would you like to enter into the prize draw or receive summary of the findings?

If you select yes, you will be directed to a separate site where you can enter your contact details. You will have a chance to win a $100 voucher as a token of appreciation for your time. None of those identification details will be linked to the answers you have provided for the survey questions.

- Yes (25)
- No (24)

End of Block: Prize Draw