Proposal for a National Interprofessional School of Rural Health

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ABSTRACT

Shortages of health professionals persist in much of rural New Zealand despite a range of targeted university and professional college initiatives. In response to this a collective of universities, professional colleges and sector groups have put a proposal to Government for a National Interprofessional School of Rural Health. If adopted, this proposal would embed rural health professional education and research in rural communities around New Zealand, empowering them to organise the education that occurs in their community, in a coherent and coordinated way. What is being proposed is not a new or separate education provider but rather an 'enabling body' that would lever off the expertise and resources of the existing tertiary institutions, colleges and rural communities. It calls for an 'all of systems' approach that encompasses all the health professions that practise in rural areas, undergraduate education and postgraduate training, and rural health research. Although modelled on successful Australian rural clinical schools, it is a uniquely New Zealand solution that is cognisant of the New Zealand context and resources.

The longstanding geographic maldistribution of the New Zealand medical workforce has resulted in chronic shortages of doctors in rural areas.[1–2] Similarly, the pattern of geographic maldistribution with rural shortages is repeated across a range of health professions.[3–6]

The research needed to quantify the impact that these shortages is having on health outcomes has not been undertaken in New Zealand.[7–8] International evidence suggests that poor access to health services in rural areas accentuates the health disadvantage associated with ethnicity and socioeconomic deprivation.[9] New Zealand rural towns (collectively described by Statistics New Zealand (SNZ) as 'independent urban areas') have overall the lowest socioeconomic status of any of the SNZ geographic categories.[10] Rural towns also have the highest proportion of people specifying Māori ethnicity, 20% overall and 40% in Northland, Bay of Plenty and Hawkes Bay.[11] Data available are limited but research suggests it is likely that the poor access to healthcare as a consequence of workforce shortages is contributing to significant pockets of health disadvantage in these communities. Residents of rural towns have consistently poorer health outcomes, including lower life expectancy, than those living in cities or surrounding rural areas, an effect that is accentuated for rural Māori.[12]

Multiple health service and wider societal factors impact on the recruitment and retention of rural health professionals. Although many of these are outside universities' sphere of influence there are three evidence-based university education strategies that increase the uptake of rural careers. The first is selecting students from rural origin to enrol in health professional programmes; the second is providing quality rural exposure throughout the undergraduate years; and the third is targeted rural postgraduate pathways.[13] The University of Otago (Otago) and the University of Auckland (Auckland) have adopted all three of these strategies.

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Existing rural programmes

Both Otago and Auckland have admission targets for students of rural origin for medical education (Otago has a similar scheme for dentistry and will for other programmes by 2020), that have lifted the proportion of rural students enrolled in these programmes.[14–15] Attachments in rural general practice have formed part of both the undergraduate medical programmes for more than 25 years.[16] All Auckland medical students undertake compulsory rural placements in 4th year and in 6th year. Rural clinical attachments are also commonplace in other health professional schools. In 2015 almost 1,000 Otago health professional students, in medicine, dentistry, oral health, physiotherapy, pharmacy, nursing and dietetics undertook clinical placements in rural communities. Similarly, Auckland University of Technology (AUT) offers rural clinical attachments for physiotherapy, occupational therapy and paramedicine students in the Bay of Plenty and a distance taught midwifery programme in collaboration with local midwives in Northland and Taranaki.

In 2007 Otago introduced a year-long rural medical immersion programme (RMIP).[17] RMIP is modelled on the longitudinal integrated clerkships (LICs) that evolved in Australia and are most likely to influence the student's future choice of a rural career.[18] Students spend a year based in rural general practice and a rural hospital, and the curriculum topics are taught concurrently rather than in the traditional specialist blocks. Currently 6% of the Otago 5th year medical class undertake RMIP. Auckland established a similar regional and rural programme in 2008. Called 'Pūkawakawa', the programme places medical students for their 5th year in Whangarei, including substantial time in small rural Northland communities.[19] The rural regional model has also been extended to Taranaki and the Bay of Plenty. Both Otago and Auckland teach a range of health professional groups and specialties in eight regional centres that cover provincial New Zealand and their surrounding rural communities.

The rural context lends itself to interprofessional education (IPE) and Otago and Auckland have located their flagship undergraduate IPE programmes in Tairāwhiti and the Western Bay of Plenty respectively. These programmes bring final year nursing, medical, dentistry, oral health, pharmacy, physiotherapy, dietetics, social work and occupational therapy students together for a five-week interprofessional learning attachment.[20]

In recent years Otago and Auckland have seen considerable growth in the number of Māori and Pacific students enrolled on health professional programmes. The intake of Māori students into the Otago MBChB programme this year was about 21% of the total domestic intake, a higher proportion than in the New Zealand population, and the proportion of Māori in the programme increased by 179% between 2010 and 2016.[16] This is the result of partnerships with Iwi (and Pacific) communities, promotion through high schools around New Zealand and foundation entry programmes.

Postgraduate (vocational) education in New Zealand is primarily the responsibility of the professional colleges. Otago is however an active partner with the Royal New Zealand College of General Practitioners (RNZCGP) in the delivery of New Zealand's one rurally-targeted vocational training programme, rural hospital medicine training. The academic component of the training (Postgraduate Diploma in Rural Hospital Practice) is delivered by a dispersed faculty embedded in rural communities across the country.[21]

Rural health as an academic discipline

What has not evolved in New Zealand in the way that it has in Australia is the development of rural health as an academic discipline. Academic posts and infrastructure have not been established in rural communities nor been brought together under the umbrella of a rural clinical school. By way of contrast there are 17 rural clinical schools[22] and 12 university departments of rural health[23] (the interprofessional equivalents), and numerous senior academic university posts, in rural Australia.

Currently New Zealand rural communities have multiple points of contact with different health professional education and training programmes run by different tertiary institutions and colleges. We are missing the opportunity for a coherent and efficient approach to health professional education in these communities; including the sharing of teaching, administrative

and IT resources and interprofessional education. Importantly, rural health also misses out on the leadership provided by senior academic posts in other branches of health; and rural health research remains 'undeveloped'.[8] Furthermore, there is no formal mechanism for the community engagement needed to feed a rural perspective back into the universities and their curricula.

There is another consequence that goes beyond rural New Zealand. Rural healthcare is more than simply the practice of healthcare in another location. Rural healthcare is more generalist, less resource intense and more engaged with the community; the boundaries between primary and secondary care and between professional groups are more blurred.[24] Generalism is developing as an epistemology and rural generalism as a scope of rural practice.[24] The importance of generalism would be explicitly emphasised if New Zealand had a School of Rural Health. The current low profile of rural health in our universities means we lose an important foil to the specialisation and compartmentalisation that is a feature of modern healthcare,[25–26] impacting students' views of ways to practise.[27] The arguments for undertaking health education in rural communities are not just about generating an equitable workforce. They are also about the value and quality of the educational experience students receive when undertaking rural attachments and the benefits to patients.[28–29]

These issues are not new and have been at the forefront of the minds of New Zealand rural health professionals and educators for more than two decades.[30–32] But perhaps it is not surprising that New Zealand's universities have not made the progress we see across the Tasman: Australian rural clinical schools and university departments of rural health are the result of targeted and substantial Commonwealth Government investment.[22]

The proposal for a National Interprofessional School of Rural Health

Otago adopted a strategic Rural Health Plan[33] in 2015 in response to reviews of its rural programmes that had recommended a department of rural health and eventually that a rural clinical school be established. When consulted on this plan the rural health sector expressed a preference for an 'all of systems approach', a national and cooperative solution that included the existing medical schools and tertiary training providers, the professional colleges, rural communities and healthcare providers. This feedback resulted in intensifying existing discussions with the University of Auckland, the Royal New Zealand College of GPs and the Rural GP Network (which represents all rural health professionals) and resulted in the current proposal for a National Interprofessional School of Rural Health (NISRH). The collaboration has grown to include AUT and will include other tertiary institutions, including those in regional centres, as it evolves.

Up until now most rural health workforce initiatives have come out of individual urban tertiary institutions and are aimed at single professional groups. The NISRH proposal is fundamentally different in that it calls for an 'all of systems approach' that is embedded in rural New Zealand, is interprofessional and multi-institutional. Key features of this proposal, which is currently sitting with government, are outlined below.

Interprofessional education

The NISRH is first and foremost a rural health initiative, aimed at improving health services and health outcomes for rural New Zealanders. The overarching educational model is an interprofessional one. The Tairāwhiti (Otago) and the Western Bay of Plenty (Auckland) programmes have each established IPE as a successful model of undergraduate health professional education in rural New Zealand that a NISRH would build on.[20] IPE is not only an educationally sound model in the rural context, it also involves sharing of teaching, administration and physical resources, and is thus efficient and sustainable.

Community and iwi engagement

The activities of the NISRH would be based around nodes located in rural towns and integrated with the local health services. Rural communities can make a significant contribution to the educational experience of students, especially when they have the opportunity to develop an ongoing relationship with trainee health professionals and can see the potential to secure their future health workforce.[34] Community

engagement occurs at three levels: student immersion in the community, community input into the curriculum and members of the community being involved in programme delivery. It creates a unique opportunity for students to understand the 'health of the community' and the social determinants of health for that community.

It is proposed that a local governance group would be established in each node in order to facilitate this community and iwi engagement. In many rural areas there are already community-owned health service organisations that would be the natural local NISRH partners. Engagement with local rural Māori within the framework of the universities' iwi partnerships will be an essential function of these local governance groups.

Local governance will also enable the NISRH to target the different health needs of individual communities. Mental health is an example of a high-needs area that is often under resourced in many rural communities.[35]

Distributed rural academic capacity

The core of this proposal is an interprofessional community of rural health academics, dispersed across rural New Zealand and bought together on a 'virtual campus' with the aid of modern IT. The academic posts would be taken up by rural healthcare professionals who would combine academic roles with active rural clinical practice. The resulting academic community would teach the future rural workforce, undertake relevant research and develop, deliver and evaluate services to improve rural health service provision and rural health outcomes. Rural health professionals would have the opportunity to engage in an academic career, without leaving rural clinical practice. This would bring rural health in to line with other specialist- and urban-based branches of practice.

Education

The LIC rural immersion year would be expanded and offered to a greater proportion of medical students and to other professional groups as evidence and infrastructure for this becomes available. For non-LIC medical and other health professional students, rotational rural clinical attachments will be coordinated. The range of disciplines would be increased to include several where rural placements are currently not an option because of inadequate clinical supervision. The discipline of the local lead academic might be medical, nursing, pharmacy or physiotherapy or another health professional. Lead academic positions would have the responsibility, along with the local administrators and tutors, for coordinating the equitable delivery of education to all the health professional students in that community, including the delivery of an interprofessional education programme.

Student assessment, curricula and qualification completion responsibilities would sit with the parent institutions as they currently do and a small NISRH presence would be maintained on the main campuses to ensure coordination and curriculum alignment. The NISRH would be responsible for delivering the curricula at each rural node, coordinating local clinical placements, ensuring interprofessional education is effective and providing accommodation and pastoral support for all student/trainees. Although the educational outcomes of prolonged rural attachments are well established, even the LIC students undertaking the year-long rural attachment would still receive the majority of their undergraduate education in urban teaching hospitals.

Infrastructure, including consulting and teaching space, student/trainee accommodation and IT would be shared by all health professional students, and with local healthcare providers such as GP clinics, contributing to their sustainability. The NISRH proposal includes funding for health provider facility extensions/utilisation for teaching space, administration and accommodation, as well as the IT infrastructure to support communication across the NISRH and with the main campuses. This would represent a significant investment in rural communities as all funds would be expended locally.

Australian Universities offer a rural LIC year to 25% of each of their medical class intakes. A NISRH could aim for a similar target and offer all health professional students enrolled in the partner institutions a shorter rural clinical attachment. The proposal is however scalable, with the number of nodes dependent on initial resourcing and the potential to increase in the future.

Vertical integration

Education would also be integrated across the years. For example, GP, rural hospital medicine registrars and postgraduate year 1 and 2 placements would be coordinated through the NISRH who would in turn contribute to the teaching of interprofessional undergraduate students, with all trainee levels involved in the continuing medical education programme for local doctors. This would contribute to the 'rural pipeline', the concept of supporting those with an interest in rural health in a coordinated fashion throughout their undergraduate education, postgraduate training and their years of rural practice (Figure 1).

Research development

The NISRH would add to existing efforts to develop a rurally-based research programme that responds to the needs of the sector and informs rural clinical practice and rural health policy. It would be well placed to trial new and innovative ways of delivering healthcare. Connections to a number of tertiary institutions would provide access to research expertise and resources.

Governance

Governance would be provided collectively by all the partners, tertiary institutions, professional colleges (including the RNZCGP), the Rural GP Network (representing rural health professionals) and rural communities.

Funding

Although draft costings have been provided to government, a full funding model has yet to be finalised. A strength of the proposal is its ability to draw together existing funding streams including Tertiary Education Commission (TEC) equivalent full-time students (EFTS) and Health Workforce New Zealand funding for medical postgraduate (year 1 and 2) and vocational training. Moreover, the NISRH will leverage existing educational and IT infrastructure of collaborating tertiary institutions. Rural communities are supportive of local health service and health professional education initiatives—for example, providing material support—when they can see the long-term benefits. Sharing infrastructure with local healthcare providers will generate additional efficiencies. It is however appreciated that distributed, community-based education is expensive, at least initially, and additional government funding will be needed for new infrastructure, academic posts and student travel and accommodation.

Benefits of the NISRH

An immediate benefit of a NISRH would be greater capacity for community-based student placements through better coordination and expansion of capacity and capability, at a time when these are in short supply. More students would benefit from exposure to rural programmes. Interprofessional education would become a standard part of health professional learning in the rural context, breaking down the barriers between the professions and improving efficiency and collaborative practice.[36]

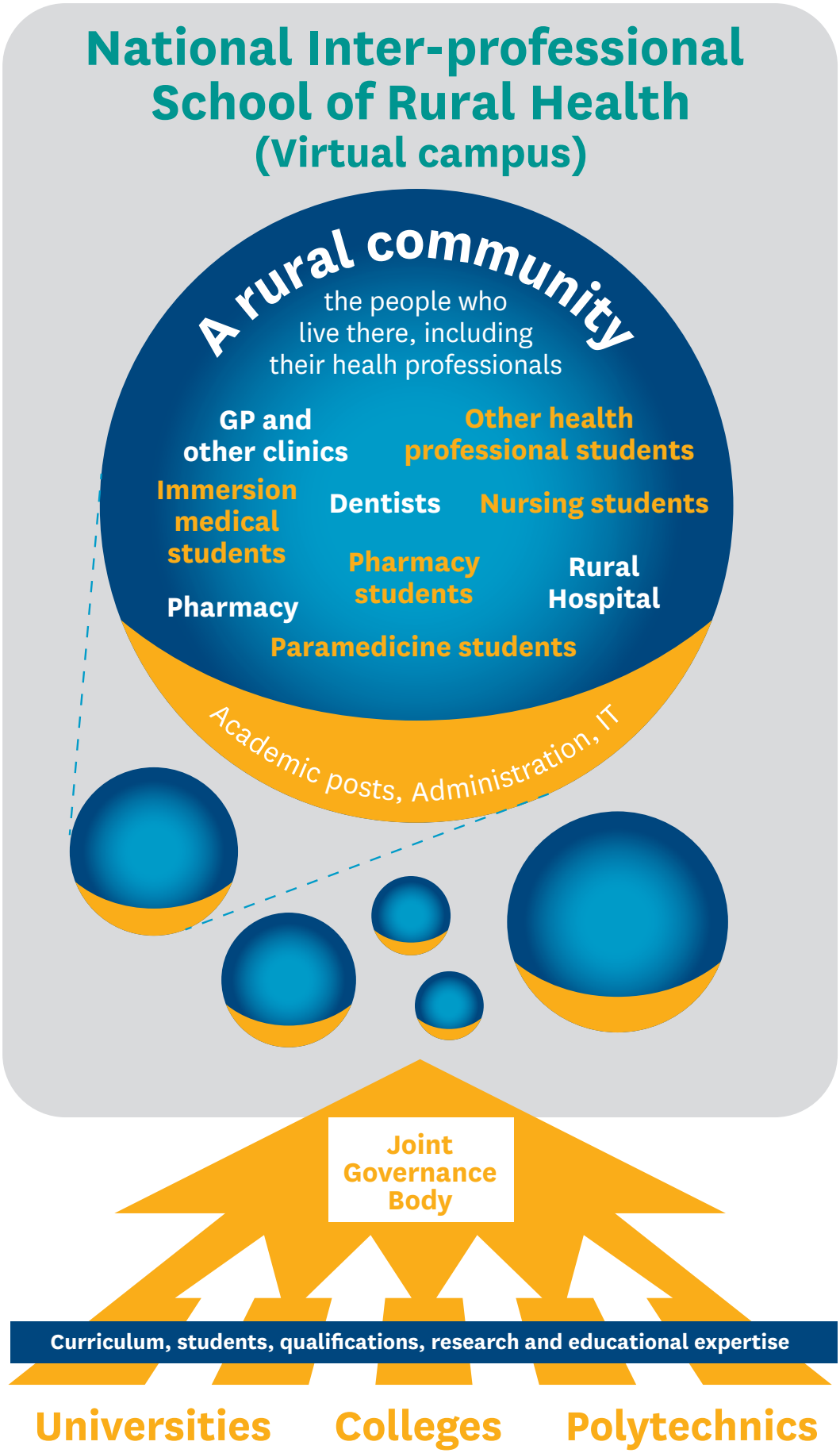
Furthermore, the NISRH would raise the profile, status and standards of generalist practice in health professional education and health service provision, maximising the potential role of generalist and community-based practice in the health services of the future. It would provide a structure that can feed a rural and generalist perspective back into the tertiary institutions, including their curricula. A NISRH would move the focus beyond workforce recruitment to workforce retention, research and leadership.

A NISRH would be a significant investment in the social fabric, institutions and economies of small town New Zealand.

Figure 1:

"The key seems to be the creation of a pipeline that reaches out to rural communities to encourage selection and success of rural students, gives them opportunities throughout medical school and residency to work in rural settings, and supports them in practice after they do settle in rural areas. This coupled with a medical school and residency training environment that values generalism, community responsive practice and rural life is a recipe for improving the flow of medical practitioners to underserved rural areas"[37]

Figure 2:


National Inter-professional School of Rural Health
(Virtual campus)
A rural community
the people who live there, including their healh professionals
GP and other clinics
Other health professional students
Immersion medical students
Dentists
Nursing students
Pharmacy students
Rural Hospital
Pharmacy
Paramedicine students
Academic posts, Administration, IT
Joint Governance Body
Curriculum, students, qualifications, research and educational expertise
Universities
Colleges
Polytechnics

As indicated above, any new resource and, as more teaching and research are undertaken rurally, more of the existing funding will be spent directly in the nodes in rural New Zealand. This is an important aspect of the proposed NISRH in terms of counteracting migration, as loss of professionals and their families has far reaching effects on rural towns. Experienced rural health professionals would be given opportunities to advance their careers without having to shift back to the city, often at a time when secondary schooling for their children is pushing them in that direction. The potential benefits of this proposal are as much about sustaining rural towns as about stemming the loss of experience and leadership from the local health services.

Conclusion

The NISRH proposal leverages existing tertiary institutions, avoiding the need to duplicate infrastructure that exists on the main campuses. It focuses on workforce redistribution without increasing the overall size of the workforce. It is not an additional tertiary education provider but an 'enabling body' collectively owned by the existing institutions that, by sharing human, physical and other resources, would permit them to educate students in rural communities in ways currently not possible. It links rural health professionals into the educational, research and clinical expertise already contained in urban institutions.

The model is based on Australian cooperative models, involving two or more universities, which successfully deliver high-quality health professional education and research across multiple rural sites.[22–23] It is however a uniquely New Zealand model that is cognisant of our small size, resources, unique geography and already crowded opportunities for clinical attachments. The need here is for a cooperative and integrated solution. The national whole-system approach incorporating undergraduate and postgraduate education for a range of health professional groups and institutions is a significant innovation.

Competing interests:
Nil.

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