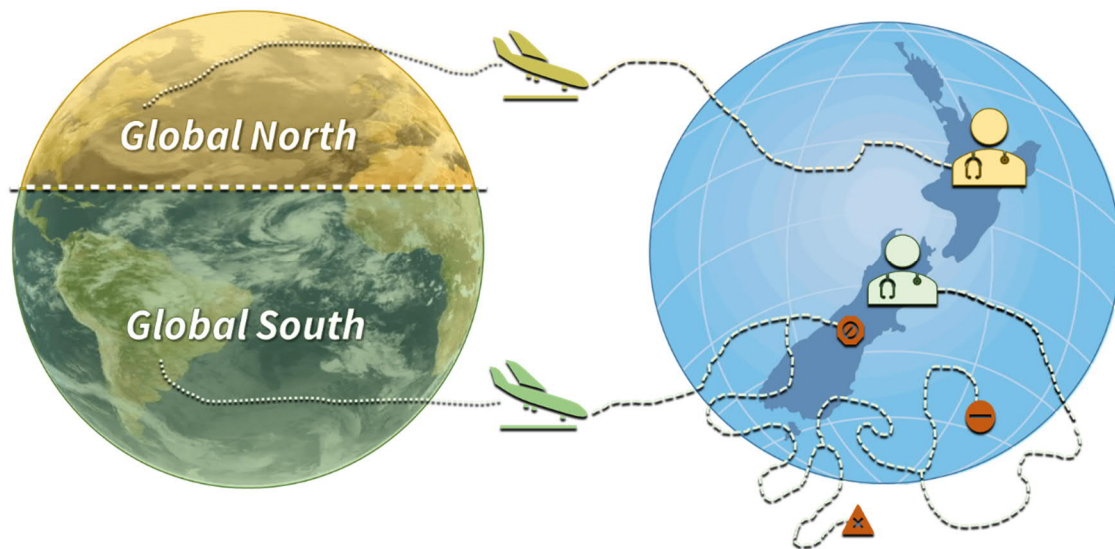


# UNDERSTANDING THE REGISTRATION EXPERIENCES OF OVERSEAS-TRAINED MEDICAL DOCTORS IN AOTEAROA NEW ZEALAND: A SNAPSHOT

Johanna Thomas-Maude (PhD Candidate)



*Doctors who trained in the Global North (high-income countries) tend to have smoother pathways to registering as doctors in Aotearoa New Zealand than those who trained in the Global South (low- or middle-income countries).*

Institute of Development Studies Working Paper

July 2024

*IDS Working Paper 2024*

*Institute of Development Studies Working Paper Series 2024*

*Understanding the registration experiences of overseas-trained medical doctors in Aotearoa New Zealand: A snapshot*

*Johanna Thomas-Maude*

ORCID : <https://orcid.org/0000-0003-0225-8489>

ISSN 1179-2973

---

Massey Research Online

Massey University's Institutional Repository

Massey author: Johanna Thomas-Maude (<https://orcid.org/0000-0003-0225-8489>)

Cite as: Thomas-Maude, J. (2024). *Understanding the registration experiences of overseas-trained medical doctors in Aotearoa New Zealand: A snapshot*. IDS Working Paper Series. Institute of Development Studies, Massey University. <https://mro.massey.ac.nz/handle/10179/70259>

## Abstract

This working paper provides a snapshot of findings from a doctoral research project that aimed to understand the experiences and outcomes of practising and non-practising overseas-trained medical doctors in Aotearoa New Zealand. This research addresses a knowledge gap by exploring the relationship between the experiences of these international medical graduates (IMGs), professional outcomes, and their designated pathway to registration. An exploratory sequential mixed methods research design was employed, consisting of semi-structured interviews of IMGs ( $n = 24$ ) and local experts ( $n = 9$ ), an online questionnaire of IMGs ( $N = 80$ ), and a document analysis of historical policies, grey literature, and media reports ( $N = 370$ ). Overall, the research found that IMGs experience differential processes and outcomes when seeking to practise medicine in Aotearoa New Zealand, depending on the country of their medical training and their designated medical licensing pathway. In general, doctors who trained in high-income countries tend to experience smoother pathways to registration. This results in unrealised potential for many IMGs who trained in low- or middle-income countries and are often already residing in Aotearoa New Zealand, with delays in registration exacerbating national medical workforce shortages. Compiling recommendations for change from research participants from diverse backgrounds, the paper argues that change is needed to create more equitable registration processes for IMGs in Aotearoa New Zealand.

# Contents

Introduction.....	1
Aotearoa New Zealand’s Practising Medical Workforce.....	1
Pathways to Medical Registration for International Medical Graduates (IMGs).....	4
Specialist Registration.....	4
Pathway 1: Vocational (VOC3) .....	4
Pathway 2: Locum Tenens (LOC).....	4
General Registration.....	5
Pathway 3: Australian Medical Graduates (AUS) .....	5
Pathway 4: Competent Authority (CA).....	5
Pathway 5: Comparable Health System (CHS).....	6
Pathway 6: General Registrants (GR) via Australia or the U.K. ....	7
Pathway 7: New Zealand Registration Examination (NZREX) .....	7
The NZREX Bottleneck.....	8
Methodology: Mixed Methods.....	11
Research Participants and Sampling .....	12
Findings .....	13
Registration and Licensing Pathways.....	13
Recognition of Prior Qualifications and Training .....	14
Delays and Inefficiencies.....	16
Financial Considerations .....	17
Timing.....	18
COVID-19 .....	19
Brain Waste.....	20
An Alternative Future?.....	22
Suggestions for Change from the Phase 1 Interviews .....	22
Suggestions for Change from the Phase 2 Questionnaire .....	23
Conclusions.....	27
References .....	28

## Introduction

Up to 40% of New Zealand medical graduates (NZMGs) trained in the early 2000s now live abroad (MCNZ, 2022b), often migrating to other Global North (high-income) countries for enhanced employment or training opportunities (ASMS, 2017). This contributes to what has been termed a *brain drain* phenomenon (Catley, 2001; Choy & Glass, 2002). Although retention of NZMGs has improved in the past decade, the country still relies on an influx of migrant doctors, with 43% of the 2023 practising medical workforce in Aotearoa New Zealand having trained overseas (MCNZ, 2024e). Nevertheless, Aotearoa New Zealand continues to experience chronic medical workforce shortages that have negative impacts on the public (e.g. Broughton, 2021; Ellingham, 2022; Shahtahmasebi, 2021; Trigger, 2022), and not all international medical graduates (IMGs) residing in Aotearoa New Zealand are currently able to practise medicine. This working paper provides an overview of findings relating to research that explored the experiences of both practising and non-practising IMGs in Aotearoa New Zealand.

## Aotearoa New Zealand's Practising Medical Workforce

Aotearoa New Zealand depends on IMGs to supplement the medical workforce. As illustrated in Figure 1, the proportion of IMGs in the "active"<sup>1</sup> medical workforce has fluctuated over the decades, with an overall increase from approximately 30% of the workforce in the 1980s (The Management Services and Research Unit, 1982) to 43% in 2023 (MCNZ, 2024e). The significant presence of IMGs in the Aotearoa New Zealand workforce is linked to both insufficient local training opportunities (Gauld & Horsburgh, 2015; Grimmond et al., 2021), and challenges in retaining NZMGs (ASMS, 2017; Lynch, 2008).

However, IMGs are also overrepresented in new annual registrations with the Te Kaunihera Rata o Aotearoa | Medical Council of New Zealand (MCNZ). While NZMGs have tended to constitute 60-70% of the active medical register since the 1980s (see Figure 1), NZMGs have made up less than 40%, and at times less than 20%, of new annual registrants since 1987 (see Figure 2), with the remaining proportion of registrants made up of IMGs. These high levels of IMG registration compared to NZMGs reflect the short-term nature of many IMGs' employment in Aotearoa New Zealand, with 40% of registered IMGs staying for less than two years (MCNZ, 2022a).

---

<sup>1</sup> The definition of what constitutes the "active" workforce has varied across time. From 1980 to 2009, the "active" workforce corresponds to the respondents of annual MCNZ medical workforce surveys, completed each year by the 31<sup>st</sup> of March (Hannah, 1996; Hannah et al., 1991; MCNZ, 2024a, 2024m; The Management Services and Research Unit, 1982). From 2010, the "active" workforce refers to those with current Annual Practising Certificates as of 30<sup>th</sup> September that year (MCNZ, 2024f).

Figure 1

*“Active” Medical Workforce in Aotearoa New Zealand Between 1980 and 2023, According to Status as Locally (NZMGs) or Overseas-Trained (IMGs)*

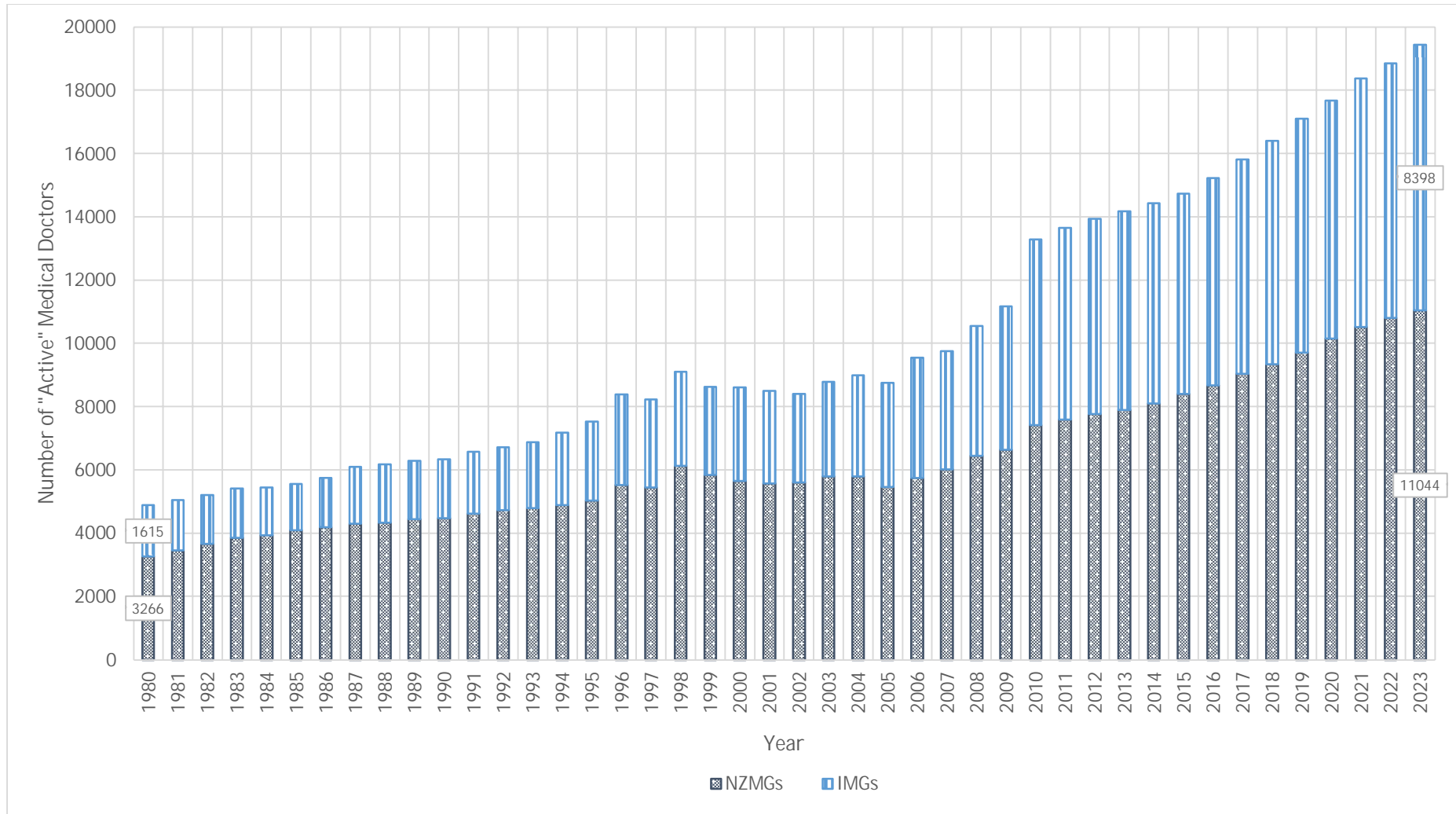
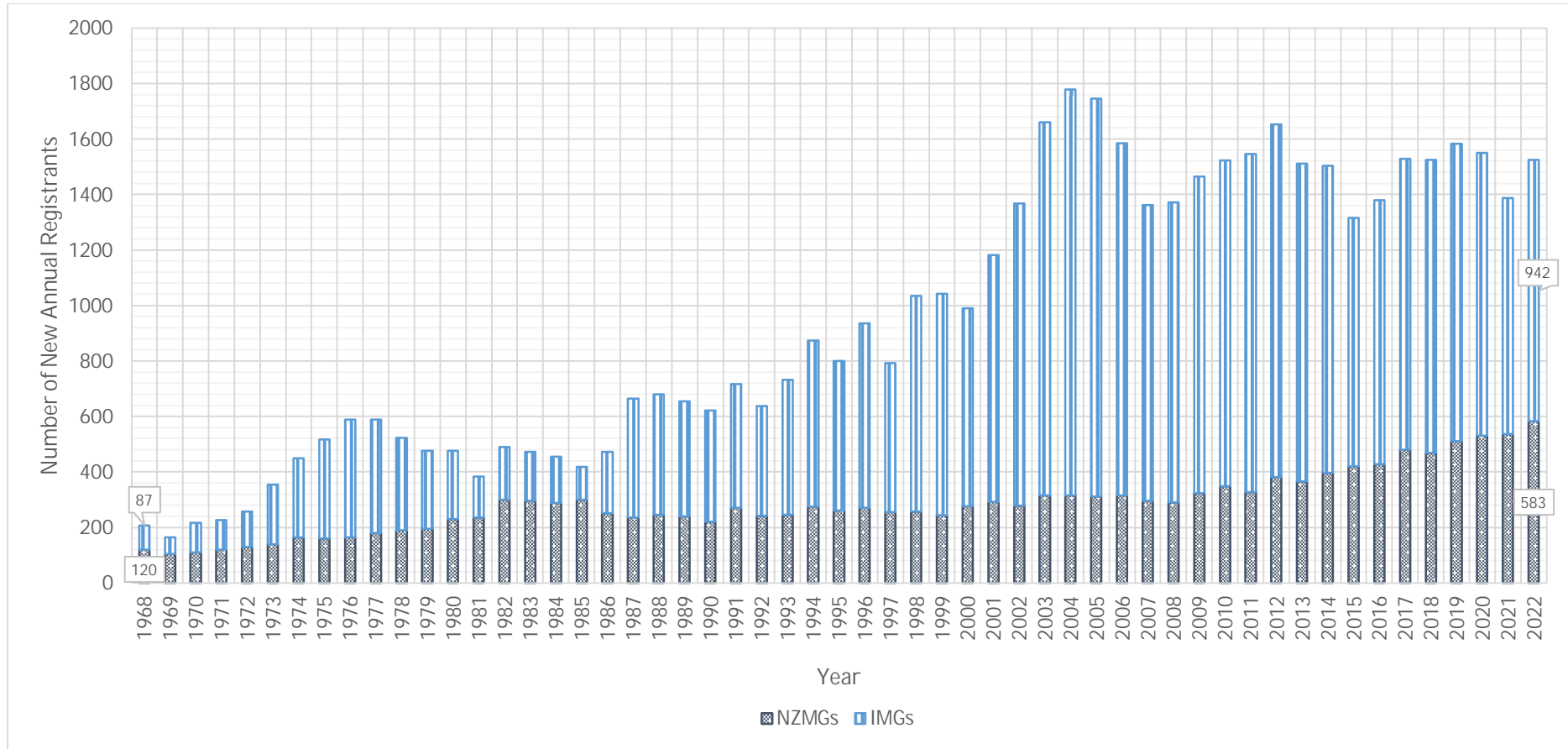


Figure 2

Annual Estimated Number of New Registrants With MCNZ, From 1968-2022, According to Status as Locally (NZMGs) or Overseas-Trained (IMGs)<sup>2</sup>



<sup>2</sup> Data have been compiled from a range of workforce surveys and annual reports (Hannah, 1996; Hannah et al., 1991; MCNZ, 2024a, 2024f; The Management Services and Research Unit, 1982). Data fluctuate between different reports (for example, workforce survey reports or MCNZ annual reports), due to the time of year when reports were published, and also depending on which types of medical registration are included in the data. Recognising the challenges with accessing consistent data, the purpose of this chart is to capture the overall trends in annual registrations, rather than provide detailed insights from each year.

## Pathways to Medical Registration for International Medical Graduates (IMGs)

Seven primary pathways to registration as medical professionals are available to IMGs seeking to work as doctors in Aotearoa New Zealand – two for *specialist registration* and five for *general registration*. These pathways are outlined below.

### Specialist Registration

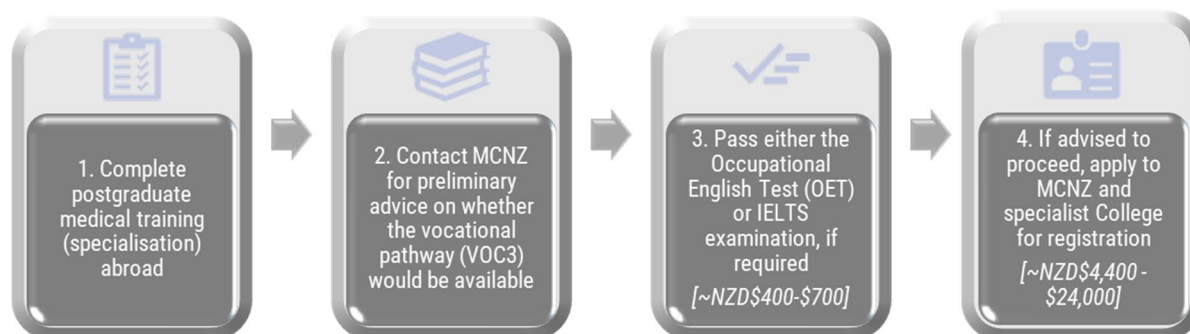
Specialist registration applies to IMGs with a recognised postgraduate specialist qualification beyond their primary medical qualification such as Paediatrics, General Practice, Gynaecology, Psychiatry, Surgery, and other specialisations.

#### Pathway 1: Vocational (VOC3)

First, the vocational (VOC3) pathway (MCNZ, 2024k) facilitates long-term registration for specialists from 33 different fields, who completed specialist training outside of Australia or Aotearoa New Zealand, on a case-by-case basis (see Figure 3). The VOC3 pathway is the most expensive on paper, primarily due to the vocational practice assessment, which costs over NZD\$19,000. However, this assessment is only required on a case-by-case basis after working fulltime for 12 to 18 months in Aotearoa New Zealand and earning a specialist doctor salary (MCNZ, 2024k). Conversely, costs indicated on other pathways occur before commencing work.

Figure 3

*Pathway 1: Vocational 3 (VOC3) (Source: Created by Author)*

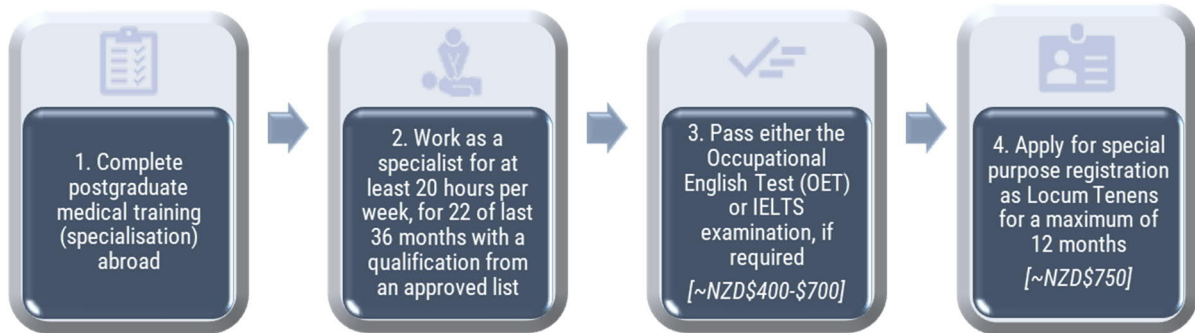


#### Pathway 2: Locum Tenens (LOC)

Second, the Locum Tenens (LOC) pathway (see Figure 4) allows registration of up to 12 months for specialists in a narrower list of fields (25 in total), and only for those IMGs who completed postgraduate training and/or registration in Australia, Aotearoa New Zealand, the U.K., Ireland, Canada, U.S.A., or South Africa (MCNZ, 2015).

Figure 4

Pathway 2: Locum Tenens (LOC) (Source: Created by Author)



### General Registration

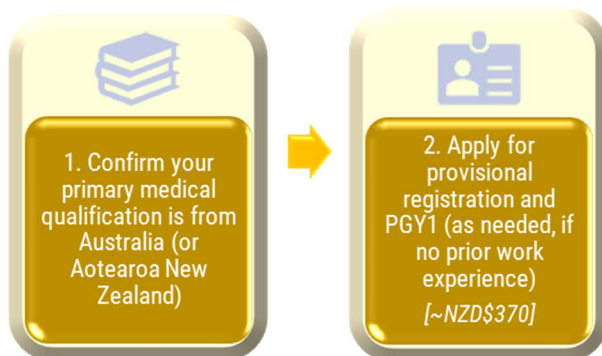
The five remaining pathways are for general registration – that is, for doctors who did not train as specialists before coming to Aotearoa New Zealand, or whose specialist qualifications are not recognised by MCNZ and the specialist Colleges of their field.

#### Pathway 3: Australian Medical Graduates (AUS)

Australian medical graduates on Pathway 3 (AUS) typically undergo a licensing process similar to NZMGs (refer to Figure 5), working under supervision in either Australia or Aotearoa New Zealand for two years after graduation (MCNZ, 2024d).

Figure 5

Pathway 3: Australian (and New Zealand) Medical Graduates (AUS) (Source: Created by Author)

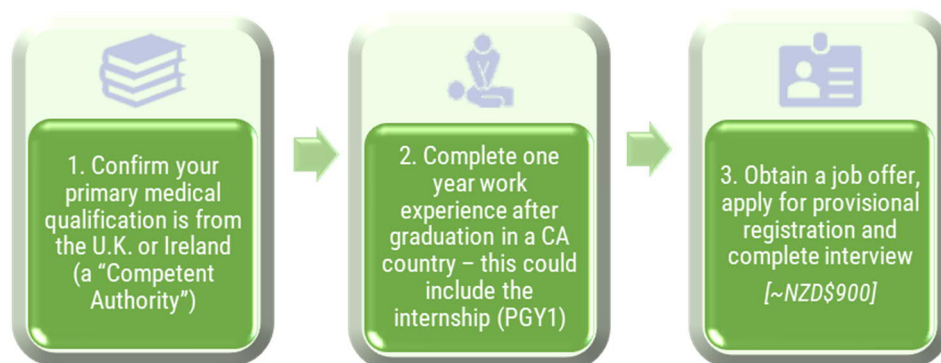


#### Pathway 4: Competent Authority (CA)

Fourth, the Competent Authority (CA) pathway, as illustrated in Figure 6, is for individuals who trained in the U.K. or Ireland and worked there for at least one year (MCNZ, 2024c).

Figure 6

Pathway 4: Competent Authority (CA) (Source: Created by Author)

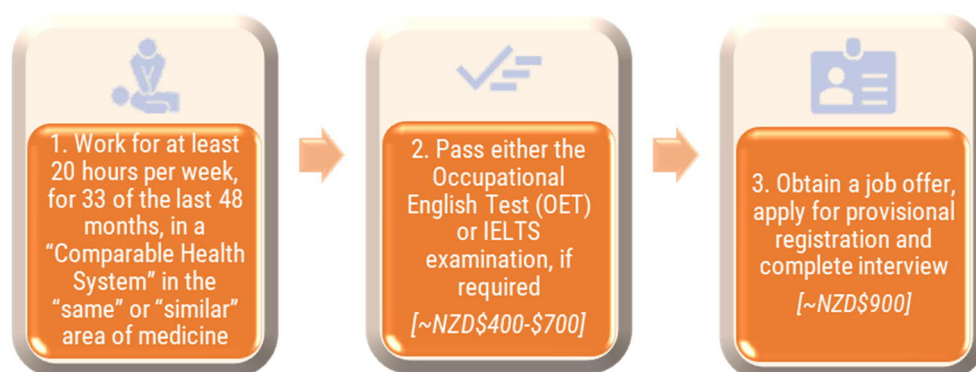


### Pathway 5: Comparable Health System (CHS)

Pathway 5, the Comparable Health System (CHS) pathway (refer to Figure 7), requires doctors to demonstrate extensive clinical experience within the past four years in a country deemed to have a “Comparable Health System”, regardless of the country of their primary qualification (MCNZ, 2024b). MCNZ determines whether a country is considered as a Comparable Health System based on public health indicators such as life expectancy, mortality rates, the doctor-to-population ratio, the similarity of the registration system, and public health expenditure per capita. These indicators are linked to human and economic development and, notably, the 2024 list of 24 accepted CHS countries (MCNZ, 2024b) are all classified as “high-income” by the United Nations (2019, p. 4). As of July 2024, the CHS countries included Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, the Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the U.K., and the U.S.A. (MCNZ, 2024b).

Figure 7

Pathway 5: Comparable Health System (CHS) (Source: Created by Author)

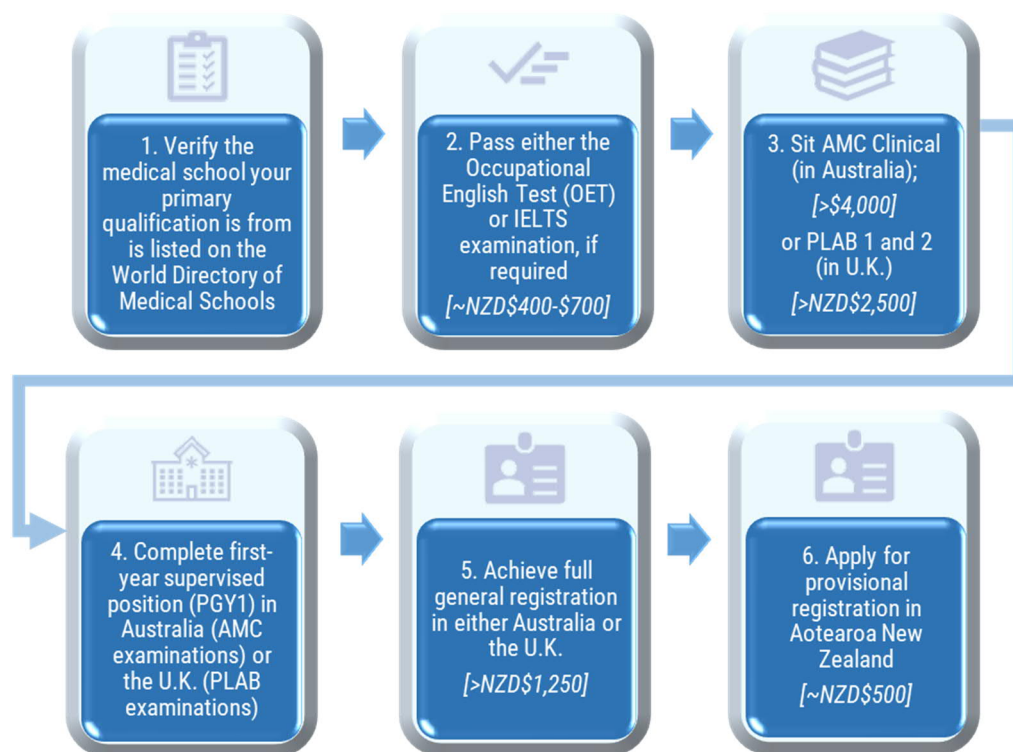


### Pathway 6: General Registrants (GR) via Australia or the U.K.

Sixth, the GR pathway (MCNZ, 2024f) is the newest option, introduced in 2017, and is designed for IMGs who did not initially train in Australia or the U.K. but have since obtained registration and worked for at least one year in either of these countries (refer to Figure 8).

Figure 8

*Pathway 6: General Registrants (GR) via Australia (from 2017) or the U.K. (from 2023) (Source: Created by Author)*

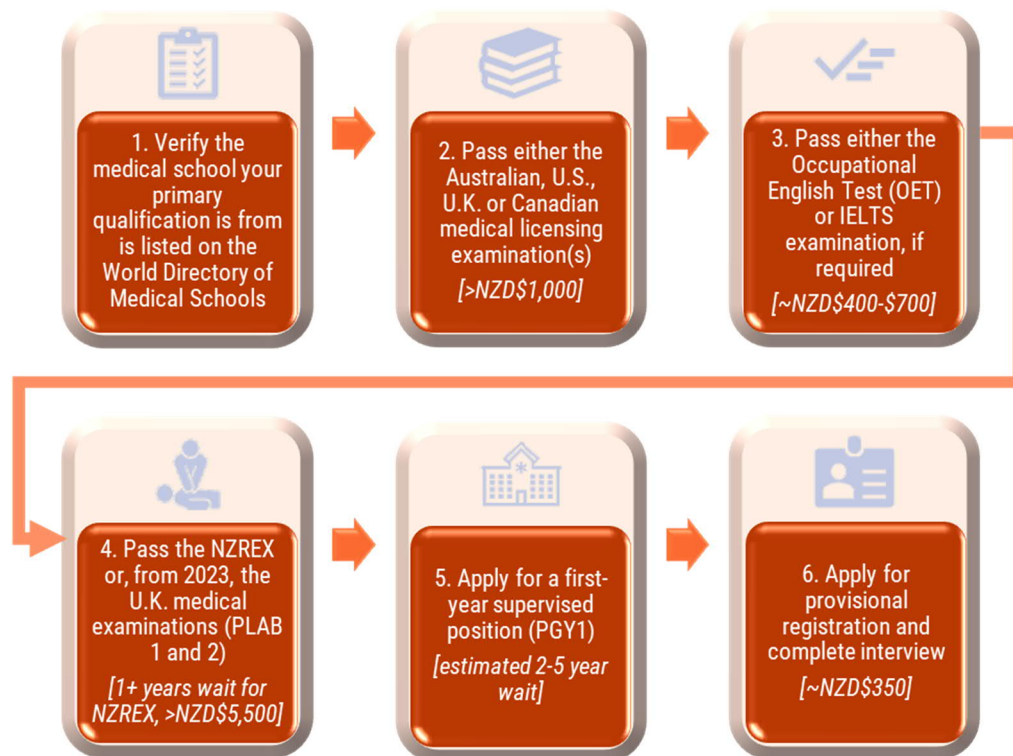


### Pathway 7: New Zealand Registration Examination (NZREX)

Finally, IMGs who are not eligible for Pathways 1-6 follow the NZREX pathway (MCNZ, 2024i), where they are required to complete additional international medical knowledge examinations, and have their clinical skills assessed in the New Zealand Registration Examination (NZREX). They must then complete two years of supervised House Officer (PGY1 and PGY2) positions alongside NZMGs to obtain their full licensure (see Figure 9). An NZREX pass is valid for five years before expiring, meaning NZREX doctors have five years to obtain a PGY1 position. Due to the nature of licensing pathways that prioritise IMGs from 24 Global North (high-income) countries, NZREX doctors usually completed their medical training and/or recent work experience in low- or middle-income countries.

Figure 9

Pathway 7: New Zealand Registration Examination (NZREX) (Source: Created by Author)



### The NZREX Bottleneck

NZREX candidates often encounter challenges in securing first-year supervised House Officer positions (known as PGY1). These roles, which are designed as training positions for recent medical graduates, are rarely offered to NZREX candidates because the limited number of PGY1 places roughly corresponds with the medical students graduating from Aotearoa New Zealand universities, and NZMGs are given priority (MCNZ, 2024i).

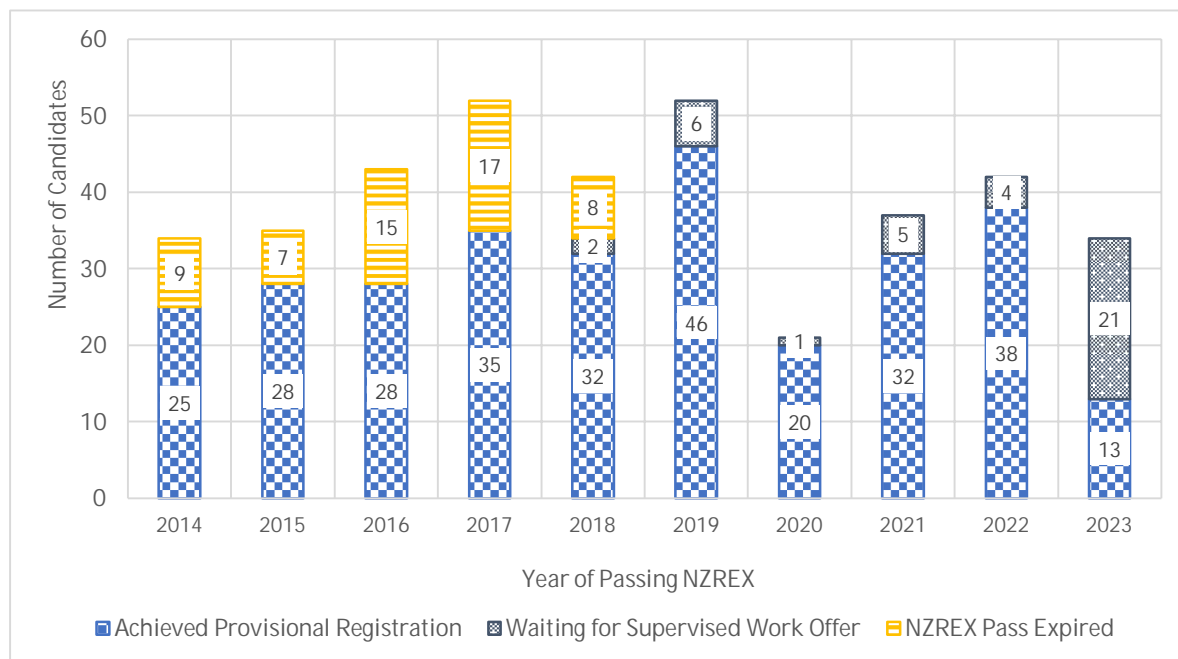
MCNZ offers publicly available data on the status of NZREX candidates, which have been compiled by the author in Figure 10 to understand the current state (MCNZ, 2024h)<sup>3</sup>. Between March 2014 and September 2023, 392 individuals (of 684 attempts) successfully passed the NZREX examination (57% pass rate). As of October 2023, 297 (76%) of these candidates had obtained provisional registration. This means they were offered a full or partial PGY1 position. Meanwhile, 29% of the cohort who successfully passed the NZREX between March 2014 and June 2018 ( $n = 56$ ) never managed to achieve provisional registration before their NZREX pass expired after five

<sup>3</sup> As MCNZ publishes data online for the past five years only, information on NZREX passes and subsequent registration prior to 2018 are no longer available online. However, these data were saved by the author during the course of this research and incorporated into Figure 10.

years. As of October 2023, 39 candidates with valid NZREX passes from 2018-2023 were waiting for a PGY1 placement.

Figure 10

*Status of Candidates Who Passed NZREX Between March 2014 and September 2023 (as of October 2023)*



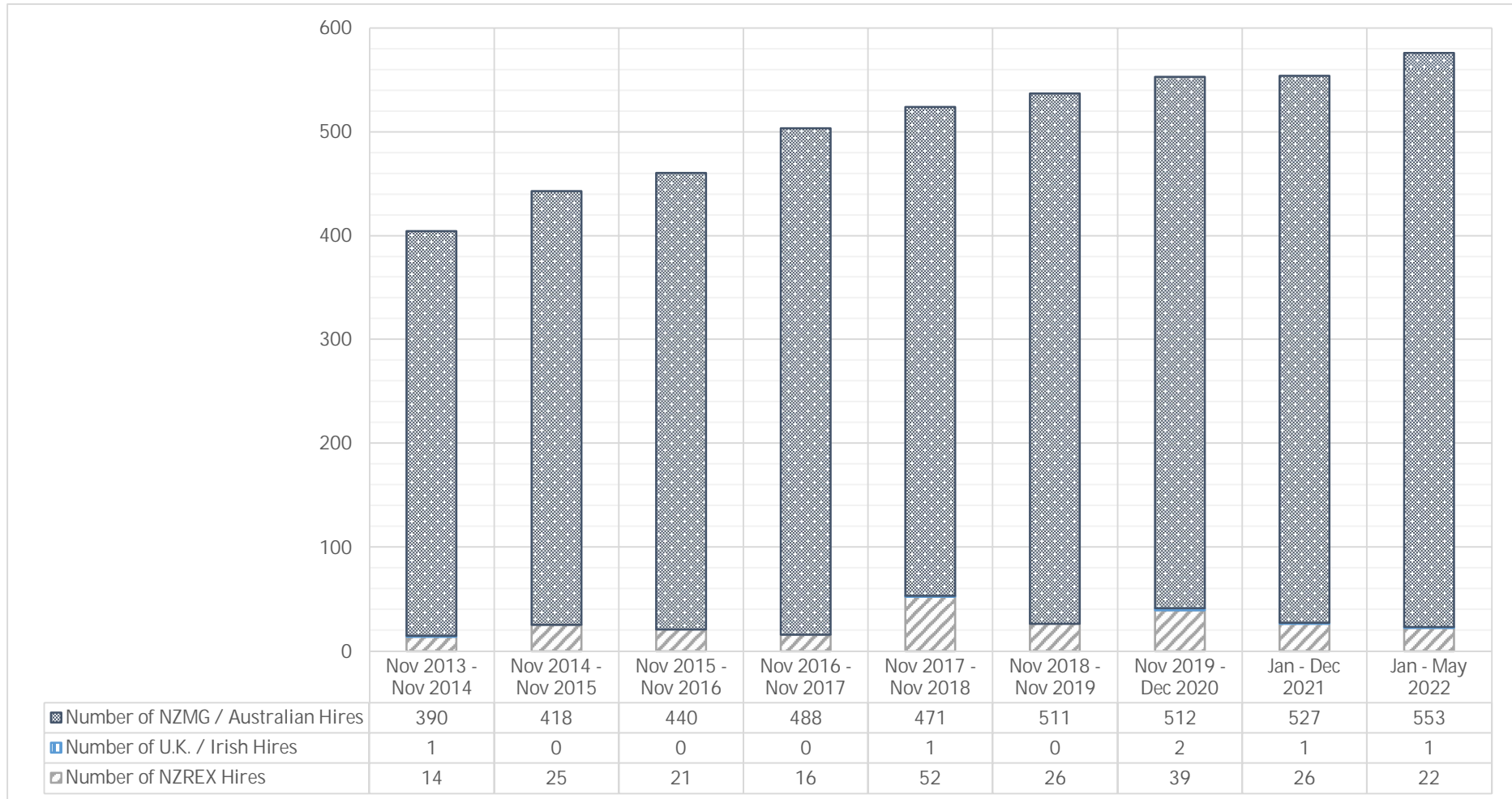
Unlike doctors who become registered on the other licensing pathways, with a direct pathway to New Zealand residency (Immigration New Zealand, 2024), NZREX candidates also do not usually experience any immigration benefits. They are thus unlikely to successfully register without already having the right to work and reside in Aotearoa New Zealand. As a result, many IMGs who already reside in the country and have met (or are striving to meet) MCNZ standards, are unable to work as doctors (Fenton & Chillag, 2022; RNZ, 2023; Thomas-Maude, 2022, 2023; Thomas-Maude & McLennan, 2022). There is thus a critical bottleneck in the NZREX pathway that does not exist for the VOC, LOC, AUS, CA, CHS and GR licensing pathways.

While a higher proportion of NZREX passes since 2019 have successfully become registered, fewer candidates have been able to take the examination due to reduced examination offerings during and after COVID-19, and more positions have not been made available for NZREX graduates overall. As highlighted in Figure 11<sup>4</sup>, although the total PGY1 position offerings have increased from 404 in 2014, to close to 575 in 2022, this 42% increase in total positions has not been reflected in NZREX hires.

<sup>4</sup> Data are sourced from information requests made in 2022 by the author to the different District Health Boards (DHBs) in Aotearoa New Zealand (now known as Te Whatu Ora | Health New Zealand).

Figure 11

Total PGY1 Annual Hires Across Aotearoa New Zealand Between November 2013 and May 2022



Therefore, in addition to the visible bottleneck of 39 IMGs who passed the NZREX and were waiting for PGY1 positions (as of October 2023), there is also an invisible bottleneck for IMGs waiting to take the examination. With no publicly available information on numbers of NZREX enquiries, and without waiting lists in place, this blockage is not measurable, yet very real, for dozens, if not hundreds, of IMGs hoping to work in Aotearoa New Zealand.

Responding to this bottleneck issue, MCNZ and other actors, such as Te Whatu Ora | Health New Zealand, have explored some ways to make the NZREX pathway more viable. As illustrated in Figure 9, the PLAB Part 2 clinical examination is now accepted as an alternative to NZREX (MCNZ, 2023); although IMGs must travel to the U.K. to undertake this (General Medical Council, 2023b). Furthermore, a pilot programme to allow 10 NZREX graduates to complete a significant portion of their PGY1 training in a primary care setting was underway in the Waikato at the time of this research in 2023 (Te Whatu Ora | Health New Zealand, 2023). Additionally, a new bridging programme has been completed for a handful of NZREX graduates in Auckland to familiarise themselves with the Aotearoa New Zealand health system prior to applying for PGY1 positions (Te Whatu Ora | Health New Zealand, 2023). While demonstrating a desire to address the PGY1 bottleneck, these programmes unfortunately “provide only a handful of places to the backlog of overseas doctors” on the NZREX pathway (Cassie, 2022, para. 2); 61 applications were received for only 10 places in the GP pilot programme (Cassie, 2023). The impact of these changes on IMGs on the NZREX pathway thus remains uncertain.

## Methodology: Mixed Methods

An exploratory sequential mixed methods design was used to explore IMG experiences in Aotearoa New Zealand, with three key phases. First, semi-structured interviews were conducted with overseas-trained medical doctors (IMGs) in Aotearoa New Zealand ( $n = 24$ ), alongside relevant local experts ( $n = 9$ ). Insights drawn from thematic analysis of these data allowed for the development of an online questionnaire in the second phase of the research, which aimed to understand the prevalence of these themes among a wider pool of migrant doctors who reside or have resided in Aotearoa New Zealand ( $N = 80$ ). Descriptive analysis was employed to explore relationships and correlations between independent variables (such as licensing pathway, gender, and specialisation) and dependent variables reflecting IMG experiences in Aotearoa New Zealand. Finally, in Phase 3, qualitative and quantitative data were integrated, and these findings were complemented by a robust policy and workforce data analysis, utilising publicly available statistics from MCNZ and other sources ( $N = 370$ ).

Two full ethics applications were approved by the Massey University Human Ethics Committee before commencing data collection for both Phase 1 (SOA 22/19, approved on 7<sup>th</sup> July 2022) and

Phase 2 (OM1 23/03, approved on 24<sup>th</sup> March 2023). The research adhered to prescribed ethical protocols, including informed consent, secure data storage, and confidentiality. All data for this research were collected between July 2022 and July 2023.

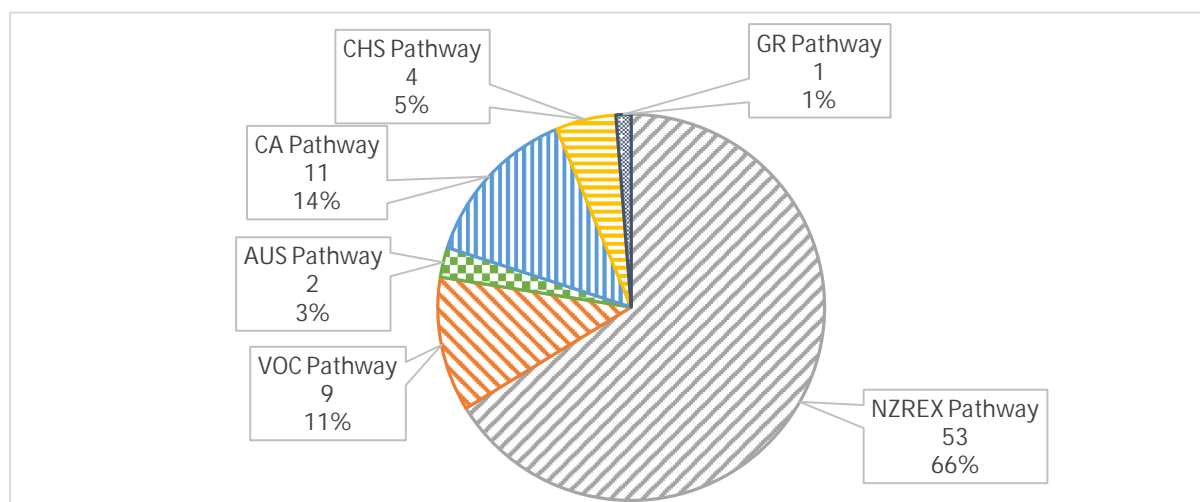
## Research Participants and Sampling

Research participants from Phase 1 are referred to in this working paper by their participant number and role or medical licensing pathway. For example, “Local Expert 1 (Employer)” or “IMG 1 (NZREX)”.

In Phase 2, questionnaire participants were not directly asked which licensing pathway they had pursued, or were pursuing, in case they were unsure. Instead, they were asked questions that enabled the researcher to group participants in accordance with MCNZ’s self-assessment tool (MCNZ, 2024j), as summarised in Figure 12.

Figure 12

*Questionnaire Respondents According to Their Medical Licensing Pathway Eligibility (N = 80)*



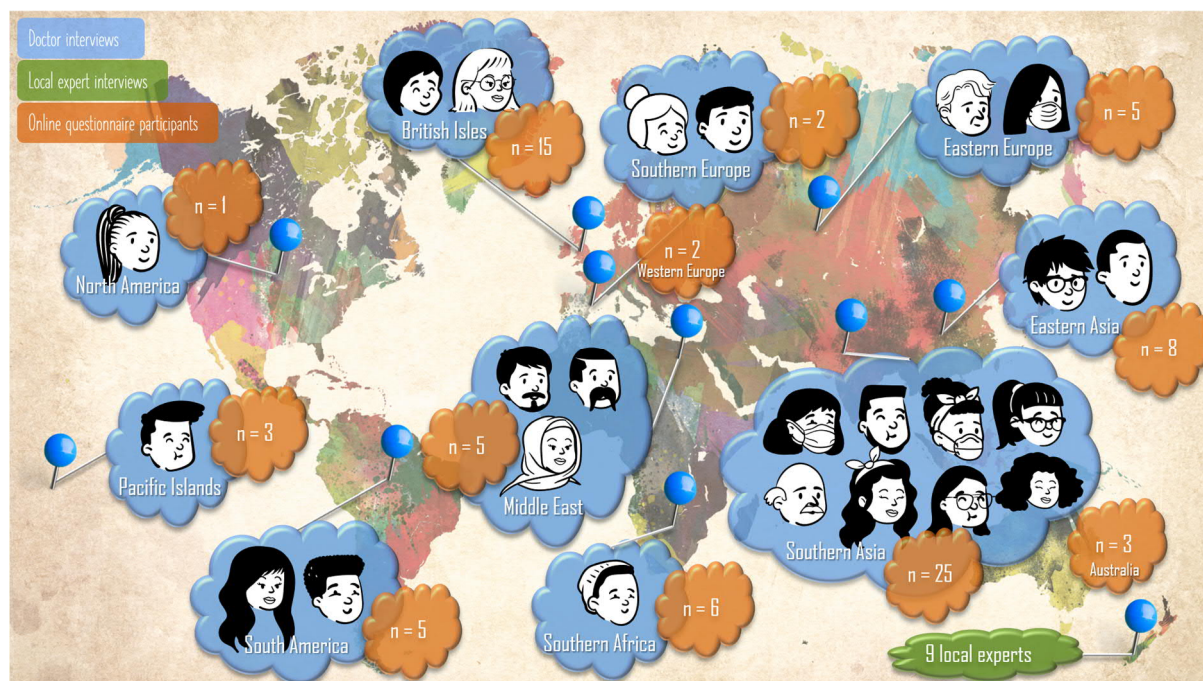
As seen in Figure 12, there were very few responses for the GR, AUS and CHS pathways, prompting the decision to collate some responses to ensure meaningful analysis. Respondents were consequently grouped into three main categories:

- Specialist Pathways: All IMGs who indicated their overseas specialist qualifications were recognised in Aotearoa New Zealand ( $n = 9$ ).
- Competent/Comparable Pathways: IMGs eligible to register on the AUS, CA, CHS, and GR pathways, who are all required to demonstrate experience and/or qualifications from specified high-income countries, without further examination ( $n = 18$ ).
- NZREX Pathway: IMGs who did not indicate their eligibility for any of the other pathways were classified as NZREX doctors ( $n = 53$ ).

Figure 13 provides a visual overview of research participants in both phases of this research according to their region of primary medical qualification and/or expertise.

Figure 13

*Overview of Research Participants and their Region of Primary Medical Qualification / Expertise*



## Findings

The following sections provide a snapshot of findings from this research in relation to key themes. Beginning with a consideration of the relationship between licensing pathway and the registration experiences of IMGs in this research, the working paper then discusses the recognition of qualifications and experience, the barriers and obstacles to registration, and potential options for changing the medical licensing landscape.

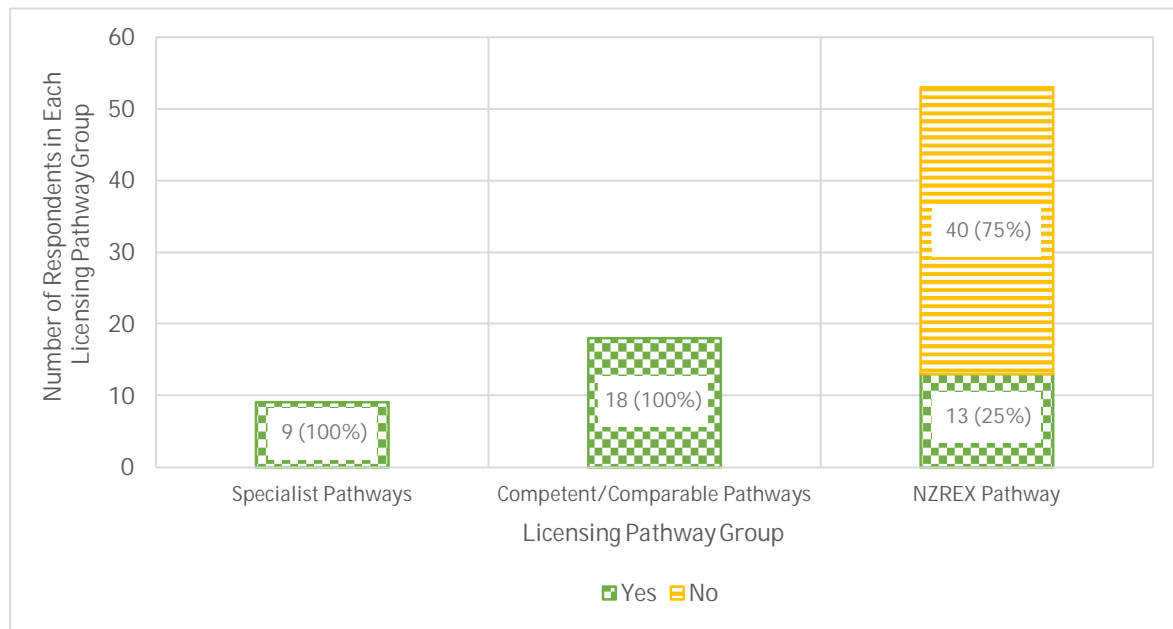
### Registration and Licensing Pathways

This research found there was a relationship between an IMG's licensing pathway and whether or not they had achieved provisional or full medical licensing to work as a doctor in Aotearoa New Zealand. Of the 19 NZREX IMGs interviewed in Phase 1, only six (32%) had obtained any form of registration. In contrast, four out of five (80%) of the non-NZREX respondents were provisionally or fully registered at the time of interview. These trends were also seen in the questionnaire. As shown in Figure 14, only 25% of NZREX questionnaire participants had ever been registered as medical doctors in Aotearoa New Zealand, compared to 100% of specialists and Competent/Comparable general registrants. This finding aligns with earlier studies (e.g., Lillis & Roblin, 2014; Mpofu & Hocking, 2013), news articles (e.g., Bhamidipati, 2022; RNZ, 2023), and

workforce data (e.g., MCNZ, 2024h), suggesting that concerns around the bottlenecks and viability of the NZREX pathway remain current, impactful, and far from resolved.

Figure 14

Questionnaire Responses to “Have You Ever Achieved Provisional or Full Registration to Work as a Medical Doctor in New Zealand?” by Respondent Licensing Pathway (N = 80)

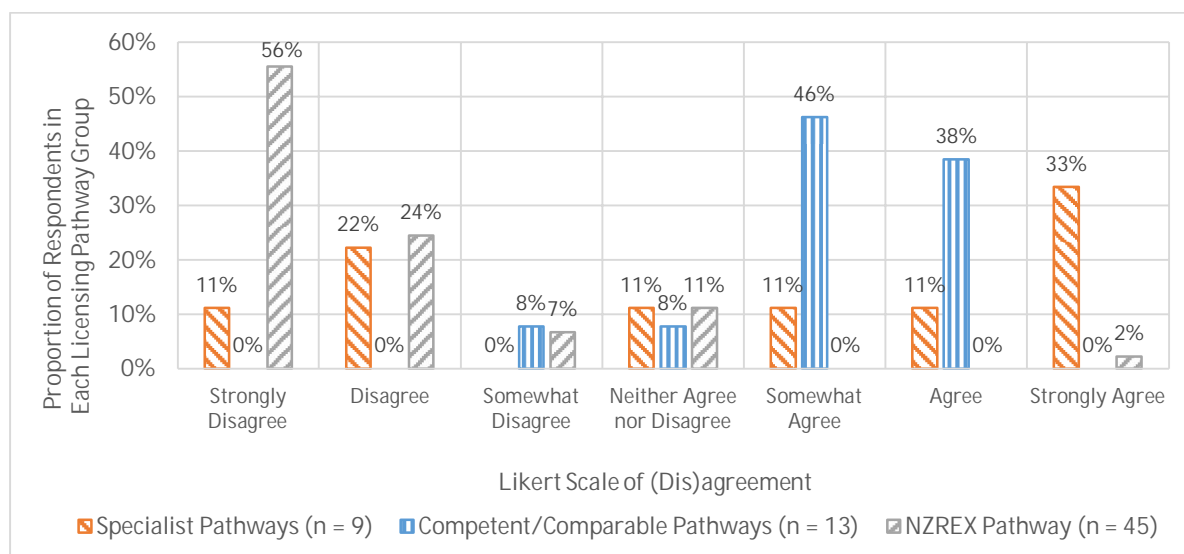


### Recognition of Prior Qualifications and Training

The experience of IMGs attempting to attain medical registration in Aotearoa New Zealand was related to the extent to which their professional skills, qualifications, and training were recognised and valued in this context. As depicted in Figure 15, just 2% of NZREX doctors responding to the questionnaire either somewhat agreed, agreed, or strongly agreed that their overseas training and qualifications are valued in Aotearoa New Zealand, as opposed to 56% of recognised specialists and 85% of Competent/Comparable general registrants.

Figure 15

Proportion of Questionnaire Respondents in Each Licensing Pathway Group According to Their Responses to “My Overseas Training and Qualifications Are Valued in New Zealand” (N = 67)<sup>5</sup>



Despite being less likely to have achieved medical licensing, NZREX participants often felt that their overseas training and experience, usually in low- or middle-income countries, provided them with skillsets that distinguished them from those who trained in high-income countries in ways that should be considered advantageous. IMG 1 (NZREX) highlighted that “while New Zealand’s health system is more effective, the level of exposure, training, and resilience you learn in [Southern Asia]<sup>6</sup> is higher”. Similarly, a questionnaire participant (NZREX) emphasised that:

Being labelled ‘non-comparable’ is also frustrating when this could be valuable to New Zealand; for example, doctors who have worked in [Sub-Saharan Africa] have a significant amount of trauma experience, experience working under a constrained system, and in a multi-cultural setting.

Nevertheless, NZREX participants felt this clinical experience was often undervalued and underutilised, compelling individuals to “start from scratch” (IMG 1, NZREX). This sense of starting over was exacerbated for IMGs whose had previously obtained specialist qualifications,

<sup>5</sup> Charts relating to the Likert scale matrices (‘Strongly Disagree’, ‘Disagree’, ‘Somewhat Disagree’, ‘Neither Agree nor Disagree’, ‘Somewhat Agree’, ‘Agree’, ‘Strongly Agree’) in the questionnaire have been presented as percentages of the total subgroup, rather than whole numbers. This is because of the vast differences in the total size of the specialist ( $n = 9$ ), Competent/Comparable ( $n = 18$ ), and NZREX ( $n = 53$ ) pathway subgroups. Three respondents among the specialists are equivalent to 33% of the total subgroup, as opposed to just 6% of NZREX. It was therefore considered more useful to capture these trends with percentages in the charts.

<sup>6</sup> To protect participant confidentiality, this paper describes their backgrounds by geographic regions of training/origin, rather than specific countries.

but were only eligible for general registration via the NZREX pathway. As explained by IMG 11 (NZREX):

I realised that to pass the exam [NZREX], I need to study medicine again. I studied medicine more than 20 years ago...even if they would give me the opportunity to pass this exam in my native language, I couldn't, because I need to start again – Psychiatry, Paediatrics, and all of General Medicine. I worked as a surgeon and that's still quite a broad field, but of course there's nothing in Surgery about Neurology, nothing about Psychiatry, or Obstetrics.

Extensive specialised experience that was not accepted on the VOC3 or LOC pathways thus posed additional challenges for undertaking the NZREX, with specialists on the NZREX pathway unable to complete an assessment or additional (re)training in their specialty.

Furthermore, not all specialists whose qualifications were recognised in Aotearoa New Zealand reported positive experiences with registration. One Western European participant explained that her specialist qualifications were still not recognised after three years, which meant she had to register via the CHS pathway as a generalist. Similarly, an Australian-trained specialist attributed the underutilisation of his prior training to “extreme and archaic limitations on enhanced skill sets (sometimes called enhanced scopes of practice) that are simply not recognised” (Questionnaire Respondent, VOC). Such anecdotes provide context for why one-third of specialist respondents to the questionnaire disagreed to some extent that their training and qualifications were valued in Aotearoa New Zealand (see Figure 15).

In contrast to the other two licensing groups, Competent/Comparable general registrants tended to indicate more consistently that their qualifications and training were recognised and valued in Aotearoa New Zealand. Nevertheless, some participants expressed concerns relating to the recognition of prior experience on the CHS pathway. IMG 2 (CHS) observed this dilemma first-hand, struggling to meet required hours to work as a General Practitioner (GP) due to recent Emergency Department experience, despite having completed postgraduate specialisation as a GP in a Western European country. Similarly, IMG 23 (NZREX) mentioned the difficulty this restriction poses for junior doctors, who typically spend their initial years rotating between departments, thus falling short of clinical experience requirements to work in any one field, even if they have worked for at least 33 months in a CHS country.

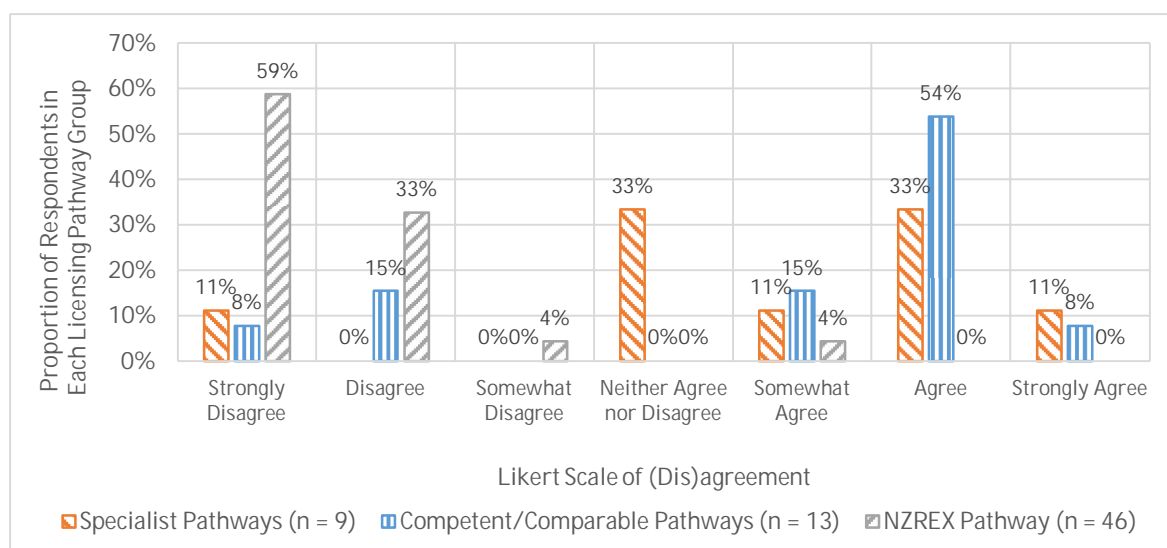
### **Delays and Inefficiencies**

Participants also voiced concerns about the practical limitations experienced during medical registration, describing inefficient, expensive, and inflexible processes. The average wait time for registration among questionnaire participants was much higher for NZREX doctors. Recognised

specialists and Competent/Comparable pathway questionnaire respondents all indicated their process took less than one year. In contrast, for NZREX participants, the licensing process took an average of three and a half years for those who had successfully registered<sup>7</sup>. Figure 16 illustrates the varying sentiments across different licensing pathways.

Figure 16

*Proportion of Questionnaire Respondents in Each Licensing Pathway Group According to Their Responses to "The Time it Takes to Register as a Medical Doctor in New Zealand Is Reasonable" (N = 68)*



Among NZREX doctors, 91% either strongly disagreed or disagreed that the time required for medical licensing is reasonable. In contrast, IMGs who pursued registration through specialist or Competent/Comparable general licensing pathways were more likely to find the time associated with medical licensing reasonable. Nevertheless, the diversity of responses in Figure 16 suggests that IMGs from all backgrounds may experience inefficiencies and delays with medical registration.

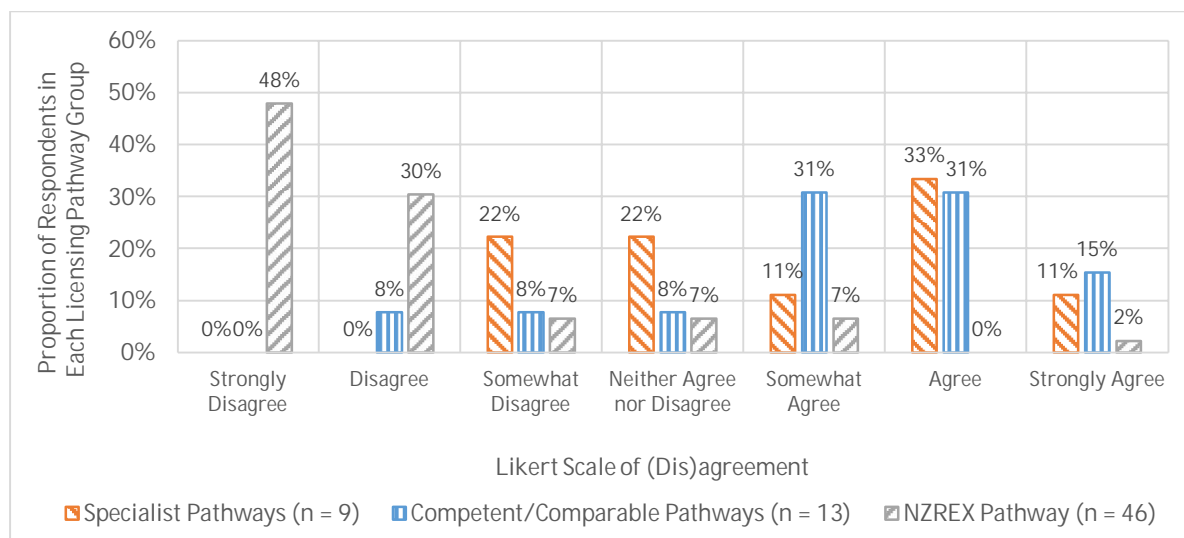
### Financial Considerations

Uneven experiences with delays in registration were compounded by the experiences IMGs reported with financial considerations. Figure 17 provides a snapshot of the uneven cost burdens experienced by IMGs who completed the questionnaire, with just 9% of NZREX doctors somewhat agreeing, agreeing, or strongly agreeing that the cost of medical licensing in Aotearoa New Zealand was reasonable, compared to 56% of specialists and 77% of Competent/Comparable pathway respondents.

<sup>7</sup> Note that only the year was provided by respondents, not the month. This average wait time should be taken as an approximation only.

Figure 17

Proportion of Questionnaire Respondents in Each Licensing Pathway Group According to Their Responses to “The Cost of New Zealand Medical Licensing for Doctors who Trained Overseas Is Reasonable” (N = 68)



The upfront cost burden is not only higher for NZREX doctors on paper (see Figure 9), but also tends to be perceived as unreasonable in practice. When interviewed, IMG 23 highlighted this financial strain, emphasising the lack of a guarantee of employment even after passing NZREX:

They say that there is no guarantee for us to employ you even after you clear your NZREX – it’s there in the official website, we do understand that. But moving to a new country, spending so much energy and effort studying, clearing all those exams – some people will be earning, but other people will be dependent on their husband or their wife to take the exam...that money is not simple money, it’s more than NZD\$5,000.

The financial burden of medical registration further compounded the practical limitations many individuals faced as new migrants, and did not always pay off. Despite investing in their relocation to Aotearoa New Zealand and the numerous examinations associated with medical registration, many NZREX participants were still unable to work as doctors at the time of this research.

### Timing

Challenges with delays and financial concerns when seeking medical registration also depended on when an individual moved to Aotearoa New Zealand. One questionnaire respondent, who arrived via the CA pathway in 2013, believed that “things have drastically changed for the worse since then, and many overseas doctors looking to move here that I speak to are generally unhappy with the remuneration and working conditions”. Many NZREX doctors also shared the belief that conditions and processes were more effective and supportive historically. Specifically, systemic

changes that resulted in reduced support programmes and employment options for NZREX doctors began in 2012, in response to challenges NZMGs were beginning to face with obtaining PGY1 employment after graduation (Taylor, 2016). Bridging programmes to facilitate the smooth transition of NZREX candidates into practice in Aotearoa New Zealand, and an NZREX examination preparation course, which involved hands-on experience in the health system, were discontinued from 2012. As IMG 4 (NZREX) explained:

In 2011, I was told by everyone who had taken the exam before that 'it's amazing, you get a job straight away, you can easily come to work here', and then when I arrived [in 2012] everything changed...it took me almost two years to get a job.

Moreover, after 2012, NZREX doctors were also removed from the Advanced Choice of Employment (ACE) matching system, a national online employment application portal that is now only available for NZMGs and graduates from Australia applying to PGY1 positions (Thomas, 2018). Several NZREX participants were frustrated by this (IMG 4; IMG 8; IMG 9; IMG 10; IMG 15; IMG 16), with IMG 15 explaining that prior to 2012:

...you could put your names into a common registry [ACE], and it's okay if, like, all the local graduates got placed ahead of us – because at least we'd get placements somewhere. But when I passed the NZREX exam they did away with the ACE matching scheme, and we were then left to scramble, applying all over the place, going to individual hospitals saying, 'Take me, take me!'

## COVID-19

In addition to more restrictive policies and worsening working conditions over the decade prior to this research, COVID-19 was seen to exacerbate the challenges IMGs faced with medical registration and employment. While Aotearoa New Zealand's initial COVID-19-free status was "touted as something that could benefit us" (IMG 14, VOC), participants did not see positive impacts of this in practice (e.g., IMG 17, NZREX; IMG 22, CA).

Instead, "COVID made everything take even longer" (IMG 2, CHS) and, despite policies that were in place to support the streamlined immigration of essential healthcare workers during COVID-19, lockdowns still saw delays (Expert 4, Recruitment Agent). IMG 14 (VOC) also reported worsening working conditions during the pandemic, with higher patient loads and limited additional remuneration, remarking that "the workforce is being so critically affected at the moment that there's not even supervision for new overseas doctors". Therefore, while COVID-19 may have encouraged some changes to employment and licensing processes (such as the pilot programmes described to address the NZREX employment bottleneck), participants tended to

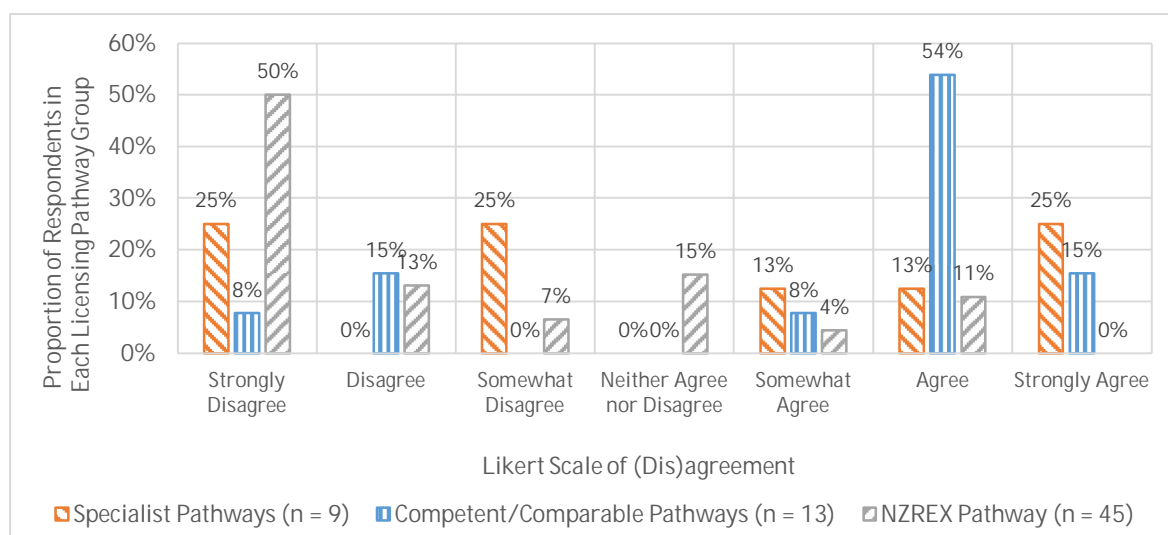
agree that the pandemic has highlighted “a substantial area of neglect in the health workforce” (Expert 1, Employer), thereby exposing a “brewing crisis” (IMG 16, NZREX).

### Brain Waste

Many research participants grappled with the unexpected lack of recognition or utilisation of their qualifications and experience. As summarised in Figure 18, 77% of Competent/Comparable general registrants either somewhat agreed, agreed, or strongly agreed that they could draw on their full potential in Aotearoa New Zealand, compared to 50% of recognised specialists and just 15% of NZREX participants.

Figure 18

*Proportion of Questionnaire Respondents in Each Licensing Pathway Group According to Their Responses to “I Am Able to Utilise my Full Potential as a Medical Professional in New Zealand” (N = 67)*



Furthermore, participants demonstrated awareness and concern for the broader contributions of this unrealised potential to the population of Aotearoa New Zealand – which some referred to as a waste of skills, or *brain waste* (Pang et al., 2002). One questionnaire respondent (NZREX) emphasised the negative impacts of brain waste, commenting that “it is harmful to the overwhelmed NZ [Aotearoa New Zealand] healthcare system to have competent doctors living in New Zealand restricted from practising their profession in any form”.

The obstacles some IMGs experience to practising their profession in Aotearoa New Zealand also contribute to a broader environment characterised by worsening working conditions, inflexible structures, low remuneration compared to many CHS countries, and significant delays in registration. This relates to the trend that 40% of registered IMGs stay in the country for less than two years (MCNZ, 2022a). IMG 4 (NZREX) observed this dynamic in practice:

If you think about the future, it doesn't make sense...often U.K. graduates come in their second year [PGY2]. I think that is where the biggest issue is, because they come here for like a working holiday – the moment you hire them, employ them, you know, it's a short-term thing.

The notion of British graduates coming to Aotearoa New Zealand for a “working holiday” reflects the language used by MCNZ (2022b) to describe doctors from the U.K., Ireland, and North America who come to Aotearoa New Zealand on short-term placements, a trend also observed by Gorman (2011), who referred to such IMGs as “medical-tourists”. Similar experiences with this short-term hiring approach in practice led IMG 9 (NZREX) to ask:

Why are they so willing to take someone from overseas for the short-term? Why don't they have a long-term plan? What about the doctors who are already here and want to stay but can't work?

Moreover, IMGs migrating with the intention of contributing to the local health system may, ironically, become a burden in other ways if they are unable to work as doctors. IMG 10 (NZREX) explained that he received government unemployment benefits while waiting to secure his PGY1 role, while Expert 5 (Local Government Representative) highlighted the broader ramifications of underutilising the skills and qualifications of IMGs. In her words:

We have to talk about the human side, because these are people...when they become citizens and they're depressed, they'll have mental health issues, and then they'll go into the health system. These are people that came here to contribute; now they're going to become a drain because of the way we've treated them...there are flow on effects to their families and broader society.

IMGs who are affected by brain waste may inadvertently contribute to an internal “drain” (Expert 5, Local Government Representative) of resources if they are unable to find another way to meet their professional goals or practical living expenses. Local experts also expressed their reservations about the alignment of current medical licensing processes with the workforce needs of Aotearoa New Zealand. Expert 1 (Employer), for example, was concerned about the heavy reliance on specialists registering through the Locum Tenens (LOC) pathway at his hospital, which only allows these IMGs to stay for up to 12 months, leading to a continuous staffing turnover that incurs higher costs overall.

The general sentiment among participants in this research was that doctors on the NZREX pathway who wished to stay in Aotearoa New Zealand long-term tended to encounter the most barriers to practising medicine. However, for IMGs with smoother pathways to licensing, the

factors drawing them to Aotearoa New Zealand were often seen as insufficient to encourage them to stay longer than a “working holiday”. In short, the doctors who want to work in the country long-term often cannot, and the ones who can, often do not wish to.

### An Alternative Future?

While participant accounts, especially relating to the NZREX pathway, speak to complex barriers and obstacles to medical licensing, a common sentiment expressed by participants was that these challenges are “eminently solvable” (Expert 9, Policy Advisor) and should have “simple solutions” (IMG 24, NZREX). This section describes some of the suggestions that participants had for alternative futures for IMG medical registration in Aotearoa New Zealand.

### Suggestions for Change from the Phase 1 Interviews

During the Phase 1 interview, there was an overall call for transparency, fairness, and a culture shift in medical regulation, along with an expressed need for greater collaboration between MCNZ and employers to address areas of neglect in the health workforce, particularly in General Practice (GP) settings. IMGs also emphasised the need for improved mentorship structures and formal cultural safety and orientation courses for all those starting work in Aotearoa New Zealand. Other suggestions from participants spoke to the need to look at related models and systems internationally, such as Australia’s licensing pathways and the U.K.’s approach of allowing some IMGs to work in non-training jobs. In addition, emphasis was placed on the importance of professional development opportunities to attract more migrant doctors, more transparent advertising of positions (particularly PGY1), and encouraging IMGs to work in rural settings as a means of addressing workforce shortages. Participants also discussed the need to address discrimination and inequities in medical licensing, with a suggestion being made for the Race Relations Commissioner to conduct a review of medical licensing pathways for transparency and fairness.

Furthermore, there were a considerable number of recommendations related to the NZREX pathway. These included a call for more streamlined registration processes for IMGs who have passed NZREX or equivalent examinations, with participants suggesting that NZREX candidates be readmitted to the online ACE matching portal. IMGs also expressed the need for financial support on the NZREX pathway, suggesting reduced fees or access to loans. By contrast, the idea of offering unpaid PGY1 rotations for gaining experience and addressing financial constraints for employers was also proposed as a way of overcoming the current bottleneck caused by limited House Officer positions. This was accompanied by suggestions to run more NZREX examinations and offer more practical options such as observerships, clinical attachments, and a standardised, comprehensive bridging programme available for all NZREX graduates, to ensure they understand

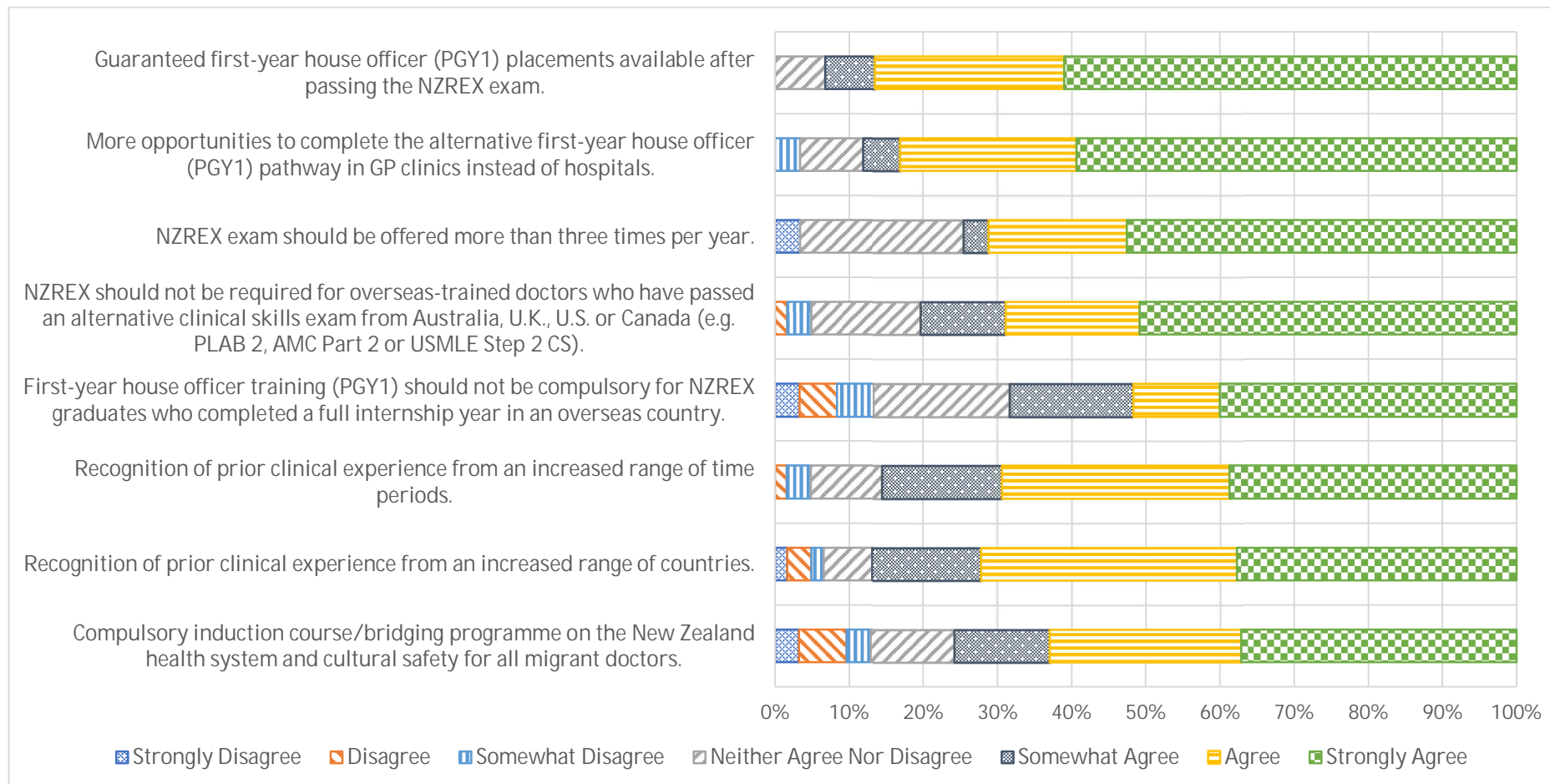
the health system and possess the required skills when entering the workforce. A suggestion was also made that MCNZ should review all NZREX applications on a case-by-case basis, considering “comparable” components of an individual’s training that may not be visible through national health system indicators, given the intranational diversity in quality of medical education in many low- and middle-income countries. This speaks to the general sentiment that MCNZ and the specialist Colleges should adopt a more open approach to assessing qualifications from a broader range of countries.

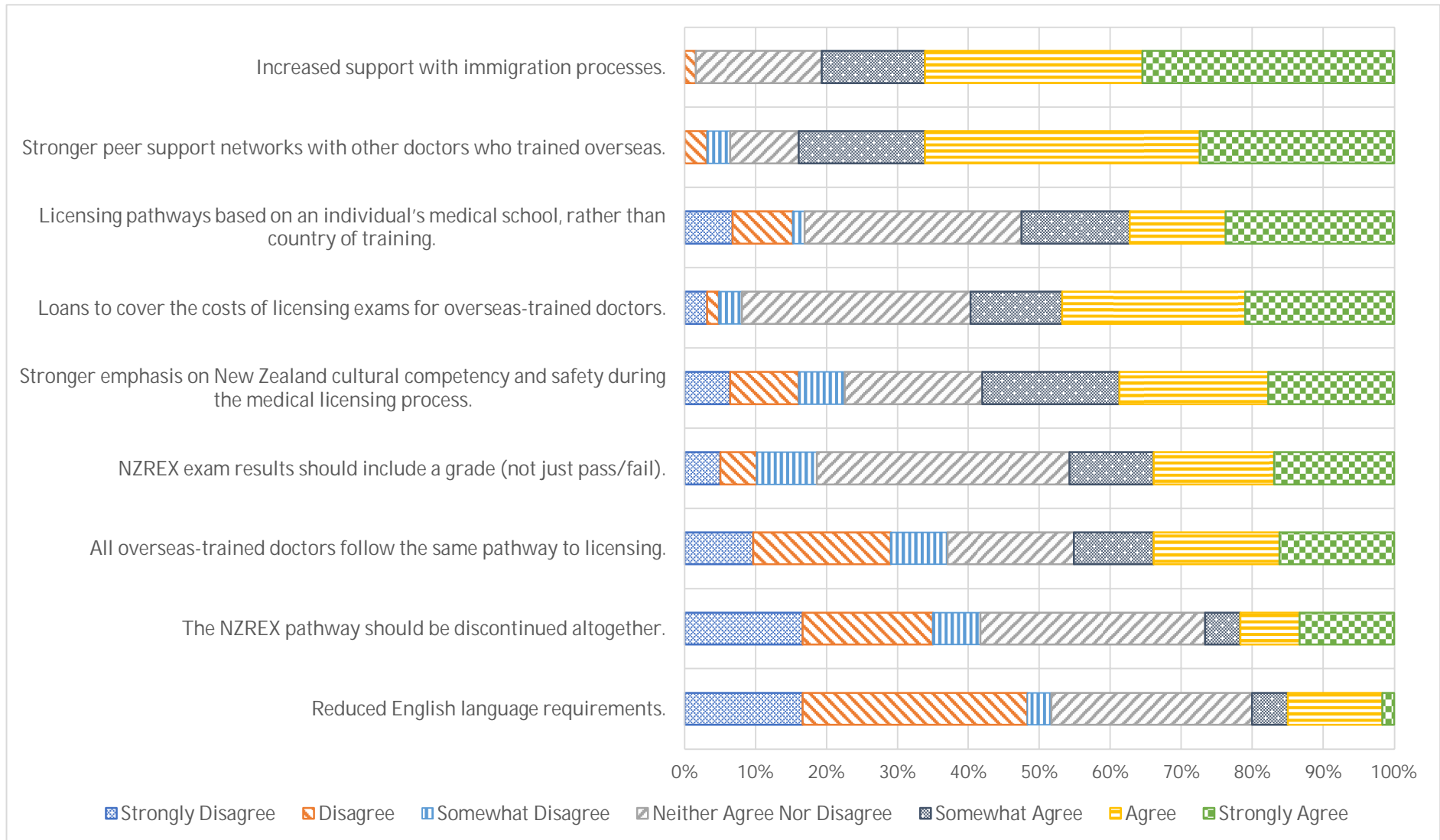
### **Suggestions for Change from the Phase 2 Questionnaire**

The suggestions from Phase 1 were then compiled into the online questionnaire, giving participants the opportunity to express the extent of their agreement with seventeen options for change. As shown in Figure 19, the most popular suggestions related to enhanced recognition of prior clinical experience and improved opportunities for NZREX candidates in their pursuit of employment and training. Furthermore, there was strong support for the prospect of completing PGY1 in a General Practice (GP) setting. This points to the potential benefits of expanding the current GP pilot programme in the Waikato.

Figure 19

Suggestions for Change According to the Extent of Agreement of Questionnaire Respondents (N ≈ 59 to 62)





Other suggestions from Phase 1, such as standardising medical licensing for IMGs from all backgrounds, were met with mixed responses among questionnaire participants. Such changes would have the potential to impact IMGs from CHS countries currently benefiting from smoother registration processes, and participants may have been reluctant to support suggestions that imply further regulation. Equalising medical licensing processes for IMGs from designated Comparable Health System (CHS) countries, and those from non-CHS, usually Global South (low- or middle-income country) backgrounds, may entail some kind of standardised examination or assessment process for all IMGs that leads to a viable, unbroken pathway to employment.

However, 96% of IMGs in Aotearoa New Zealand currently gain registration without sitting an examination, with NZREX doctors who have successfully registered estimated to make up around 4% of the IMG workforce (RNZ, 2023). Requiring these 96% of IMGs, who constitute more than 40% of the total active medical workforce, to take a licensing examination, would represent a significant shift in registration processes. This was already trialled historically in Aotearoa New Zealand, with a sharp decline in registrations from IMGs, particularly from the U.K./Ireland, when the NZREX was briefly required by all IMGs in the late 1990s (MCNZ, 1999). Fears of a resulting workforce crisis at the time prompted MCNZ to make an exception for doctors who trained in the U.K., Ireland, Australia, Canada, South Africa, and the U.S.A. (MCNZ, 1998). This exception was formalised by the CA and CHS pathways from 2004. Requiring examinations or assessments of IMGs currently exempt from NZREX may thus be perceived as creating barriers to registration for many doctors from CHS countries that do not currently exist. This could explain the hesitancy for many research participants to agree with such a suggestion for change.

Nevertheless, there are also a number of findings in this research that challenge the assumption that more restrictive licensing processes for doctors from CHS countries would ultimately reduce the available medical workforce. While creating more standardised and equitable processes may have the appearance of imposing greater restrictions for some individuals, having a viable pathway to licensing without the delays of at least three years currently associated with NZREX could facilitate the migration of an even greater number of prospective IMGs. Furthermore, workforce data highlight how doctors on the NZREX pathway, and those from low- and middle-income countries (e.g., MCNZ, 2024g), are more likely to remain in Aotearoa New Zealand long-term, thereby potentially enhancing patient access to continuity of care.

Moreover, even if standardised licensing processes are perceived as a deterrent by doctors currently benefiting from streamlined registration pathways, such processes could require all IMGs to demonstrate a required standard, including in relation to cultural safety. This has the potential to facilitate more equitable healthcare employment for IMGs, as well as more equitable healthcare provision for patients in Aotearoa New Zealand – this is particularly pertinent to the

Mā ori and Pasifika population groups, whose consistently poor health outcomes have been linked to culturally unsafe care, among other factors (Curtis et al., 2019). Standardising medical registration for all IMGs would ideally involve the opportunity for these individuals to engage in more bridging programmes or contextually-specific training courses upon arrival in the country.

However, participants in both phases of this research were less inclined to support the idea of increased regulation and/or registration examinations for all IMGs. Instead, participants were in favour of reducing the perceived bureaucratic barriers faced by NZREX doctors, as well as doctors excluded from the CHS licensing pathway due to, for example, illness or parental leave that interrupted their required recent clinical work experience. While standardised processes for IMGs from all backgrounds may represent an alternative future, participants were clear that an ideal future involves creating more equitable registration pathways by reducing perceived barriers overall, and avoiding making the process equally challenging for all IMGs.

## Conclusions

This working paper has provided a snapshot of the registration experiences and outcomes of IMGs from a range of backgrounds through interviews and an online questionnaire. With some exceptions, the research highlights how current processes generally facilitate the migration and medical licensing of IMGs with qualifications, training, or experience in 24 high-income countries, while doctors from the rest of the world, on the NZREX licensing pathway, face additional barriers to registration. Participants were clear that change – to some extent – is needed in the medical regulatory sphere in Aotearoa New Zealand.

Such changes would require significant political support. The October 2023 election resulted in a change of government, with the creation of a coalition between the National, Act, and New Zealand First parties. In the coalition agreement between National and Act, one of the stated policy agreements is to “better recognise people with overseas medical qualifications and experience for accreditation in New Zealand” (New Zealand National Party & Act New Zealand, 2023, p. 8). The explicit inclusion of occupational licensing for IMGs in such a document suggests that the uneven experiences described by IMGs in this research are gaining awareness in the political and public spheres. It is hoped that this research may provide useful insights to the implementation of this aspect of the coalition agreement. Further publications are planned.

## References

- ASMS. (2017). *International medical migration: How can New Zealand compete as specialist shortages intensify?* ASMS: Toi Mata Hauora. [https://asms.org.nz/wp-content/uploads/2022/05/IMG-Research-Brief\\_167359.5.pdf](https://asms.org.nz/wp-content/uploads/2022/05/IMG-Research-Brief_167359.5.pdf)
- Bhamidipati, S. (2022). *Migrant doctors worry about prospects as officials look overseas to fill workforce gaps.* RNZ. <https://www.rnz.co.nz/news/national/472858/migrant-doctors-worry-about-prospects-as-officials-look-overseas-to-fill-workforce-gaps>
- Broughton, C. (2021). *Doctor shortage forcing GP clinics to turn away new patients.* Stuff. <https://www.stuff.co.nz/national/health/124477572/doctor-shortage-forcing-gp-clinics-to-turn-away-new-patients>
- Cassie, F. (2022). *Pilot of training migrant doctors in general practice probed.* NZ Doctor. <https://www.nzdoctor.co.nz/article/news/pilot-training-migrant-doctors-general-practice-probed>
- Cassie, F. (2023). *Practices keen to host overseas-trained doctors in pilot scheme.* NZ Doctor. <https://www.nzdoctor.co.nz/article/news/practices-keen-host-overseas-trained-doctors-pilot-scheme>
- Catley, B. (2001). The New Zealand 'brain drain'. *People and Place*, 9(3), 54-65.
- Choy, W. K., & Glass, H. (2002). Brain drain in New Zealand: Issues, evidence and implications. *Agenda: A Journal of Policy Analysis and Reform*, 9(1), 65-82.
- Curtis, E., Jones, R., Tipene-Leach, D., Walker, C., Loring, B., Paine, S. J., & Reid, P. (2019). Why cultural safety rather than cultural competency is required to achieve health equity: A literature review and recommended definition. *International Journal for Equity in Health*, 18(1), 174. <https://doi.org/10.1186/s12939-019-1082-3>
- Ellingham, J. (2022). *Patient left in emergency department for whole day before being moved to ward.* RNZ. <https://www.rnz.co.nz/news/national/461673/patient-left-in-emergency-department-for-whole-day-before-being-moved-to-ward>
- Fenton, E., & Chillag, K. (2022). We want to help: Ethical challenges of medical migration and brain waste during a pandemic. *Journal of Medical Ethics*, 0, 1-4. <https://doi.org/10.1136/medethics-2022-108311>
- Gauld, R., & Horsburgh, S. (2015). What motivates doctors to leave the UK NHS for a "life in the sun" in New Zealand; and, once there, why don't they stay? *Human Resources for Health*, 13, 75. <https://doi.org/10.1186/s12960-015-0069-4>
- Gorman, D. (2011). The disposition and mobility of medical practitioners in New Zealand. *New Zealand Medical Journal*, 124(1330), 11-13.
- Grimmond, D., Martin, G., & Tu, D. (2021). *2021 GP future workforce requirements report.* Allen+Clarke. <https://www.rnzcgp.org.nz/gpdocs/new-website/publications/2021-GP-future-workforce-report-FINAL.pdf>
- Hannah, A. (1996). *The New Zealand medical practitioner workforce 1995.* Ministry of Health. [https://www.moh.govt.nz/notebook/nbbooks.nsf/0/3CAA4BB7AE9284D84C2565D7000E4C31/\\$file/Medical%20Pract%20Wkforce%201995.pdf](https://www.moh.govt.nz/notebook/nbbooks.nsf/0/3CAA4BB7AE9284D84C2565D7000E4C31/$file/Medical%20Pract%20Wkforce%201995.pdf)
- Hannah, A., Roser, B., & Linton, M. (1991). *The New Zealand health workforce 1990.* Department of Health - Te Tari Ora. [https://www.moh.govt.nz/notebook/nbbooks.nsf/0/74FEDD30C19DED134C2565D7000E3D38/\\$file/1990part1.pdf](https://www.moh.govt.nz/notebook/nbbooks.nsf/0/74FEDD30C19DED134C2565D7000E3D38/$file/1990part1.pdf)
- Immigration New Zealand. (2024). *Green List roles.* <https://www.immigration.govt.nz/new-zealand-visas/preparing-a-visa-application/working-in-nz/qualifications-for-work/green-list-occupations>
- Lillis, S., & Roblin, H. (2014). Progress of successful New Zealand Registration Examination (NZREX Clinical) candidates during their first year of supervised clinical practice in New Zealand. *New Zealand Medical Journal*, 127(1399), 36-42.
- Lynch, A. C. (2008). So why are New Zealand-trained doctors leaving? *New Zealand Medical Journal*, 121(1273), 6-8.

- MCNZ. (1998). *Approved medical schools and universities*. New Zealand Gazette. <https://gazette.govt.nz/notice/id/1998-gn4404>
- MCNZ. (1999). *Annual report 1999*. <https://www.mcnz.org.nz/assets/Publications/Annual-Reports/a3b837f83d/MCNZ-Annual-Report-1999.pdf>
- MCNZ. (2015). *List of approved qualifications for locum tenens specialist appointments - February 2015*. <https://www.mcnz.org.nz/assets/Policies/1f8183e705/List-of-approved-qualifications-for-locum-tenens-specialist-appointments.pdf>
- MCNZ. (2022a). *Annual report 2022*. <https://www.mcnz.org.nz/assets/Publications/Annual-Reports/MCNZ-Annual-Report-2022.pdf>
- MCNZ. (2022b). *The New Zealand medical workforce in 2022*. <https://www.mcnz.org.nz/assets/Publications/Workforce-Survey/64f90670c8/Workforce-Survey-Report-2022.pdf>
- MCNZ. (2023). *Medical Council news: March 2023*. <https://mailchi.mp/29ab5ae7e783/medical-council-news-july-15119944>
- MCNZ. (2024a). *Annual reports*. <https://www.mcnz.org.nz/about-us/publications/annual-reports/>
- MCNZ. (2024b). *Comparable health system criteria*. <https://www.mcnz.org.nz/registration/getting-registered/registration-policy/comparable-health-system-criteria/>
- MCNZ. (2024c). *Competent authority criteria*. <https://www.mcnz.org.nz/registration/getting-registered/registration-policy/competent-authority-criteria/>
- MCNZ. (2024d). *New Zealand and Australian graduates (internship completed)*. <https://www.mcnz.org.nz/registration/getting-registered/registration-pathways/general-scope/new-zealand-and-australian-graduates-internship-completed/>
- MCNZ. (2024e). *Our data - International medical graduates*. <https://www.mcnz.org.nz/about-us/our-data/international-medical-graduates/>
- MCNZ. (2024f). *Our data - New doctor registrations - Entry pathway*. <https://www.mcnz.org.nz/about-us/our-data/new-doctor-registrations-entry-pathway/>
- MCNZ. (2024g). *Our data - Retention*. <https://www.mcnz.org.nz/about-us/our-data/retention/>
- MCNZ. (2024h). *Our data: NZREX*. <https://www.mcnz.org.nz/about-us/our-data/nzrex-overview/>
- MCNZ. (2024i). *Registration exam (NZREX)*. <https://www.mcnz.org.nz/registration/getting-registered/registration-exam-nzrex/>
- MCNZ. (2024j). *Registration self assessment tool*. <https://www.mcnz.org.nz/registration/getting-registered/tool/>
- MCNZ. (2024k). *VOC3 Vocational (specialist) registration*. <https://www.mcnz.org.nz/registration/getting-registered/registration-pathways/pathways-to-registration-in-a-vocational-scope/voc3-vocational-specialist-registration/>
- MCNZ. (2024l). *Workforce survey*. <https://www.mcnz.org.nz/about-us/what-we-do/workforce-survey/>
- Mpofu, C., & Hocking, C. (2013). "Not made here": Occupational deprivation of non-English speaking background immigrant health professionals in New Zealand. *Journal of Occupational Science*, 20(2), 131-145. <https://doi.org/10.1080/14427591.2012.729500>
- New Zealand National Party & Act New Zealand. (2023). *Coalition agreement*. New Zealand House of Representatives. [https://www.nzdoctor.co.nz/sites/default/files/2023-11/National ACT Agreement.pdf](https://www.nzdoctor.co.nz/sites/default/files/2023-11/National%20ACT%20Agreement.pdf)
- Pang, T., Lansang, M. A., & Haines, A. (2002). Brain drain and health professionals. *BMJ: British Medical Journal*, 324(7336), 499-500. <https://doi.org/10.1136/bmj.324.7336.499>
- RNZ. (2023). *Calls to fix registration pathways for overseas doctors*. Newshub. <https://www.newshub.co.nz/home/new-zealand/2023/09/calls-to-fix-registration-pathways-for-overseas-doctors.html>
- Shahtahmasebi, Z. (2021). 'We are drowning': GP workforce survey. *NZ Doctor*.

- Taylor, C. (2016). Help was at hand, but not after it got in the way of NZ doctors. *NZ Doctor*, 13.
- Te Whatu Ora | Health New Zealand. (2023). *Overseas doctors*. <https://www.mcnz.org.nz/about-us/news-and-updates/te-whatu-ora-pilot-for-programmes-for-nzrex-graduates/>
- The Management Services and Research Unit. (1982). *New Zealand medical manpower statistics 1980*. Department of Health. [https://www.moh.govt.nz/notebook/nbbooks.nsf/0/74fedd30c19ded134c2565d7000e3d38/\\$FILE/Medical%20manpower%201980-part1.pdf](https://www.moh.govt.nz/notebook/nbbooks.nsf/0/74fedd30c19ded134c2565d7000e3d38/$FILE/Medical%20manpower%201980-part1.pdf)
- Thomas-Maude, J. (2022). *NZ's medical licensing system is still a major hurdle for desperately needed foreign-trained doctors*. *The Conversation*. <https://theconversation.com/nzs-medical-licensing-system-is-still-a-major-hurdle-for-desperately-needed-foreign-trained-doctors-196724>
- Thomas-Maude, J. (2023). Mobility justice, capabilities, and medical migration: Medical licensing pathways for overseas-trained doctors in Aotearoa New Zealand. *Australian Geographer*, 54(4), 479-497. <https://doi.org/10.1080/00049182.2023.2245620>
- Thomas-Maude, J., & McLennan, S. (2022). *Critically understaffed and with Omicron looming, why isn't NZ employing more of its foreign-trained doctors?* *The Conversation*. <https://theconversation.com/critically-understaffed-and-with-omicron-looming-why-isnt-nz-employing-more-of-its-foreign-trained-doctors-175914>
- Trigger, S. (2022). *GP shortage: Rural medical centre says 'impossible' to recruit in NZ, immigration process must be seamless*. *NZ Herald*. <https://www.nzherald.co.nz/nz/gp-shortage-rural-medical-centre-says-impossible-to-recruit-in-nz-immigration-process-must-be-seamless/2QB37AJLP5AEBHUX5UASG3ZS4/>
- United Nations. (2019). *Annex II: Classification of SDG regions and income groups*. [https://population.un.org/ProfilesOfAgeing2019/Docs/Annex%20%20-%20Classification%20of%20countries%20by%20region\\_updated%20for%20WPP%202019.pdf](https://population.un.org/ProfilesOfAgeing2019/Docs/Annex%20%20-%20Classification%20of%20countries%20by%20region_updated%20for%20WPP%202019.pdf)