A Socially Accountable Rural Medical Program - the Waikato Graduate Entry Medical School

Ross Lawrenson, MBBS, MD, FAFPHM, FFPH, FRCGP, FRNZCGP (Hon)

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Introduction

- My background
- Why New Zealand needs a rural medical school
- What has been done in the past to address the health workforce needs of rural communities
- What is the plan for the Waikato Medical School
- Impact we hope WMS will have on rural general practice

Curriculum vitae

- Wairoa GP
- Waikato Hospital Board – Medical Superintendent of Community Services and Rural Hospitals
- Charing Cross Medical School/Imperial College
- University of Surrey
- University of Auckland (Waikato Campus)
- 5 years on NZIRH
- 9 Years on Rural GP Network
- 270 papers including 60 on rural health

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Taught Programmes

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"Saving New Zealand's rare bird - the rural doctor."

Ross Lawrenson
Professor of Primary Care
Waikato Clinical School

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Characteristics of Rural GPs

- Rural GPs see more patients per week.
- Work longer office hours
- Rural GPs tend to be more of a generalist – wider range of skills
- Less likely to order lab tests although similar use of Xray and ECG
- Less likely to refer (Access to specialist care harder)

Positive aspects of rural general practice

- The core work was described as interesting and rewarding by many rural GPs.
- Challenge of providing the full spectrum of care from birth to death
- Using emergency skills with critically ill patients.
- Patient continuity of care was greater in rural areas
- Felt they were valued and respected members of the community.

Negative aspects

- ‘Double jeopardy’ - heavy daytime workload followed by a night or weekend on-call.
- Leave/holidays/CME
- Income
- Bureaucratic burden
- Poor status - not valued
- Family pressures
- Practice ownership more of a trap, than an asset.

What needs to be done?

- Encourage more graduates into general practice
- Encourage GP registrars into rural practice
  - 30% of trainees will not consider rural practice.
  - About 8% of trainees plan to go into rural practice even without incentives
  - Two thirds of trainee GPs could be swayed towards rural practice by a comprehensive incentive scheme.
- Recruit aggressively overseas and provide support for newly arrived Drs
- Look at supported models in high needs areas

Strategies

- Take students from rural communities (ROMPE)
- Mentor students
- Give them excellent rural experience
- Deal with student debt
- Train with nurses and other rural professionals
- Develop other interest relevant to a rural community

Postgraduate training (2006)

“The Labour-led government will invest $2 million to increase the number of GP training places by over 25 per cent for each of the next two training years, Health Minister Pete Hodgson announced today.
15 extra places will be funded bringing the total number of GP Registrars to 69 per annum. “

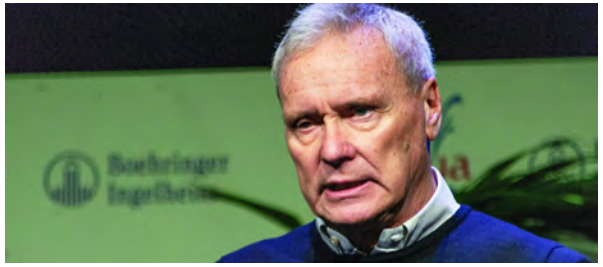
- "The 15 extra registrars will be targeted for placements in rural practices, where we know we're going to need to encourage more young GPs to set up shop in the future."

What has been done in the past

- ROMPE 2002
- RMIP 2010
- Rural Hospital Doctors training
- Bonding
- Interprofessional learning
- A National Rural School
- Waikato proposal

Ground breaking training partnership for rural doctors and nurses (September 1st 2011)

- Health Minister Tony Ryall and Education Minister Anne Tolley launched a partnership with the Universities of Auckland and Otago that will train more doctors and nurses and other health professionals at Gisborne and Whakatane Hospitals



Proposal 2016 for a new medical school

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- Socially accountable, involving communities in the design of the programme, selection of students, and training of students
- Graduate entry only (requiring an undergraduate degree from any university in any subject)
- Four years in length rather than the five years currently required at Auckland and Otago Universities
- Focused on rural and provincial centers in and around the Waikato (60 students initially)

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Business Case for the Waikato School

- Led by Ministry of Health

Problem statements

- There is a shortage of doctors in New Zealand, with an estimated 1,700 additional doctors needed to meet current staffing shortages and an additional 3,200 doctors needed by 2032.
- New Zealand produces fewer medical graduates (10.5 per 100,000) than other OECD countries (15 per 100,000) increasing reliance on internationally trained doctors and contributing to shortages.
- The medical workforce is not representative of the New Zealand population.
- Maldistribution of doctors reduces access to healthcare in those places where there are fewer doctors.
- There has been a steady decline in the proportion of medical students expressing a preference to enter general practice or rural generalist specialties.

Problem statements

- It is unclear whether the existing medical schools have the capacity to accommodate the required increase in the intake of medical students to close the gap without significant capital investment.
- There is insufficient capacity and capability in health settings to provide consistent high-quality training.
- There are gaps in training provision in some regions and types of health settings, limiting the availability of clinical placements .
- The costs for students is prohibitive with requirements on entry (have to travel to Auckland or Dunedin for a 15% chance of entry into medicine) and then if successful accommodation costs in Auckland and the main centres are the highest in the country.
- For graduates requirement of a 5 year program after gaining entry compared to 4 years for most graduate entry programs

MCNZ data

Measure	2017	2018	2019	2020	2021	2022	2023
Size of the workforce[1]	15,819	16,292	16,908	17,671	18,247	18,780	19,350
Doctors per 100,000 population[2]	327.9	333.5	344.7	347.6	357.2	366.7	372.2
Proportion of IMGs[3] (%)	40.0	40.1	40.4	40.2	41.2	41.2	41.4
Proportion of females (%)	44.8	45.1	46.3	46.9	46.5	47.4	47.9
Average age of workforce	45.9	46.1	46.0	45.9	45.4	45.3	45.2
Average weekly workload (hours)	44.2	43.8	44.5	44.1	44.4	44.5	44.6
Proportion of new IMGs retained after 1 year[4]	65.7	67.5	71.0	77.1	81.2	77.5	-

Growth in medical workforce (500 pa)

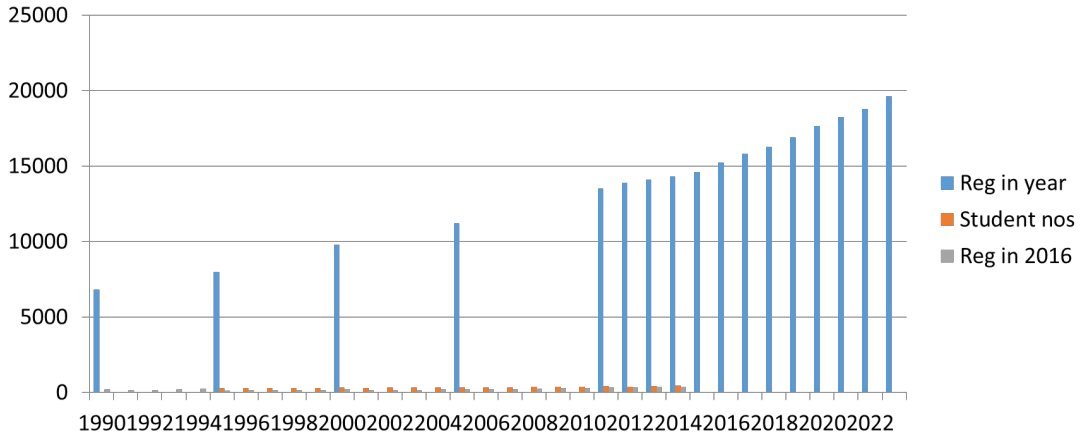
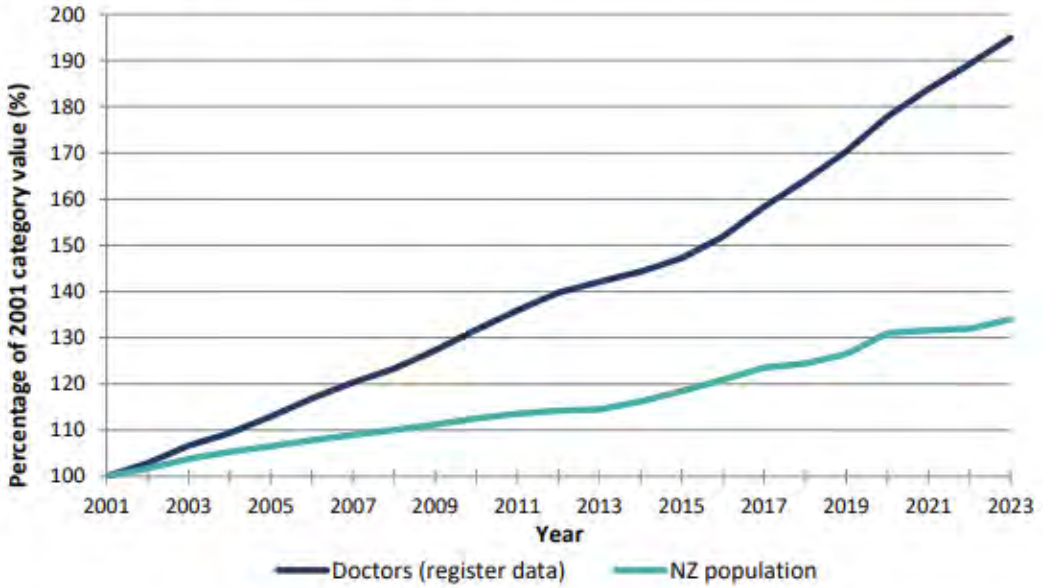
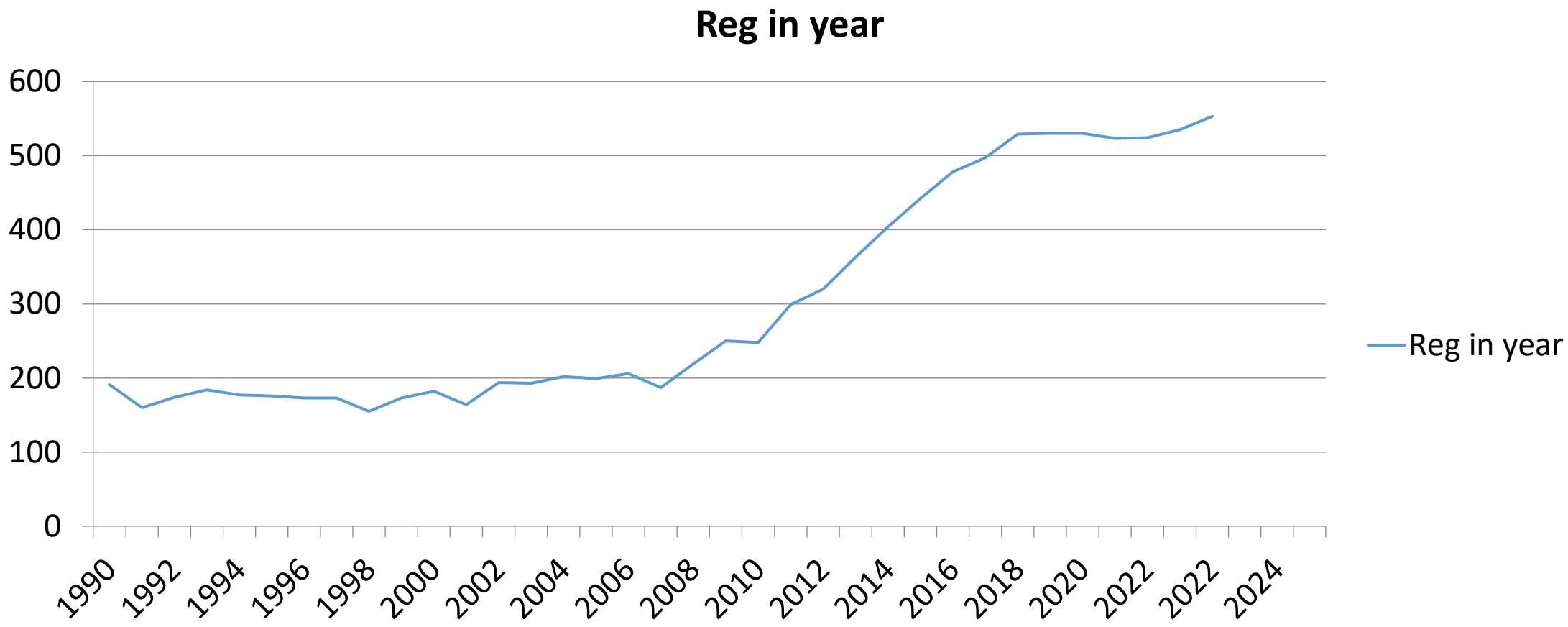


Figure 8: Change in size of the active medical workforce compared to change in the size of the New Zealand population (2001–2023)

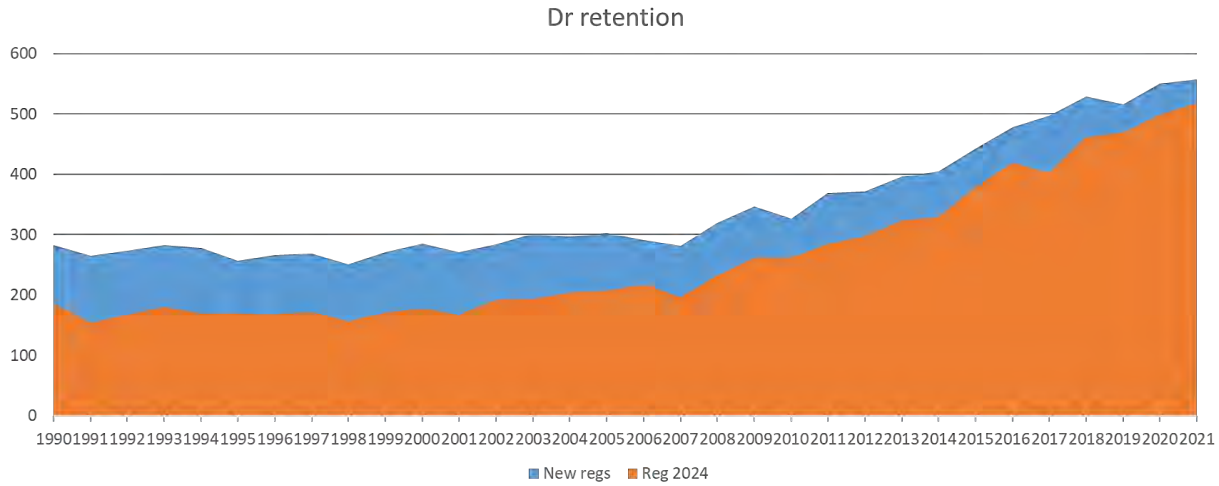


NZ graduates registering each year



Medicine - Case for change

- Retention of graduates is poor
- 15 - 20% are not registered in NZ 10 years after qualification



Number of Otago+Auckland grads registered by year and number who are still registered in 2024

Medical workforce and NZ population

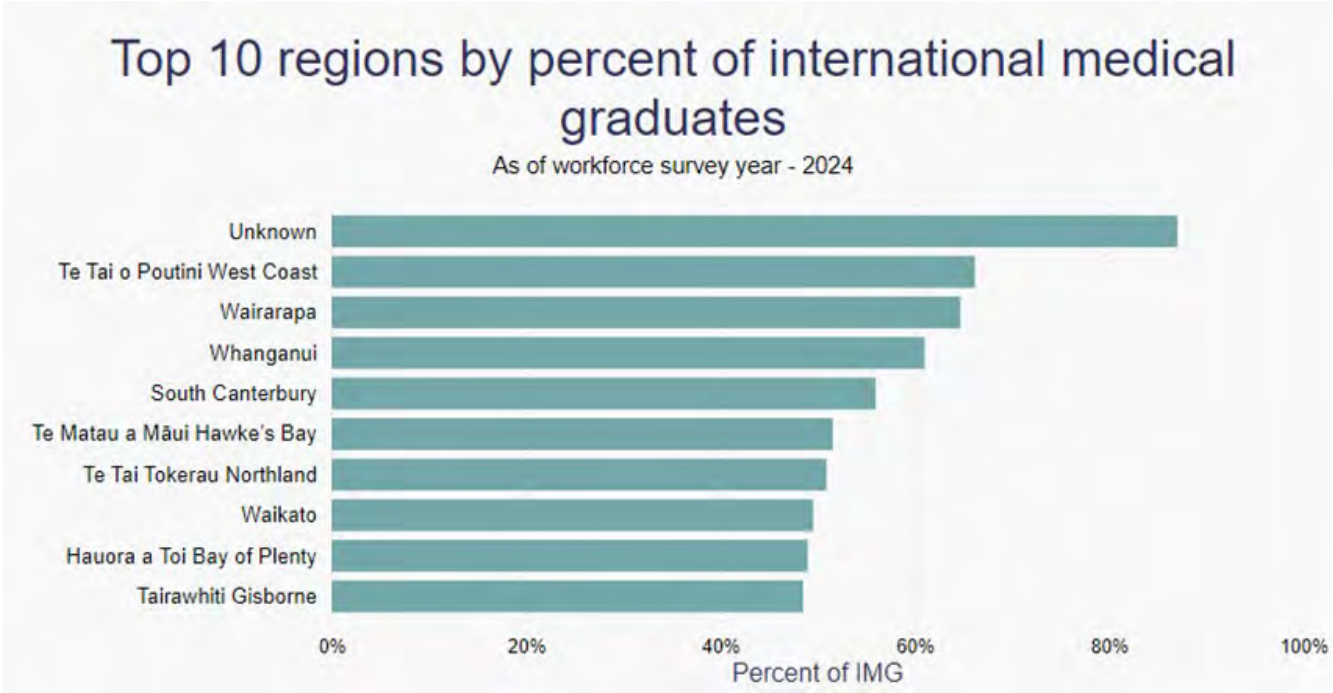
- Medical workforce does not reflect the population it serves

Table 2: Proportion of doctors and New Zealand population by ethnic group

Ethnicity[1]	Proportion of doctors (2023)	Proportion of New Zealand population (2018 Census)[2]
Māori	4.7	16.5
Pacific Island (Pasifika)	2.3	8.1
New Zealand European/Pākehā	44.9	64.2

Maldistribution

Jake Parsons NZMSA

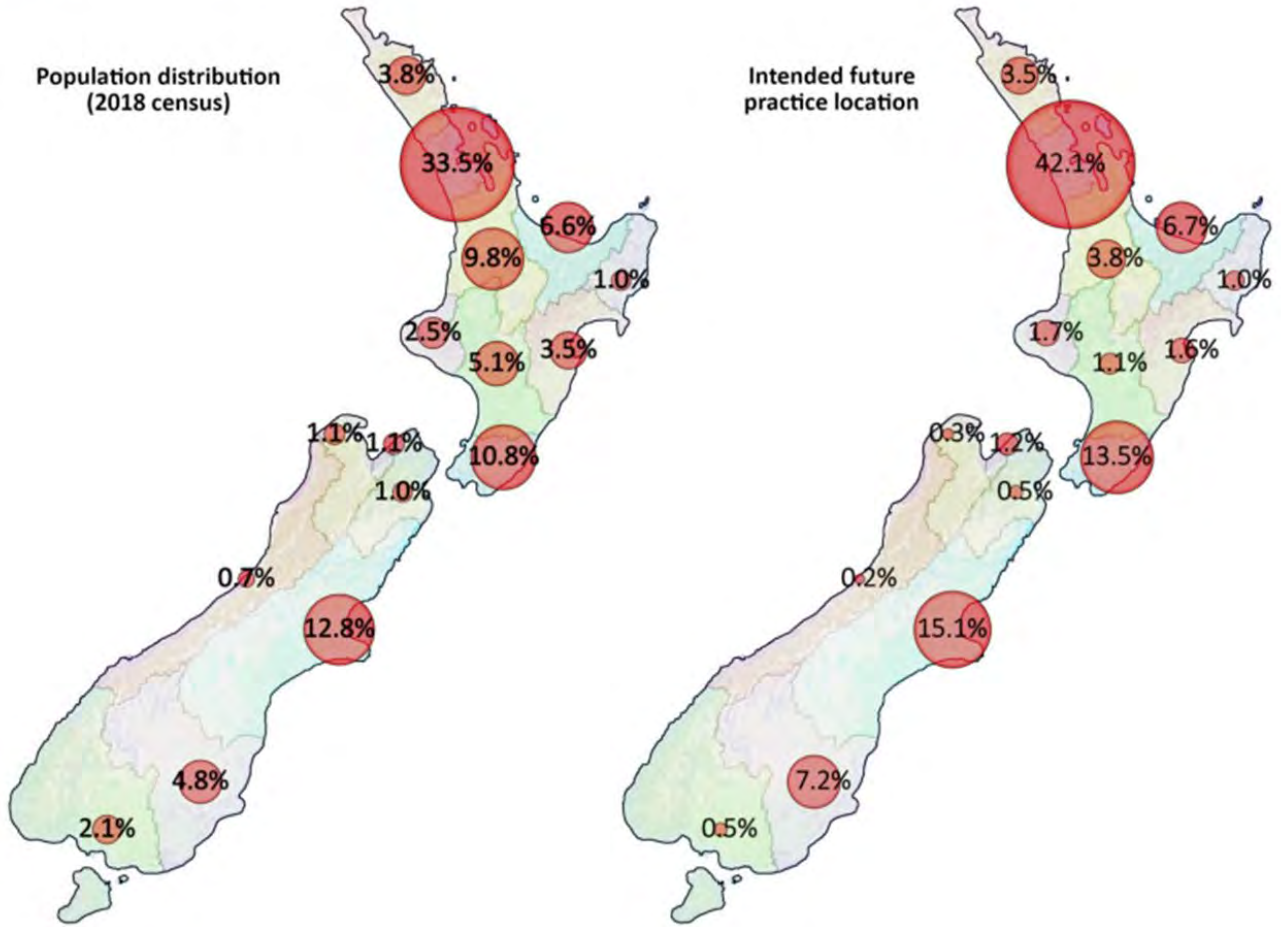


Where is the health need?

Life expectancy

MSOD – Students intention to practice by Region

Figure 3. Geographical distributions of population (2018 census), and of first preference of intended future practice location. These values have been corrected for response rate.



Student origins and future practice

Table 16. Geographic location of longest residency within New Zealand

Main NZ geographic location lived in	Survey year 2019 n	%	2020 n	%	2021 n	%	2022 n	%	2023 n	%	Total n	%
Major urban centre (pop. over 100,000)	315	64.4%	369	67.2%	315	69.1%	321	64.5%	330	70.1%	1650	67.0%
Regional centre (pop. 25,000 – 100,000)	75	15.3%	72	13.1%	57	12.5%	78	15.7%	69	14.6%	351	14.3%
Town (pop. 10,000 – 25,000)	27	5.5%	33	6.0%	21	4.6%	30	6.0%	21	4.5%	132	5.4%
Small community (pop. under 10,000)	57	11.7%	60	10.9%	48	10.5%	57	11.4%	33	7.0%	255	10.4%
Not applicable (lived in NZ for fewer than 12 months)	15	3.1%	15	2.7%	15	3.3%	12	2.4%	18	3.8%	75	3.0%

Base: all respondents. Question response rate: 99.5%

Table 13. Preferred population centre size of future practice

First preference of population centre size of future practice	2016 n	%	2017 n	%	2018 n	%	2019 n	%	2020 n	%	Total n	%
Major city (pop. 100,000 or greater)	237	58.5%	192	62.1%	258	65.6%	228	64.4%	210	64.8%	1125	62.7%
Regional centre or large town (pop. 25,000 – 100,000)	132	32.6%	90	29.1%	105	26.7%	99	28.0%	96	29.6%	528	29.4%
Town (pop. 10,000 – 24,999)	24	5.9%	18	5.8%	27	6.9%	21	5.9%	18	5.6%	108	6.0%
Small town (pop. 10,000 or fewer)	6	1.5%	6	1.9%	3	0.8%	3	0.8%	..C	..C	21	1.2%
Not applicable, not intending to work in New Zealand	6	1.5%	3	1.0%	..C	..C	3	0.8%	..C	..C	12	0.7%

“There has been a steady decline in the proportion of medical students expressing a preference to enter general practice”

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Table 29. First preference of specialisation for all respondents

First preference of specialisation	Survey year 2019 %	2019 rank	2020 %	2020 rank	2021 %	2021 rank	2022 %	2022 rank	2023 %	2023 rank	Total %	Total rank
Surgery	24.1%	1	26.7%	1	24.7%	1	27.0%	1	27.0%	1	25.9%	1
General Practice	14.7%	2	12.8%	2	14.1%	2	13.3%	2	10.7%	2=	13.1%	2
Paediatrics and Child Health	11.6%	3	12.4%	3	11.7%	3	11.2%	3	9.9%	4	11.4%	3
Emergency Medicine	10.9%	4	9.4%	4	9.9%	4	9.5%	4	8.6%	5	9.7%	4
Adult Medicine / Internal Medicine / Physician	7.1%	5	7.6%	5	8.1%	5	8.3%	5	10.7%	2=	8.4%	5
Obstetrics and Gynaecology	6.5%	6	4.8%	6	7.0%	6	4.8%	6	6.8%	6	5.9%	6
Anaesthesia	4.7%	8	4.4%	8	5.1%	7	3.9%	8	5.5%	7	4.7%	7

On commencing medical school

Table 18. First preference of medical specialty irrespective of whether a future medical specialty had been decided (ranked by Total column)

Medical specialty	2016 n=387 %	2016 Rank	2017 n=294 %	2017 Rank	2018 n=378 %	2018 Rank	2019 n=342 %	2019 Rank	2020 n=321 %	2020 Rank	Total n=1722 %	Total Rank
Surgery	20.7%	1	24.1%	1	22.8%	1	24.0%	1	21.9%	1	22.6%	1
General Practice	19.9%	2	19.0%	2	15.9%	3	14.9%	2	13.4%	2	16.7%	2
Adult Medicine / Internal Medicine / Physician	14.7%	3	12.2%	3	17.0%	2	11.1%	3	12.5%	3	13.7%	3
Anaesthesia	7.5%	4	8.5%	4	9.0%	4	9.9%	4	8.1%	5	8.6%	4
Paediatrics and Child Health	6.7%	5=	7.1%	5	6.4%	6	7.3%	6	11.9%	4	7.8%	5
Emergency Medicine	6.7%	5=	6.5%	6	7.7%	5	7.9%	5	5.6%	6	6.9%	6
Obstetrics and Gynaecology	4.9%	7	5.4%	7	4.2%	7	5.0%	7	5.0%	7	4.9%	7

On exit medical school

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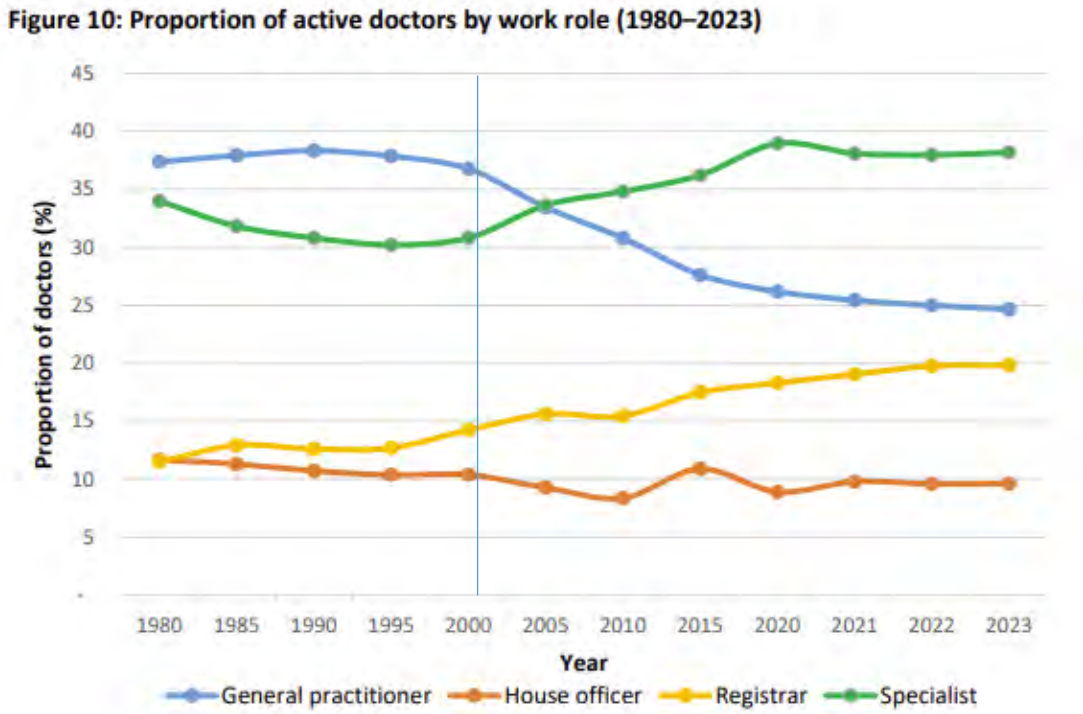
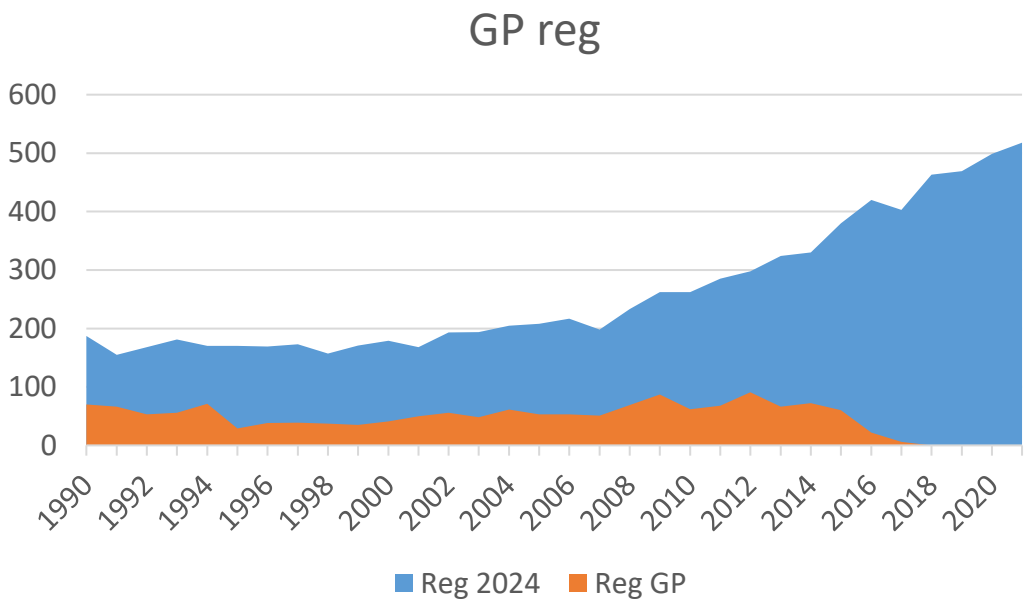
Decline in proportion of doctors working in general practice

- Since the “primary care strategy” we have seen a decline in proportion of doctors entering GP and an increase in specialists.



Medicine - Case for change

- Fewer medical students expressing a preference to enter general practice or rural generalist specialties



Number of Otago+Auckland grads registered in 2024 and number who are vocationally registered in GP

How many more students?

- Deborah Powell reckons 300 more (will be 625 next year)
- 15*5300000/100,000 = 795
- Planned intake for Waikato is 120 initially rising to 160

Capacity in the system

- Capacity of existing medical schools to take another 100 students each
- Capacity of hospitals for clinical placements
- Capacity of general practice to take more students.

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Costs for rural students

- 5 year program for graduates
- Costs of accommodation in Auckland or Dunedin
- Costs of travel for those from out of region

University of Waikato Faculty of Health

- Nursing
- Sport and human performance
- Pharmacy - 2025
- Midwifery - 2025
- Medicine - https://www.waikato.ac.nz/about/major-projects/medical-school/

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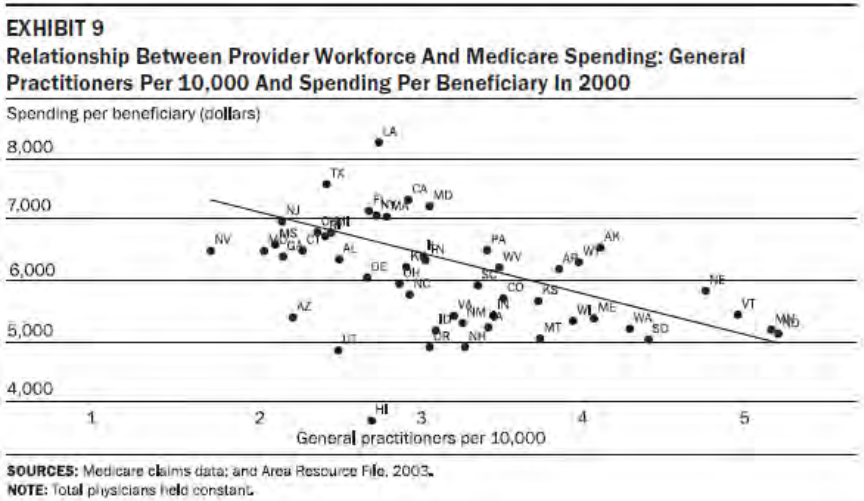
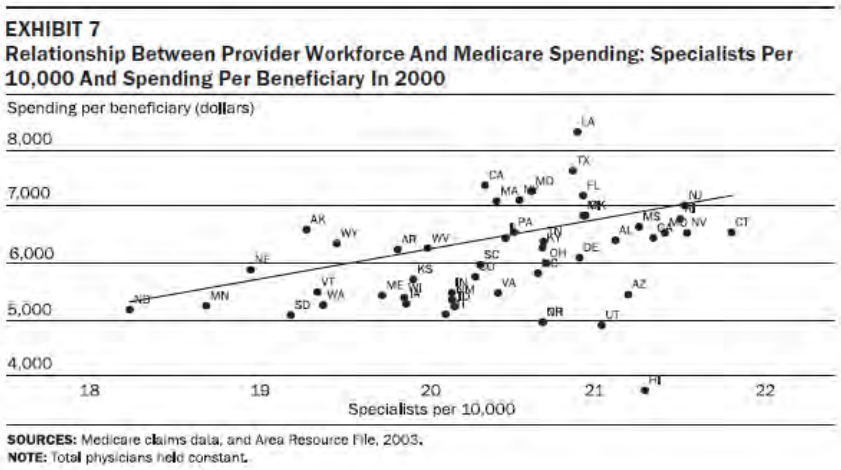
Emphasis on general practice

- Primary care sits at the heart of New Zealand's health system. It is often the first-place people attend for care. To support their role in developing future doctors, medical schools need to ensure student recruitment and selection processes give sufficient consideration and weight to align with evidence-based indicators of a future general practice career choice.
- New Zealand signed up to the WHO Alma Ata declaration that stated "It (PHC) forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community".
- The work of Barbara Starfield et al showed that primary care led systems are more cost effective providing better quality of care at less cost. The decreasing emphasis on general practice in NZ leads to increasing system costs. This is one of the strongest arguments for emphasising a medical training program that emphasises the role of general practice.





Investment Objectives

- Deliver fit for purpose medical training and meet the health care needs of provincial and rural communities at lower costs
- Improve the quality and the accessibility of health care in provincial and rural communities by training doctors who will live and work in these communities
- Generate a sustainable provincial and rural health care workforce that is committed and trained to work in high needs communities, reducing New Zealand's reliance on IMGs to provide primary and specialist care in these communities.

Principles of a socially accountable medical school

- Community engaged
- Teamwork/Interprofessional
- Focus on equity
- Embrace new technologies
- Primary care/rural
- Leadership
- https://www.youtube.com/watch?v=psZ4w_zPIBY

AMC Standards

- Clinical practice
- Science and scholar
- Professionalism and leadership
- Health advocacy

Program

- Accelerated 4-year graduate entry - Wollongong
- Year 1 - science+
- Year 2 - emphasis on clinical skills
- Year 3 – Community based longitudinal placement
- Year 4 – TI year

Year 1

- The doctor as a scientist and scholar
- Systems based teaching of anatomy, physiology, pathology, pharmacology etc
- Digital teaching of anatomy using US etc
- Doctor as a clinician – Introduction to patient care – some exposure to general practice
- Doctor as a leader – team based working. Interprofessional practice, organisation of health services, linguistics
- Doctor as an advocate –public health, climate change, sustainability goals

Year 2

- Preparation for longitudinal practice in year 3
- How to take a history – including use of actors and simulation
- How to examine a patient – systems based learning
- General medicine and surgery – differential diagnoses, surgical skills
- Some preparation for general practice – e.g. mental health, paediatrics, O&G.
- Use of new technologies, data systems etc.
- Radiology

Year 3

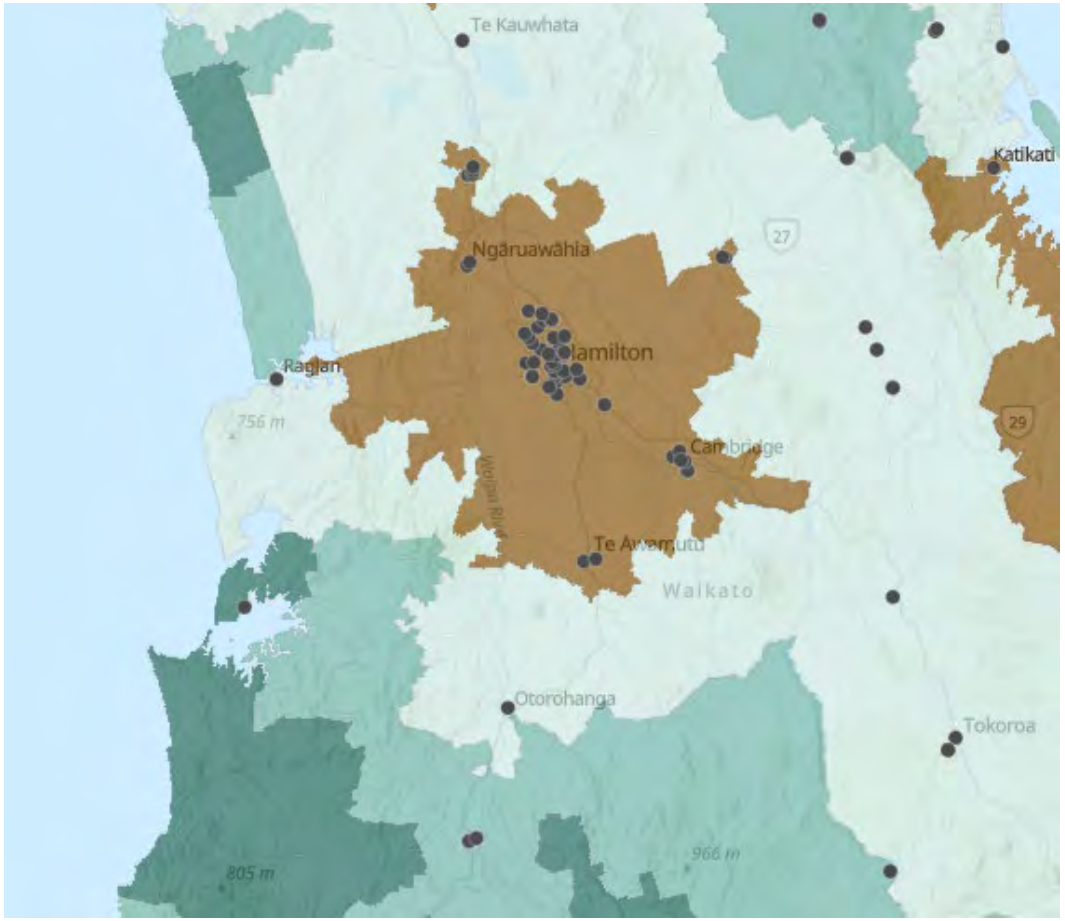
- Longitudinal community placement
- Mixture of rural hospital and general practice – average 3 - 3.5 days in GP seeing patients
- Some urgent care experience – diagnostic skills
- Regular distance learning opportunities with specialist topics
- Competency based assessment – have seen and helped manage key conditions (normal pregnancy, type 2 diabetes, COPD, neurological condition etc.)
- Palliative care and care of older people
- Equity project in the community

Year 4

- Preparation as a house surgeon
- Medicine and surgical runs
- Hospital ED experience
- Selective – including a community run
- Elective or research
- Prescribing course
- Final exams

Where will the Medical school reach?

- Hub and spoke model
- 4 - 5 Regions initially
- Learning hubs – 20,000 population plus (rural hospitals)
- Practices linked to hubs



Rural learning hubs

- Clinically led staffing
- Interprofessional – nursing, medical, pharmacy etc
- 3 days a week in General Practice
- Emergency care exposure
- Teaching facilities

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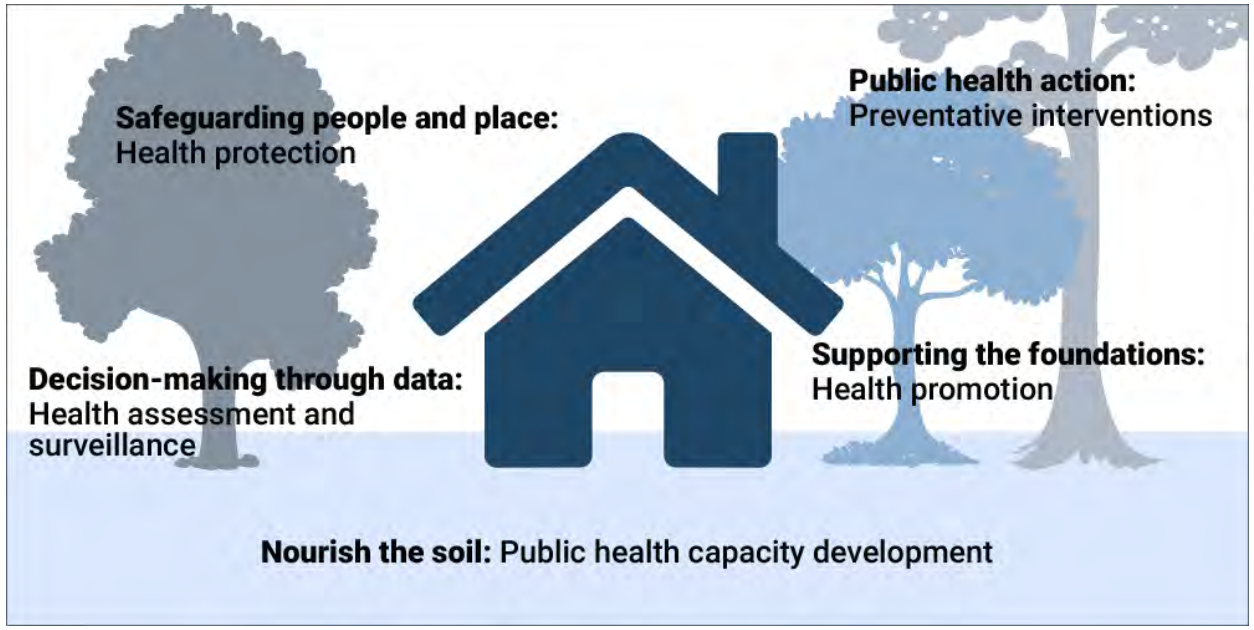
Community equity projects

- Give every child the best start in life
- Enable all children, young people, and adults to maximise their capabilities and have control over their lives
- Create fair employment and good work for all
- Ensure a healthy standard of living for all
- Create and develop healthy and sustainable places and communities
- Strengthen the role and impact of ill health prevention
- Tackle racism, discrimination, and their outcomes
- Pursue environmental sustainability and health equity together



Benefits for rural sector

- Partnership in curriculum
- Advice on selection of students
- Funding for rural teachers
- Funding for infrastructure
- Basis for research

- Boost to rural communities
- Students living and working locally
- Increases local spending
- Students can be involved in community activities

Next steps

- Business case approved
- Community consultation
- Curriculum development
- Staffing and infrastructure

Summary

- 56 years since last medical school established
- Following a successful model already used in Australia, Canada and other developed countries
- Changing the way we select students, the way we teach them and the settings in which they learn
- A new focus – doctors who are patient and community centred, team players, able to use the latest advances in technology, representative of the people they serve