I hereby give notice that
an Economic Development Committee Meeting will be held on:

Date:	**Tuesday, 16 May 2017**
Time:	**1.30pm**
Location:	**Council Chamber, Wairoa District Council, Coronation Square, Wairoa**

AGENDA

Economic Development Committee Meeting

16 May 2017

Fergus Power

Chief Executive Officer

The agenda and associated papers are also available on our website: www.wairoadc.govt.nz

For further information please contact us 06 838 7309 or by email info@wairoadc.govt.nz

Order Of Business

1 KARAKIA

2 APOLOGIES FOR ABSENCE

3 DECLARATIONS OF CONFLICT OF INTEREST

4 CHAIRPERSON'S ANNOUNCEMENTS

5 LATE ITEMS OF URGENT BUSINESS

6 PUBLIC PARTICIPATION

A maximum of 30 minutes has been set aside for members of the public to speak on any item on the agenda. Up to 3 minutes per person is allowed.

7 MINUTES OF THE PREVIOUS MEETING

Ordinary Meeting - 4 April 2017

8 GENERAL ITEMS

8.1 TE MĀTĀRAE O TE WAIROA TRUST

Author: **Charlotte Knight, Governance Advisor & Policy Strategist**

Authoriser: **Kitea Tipuna, Economic Development and Engagement Manager**

Appendices: **1. Update to WDC 16 May 2017** ⇩

1. PURPOSE

1.1 This report provides information for Committee on the Trust's recent activities. No decisions are required by Committee at this stage.

RECOMMENDATION

The Chair of Te Mātārae o Te Wairoa Trust RECOMMENDS that the Committee receive the report.

Signatories

	
Charlotte Knight Author	Kitea Tipuna Approved by

The Wairoa Horizon Trust
Te Mātārae o Te Wairoa Trust

Wairoa District Council ED committee meeting – Update 16 May 2017

Maori Land Development

Horticultural Opportunities – Richard has had discussions with Cedenco re opportunities for squash, peas and sweetcorn in the District. Looking for expressions of interest at this stage.

Koura farming – an article has been published in the Wairoa Star, together with advertisement for expressions of interest in sponsorship opportunity to investigate koura farming. Water testing is underway. Mahanga wetlands looking promising, and eel management and relocation is being addressed. John Hollows (Otago University) is coming to Wairoa at the end of May to start feasibility assessments of various sites.

Project Officer Position – struggling to make progress with parties contacted so far. WDC have confirmed their support for the MLD project and will support any applications where they can eg. letter from Mayor, REDS group meetings, central government opportunities. Tatou Tatou, Tuhoe and Pahauwera all suggested as possible supporters.

Plant and Food Research Horticulture Seminar –attended by Trust recently. May be potential for further discussion/ partnerships/access to central government funding.

Indigenous Mapping Wananga 2017 – Richard Allen will be attending this wananga in Hamilton in May 2017.

Made in Wairoa Market

The MADE IN WAIROA market has now finished for the season and will recommence at Labour Weekend 2017. The Trust is assessing its position of being the 'umbrella body' for the markets, which have been a success for local producers, the community and travellers through Wairoa, with a regular base of 9 – 11 stalls. The lease cost of the Deluxe Ford carpark has been considerable and alternative locations are being assessed. The stallholders are committed to growing the market, and the Trust has had initial discussions with DIA to work with them in a community led development programme to develop a Market and Arts Space which would provide a permanent place for regular markets, including night markets. This project would link in well with the Marine Parade enhancement program being considered.

The Gaiety Theatre

The financial performance of the Gaiety Theatre is an on-going challenge and something which is being closely monitored by the Trust's 'Gaiety Advisory Committee'. Bringing in new events for the theatre is a key focus to improve the Gaiety's financial position, and the Theatre Manager is constantly seeking opportunities in this area.

The Trustees are keen to promote and extend the movie sessions available during the school holidays in July.

Wairoa Maori Film Festival

This event is again being held at the Gaiety Theatre (as well as Kahungunu Marae and Morere) 2-4 June 2017. The Trust has agreed to make the theatre available for movie screening and the awards evening on Saturday 3 June. A letter has been written to WDC seeking their financial support of the event.

Business Mentoring

The Business Mentoring programme has continued over the last few months.

The Trust have identified the need to offer business support to Morere and Mahia commercial businesses to discuss the opportunities that are beginning to arise through Rocket Lab's presence and to encourage networking and co-promotion.

The Trust is developing a Morere and Mahia commercial clustering project which will develop a plan to capitalise on regional tourism activity, seasonal demand, identifying new customers and markets and maximising the supply chain needs of each business through a collaborative approach.

Great Business Great People

'Out on a Lim' was promoted in an advertorial in The Wairoa Star, to promote tourism activity in the area.

Strategic Review of Projects WDC/Te Mātārae o Te Wairoa Trust

A meeting is scheduled for late May 2017 May (post annual plan confirmation) at which Trustees and WDC ED team will discuss and agree on projects each party will take the lead on. Emphasis on strategic focus and the need to ensure duplication of effort/resource is avoided and strong links to Matariki REDS document.

Annual Plan Consultation document 2017/18 – 2 key areas of focus for Trust:

- Enhancing Wairoa – the main street upgrade is being consulted on and the burnt-out buildings/Arts and Market space project comes under this umbrella. Kitea advised this project is being directed to Upstream Wairoa to take the lead. Trust still sees Vision Projects being involved but linked to Upstream rather than Trust. WDC keen to commence this project in July 2017 and Kitea has contacted the owner of the burnt-out buildings.
- Investing in People – Trade training and affordable housing. There may be opportunities for the Trust to be involved in this area.
- Other areas (outside of the consultation document) which WDC is keen to support:
    - Business support and mentoring program
    - Mahia/Morere tourism/business cluster development

WDC focussing on business attraction to Wairoa, and on gaining central and regional support for projects (including offering WDC support for Trust projects), and on developing a CRM (Customer Relationship Model) to ensure tracking and measurement of all external relationships.

New Trustees

Two new Trustees, Kiri Gilbert and Angela Thomas have been appointed.

Karen Burger
Chairperson
Te Mātārae o Te Wairoa Trust

8 May 2017

8.2 ECONOMIC DEVELOPMENT & ENGAGEMENT MANAGER REPORT

Author: **Kitea Tipuna, Economic Development and Engagement Manager**

Authoriser: **Fergus Power, Chief Executive Officer**

Appendices: **Nil**

1. PURPOSE

1.1 This report provides information for the Economic Development Committee on Council and community activities. No decisions are required by the Economic Development Committee at this stage.

RECOMMENDATION

The Economic Development & Engagement Manager RECOMMENDS that the Economic Development Committee receive the report.

2. MATARIKI WORKSHOP

A two-day workshop particularly tailored to whānau, hapū, iwi, Māori youth, and those involved in iwi development and Māori business development within the Wairoa district was held in Wairoa on the 5th and 6th of May at the Presbyterian Hall and the Wairoa Taiwhenua. The main outcomes of the workshops included;

- MATARIKI – Hawke's Bay Regional Economic Development Strategy (REDS) and Action Plan 2016 – information sharing with attendees, in particular, providing an overview on what has been happening since Matariki was launched in July 2016 and what is coming up;
- Scoping an effective communications approach ;
- Localising the upcoming actions for whānau and communities;
- Supporting whānau business development, including in the following key areas – digital enablement, tourism and land based economies;
- Engaging business development support agencies and organisations;
- Supporting the development of rangatahi entrepreneurs and their business ideas.

JMP Consulting was engaged by Te Kahui Ohang o Takitimu (TKO) to deliver the workshops. TKO is a collective of Ngāti Kahungunu iwi and hapū post treaty settlement groups committed to driving economic development in Hawke's Bay.

Approximately 60 participants attended day one of the workshop, with participants able to also book business clinics or tailored business development coaching sessions on the second day.

Thank you to His Worship the Mayor, Councillor Min Johansen and CEO Fergus Power who attended part of the workshops on day one.

3. PROFIT MAGAZINE: MAY – AUGUST 2017

Wairoa stories were profiled significantly in the PROFIT Magazine. The aim of the magazine is "Inspiring Business in Hawke's Bay."

4. CUSTOMER RELATIONSHIP MANAGEMENT (CRM) SYSTEM

Council is currently investigating the implementation of a CRM system to better manage economic development projects.

5. ECONOMIC DEVELOPMENT STRATEGY

A draft Wairoa District Council Economic Development Strategy will be tabled at the next meeting of the EDC (June 27), to seek feedback from committee members before it is formally tabled at the Ordinary Council meeting scheduled for July 11. A draft Economic Development Strategy was put to Council in 2016, but a decision was deferred until the Hawke's Bay Regional Economic Development Strategy (REDS) had been launched. Also of note is the Tairawhiti Regional Economic Development Strategy, which was also recently released. It is intended that the draft WDC ED Strategy will now have clearer aligned to regional strategies currently in place.

6. TRENZ

TRENZ is New Zealand's biggest annual business-to-business travel and trade event. Bringing together tourism businesses, tourism wholesalers and media from around the globe. TRENZ was hosted in Auckland at The Cloud and Shed 10 (Queens Wharf) on the 9th to the 12th of May 2017.

The Wairoa District Council attended TRENZ this year to promote the tourism opportunities here in the Wairoa district.

7. SILICON MĀHIA

Silicon Maori was hosted at Mokotahi Hall at Māhia on the 8th of May. It was planned to demonstrate opportunities available to rural communities through a digital lens. This year Silicon Māhia also coincided with the Poutama Digital Cluster hui in Māhia. The Poutama Digital Cluster is a loose cluster of various businesses involved in digital activities. The cluster is not affiliated to any particular digital group or forum, it is not government supported or funded, it is a group of people that come together to share experiences and ideas and share business ideas. The businesses attending included software and hardware developers, animators and gamers, film and television producers, app, web and bot developers, drone and GIS operators, crypto-currency traders and keepers of data sovereignty.

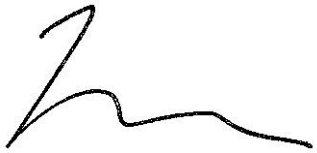
With a list of approximately 15 specialist industry speakers, with a particular focus from the Wairoa district, the hui was well attended including two staff from the Wairoa District Council.

8. TE MĀTĀRAE O TE WAIROA TRUST

Ongoing work to support Trust activities. The Trust's report is also tabled for Committee members, however, Council wishes to note the following items particularly;

- Koura Farming Initiative – Council provided seed funding for this project (as approved at the last ED Committee meeting).
- Made In Wairoa Markets – Council has offered the Library Green and Coronation Square as an alternative venue for the summer season for the Made In Wairoa Markets. Preliminary work is underway to prepare the area which includes the installation of additional picnic benches on the Library Green and a GREAT THINGS GROW HERE mural painted on Wairoa Library wall.

Signatories

	
Kitea Tipuna Author	Fergus Power Approved by

8.3 MEDICAL SCHOOL

Author: **Fergus Power, Chief Executive Officer**

Authoriser: **Fergus Power, Chief Executive Officer**

Appendices:
1. **Waikato Medical School ⇩**
2. **Business Case Report ⇩**

1. PURPOSE

1.1 This report provides information for the Committee on the proposal to establish a third medical school, and outlines the potential benefits for the community of Te Wairoa.

1.2 The University of Waikato is proposing to establish a new medical school that focuses on producing general practitioners (GP), in particular for rural and remote areas that are experiencing problems with attracting or retaining GPs. They also intend focusing on 'hard-to-find' specialties such as psychiatry, care of older people, and palliative care particularly for provincial New Zealand.

1.3 The proposal is for a partnership between the University and the District Health Boards of the Central North Island, with students undertaking training placements in rural areas. This will involve both students and junior doctors in training in the rural and remote areas, centering on mental health issues, drug and alcohol addictions, elder care as well as general practice.

1.4 This report outlines the arguments for the University of Waikato entering into a partnership with the Hawke's Bay District Health Board and using the Wairoa Health Centre buildings as a training base.

RECOMMENDATION

That the Chief Executive Office be instructed to work with the University of Waikato and its partners to advance the proposal for the establishment of a third medical school, and for the establishment of an associated medical student training presence in Te Wairoa.

2. BACKGROUND

2.1 The University of Waikato is proposing to establish a new medical school that focuses on producing general practitioners (GP), in particular for rural and remote areas that are experiencing problems with attracting or retaining GPs. They also intend focusing on 'hard-to-find' specialties such as psychiatry, care of older people, and palliative care particularly for provincial New Zealand.

2.2 There is another proposal regarding a new National School of Rural Health also being proposed, by Auckland & Otago, but Council could also support that as well.

2.3 The proposal is for a partnership between the University and the District Health Boards of the Central North Island, with students undertaking training placements in rural areas. This will involve both students and junior doctors in training in the rural and remote areas, centring on mental health issues, drug and alcohol addictions, elder care as well as general practice.

2.4 This report outlines the arguments for the University of Waikato entering into a partnership with the Hawke's Bay District Health Board and using the Wairoa Health Centre buildings as a training base.

2.5 Active community participation is an essential enabler of success in delivering the Waikato Medical School model, as is a fully integrated partnership between the University of Waikato and the Waikato DHB.

2.6 Based in a region of New Zealand with many communities where Māori are a high proportion of the population, the Waikato Medical School represents an opportunity to engage Māori students in medical training that will focus them on returning to provide primary care in their communities and entering specialties that currently under recruit doctors. This will be achieved not just by focusing on the recruitment of Māori students, but also by involving iwi and Māori communities in the governance, design and operation of the new School.

3. PROPOSED TRAINING MODEL

3.1 The University of Waikato is largely copying a proven Canadian training model that has a core mission to recruit students from, and produce health professionals for, under-served communities. The Canadian model has the following core principles:

3.1.1. Health and social needs of targeted communities guide education, research and service programmes;

3.1.2. Students are recruited from the communities with the greatest health care needs;

3.1.3. Programmes are located within or in close proximity to the communities they serve;

3.1.4. Much of the learning takes place in the community instead of predominantly in university and teaching hospital settings;

3.1.5. The curriculum integrates basic and clinical sciences with population health and social sciences; and early clinical contact increases the relevance and value of theoretical learning;

3.1.6. Training methodologies are student, patient and population centred, service-based and assisted by information communication technology;

3.1.7. Community-based practitioners are recruited and trained as teachers and mentors;

3.1.8. Partnering with the health system to produce locally relevant competencies; and,

3.1.9. Faculty and programmes emphasise and model commitment to public service.

3.2 In the case of the North Ontario Medical School (NOSM) they have been successful in attracting students to work in general practice and to remain and work in the areas where they have trained:

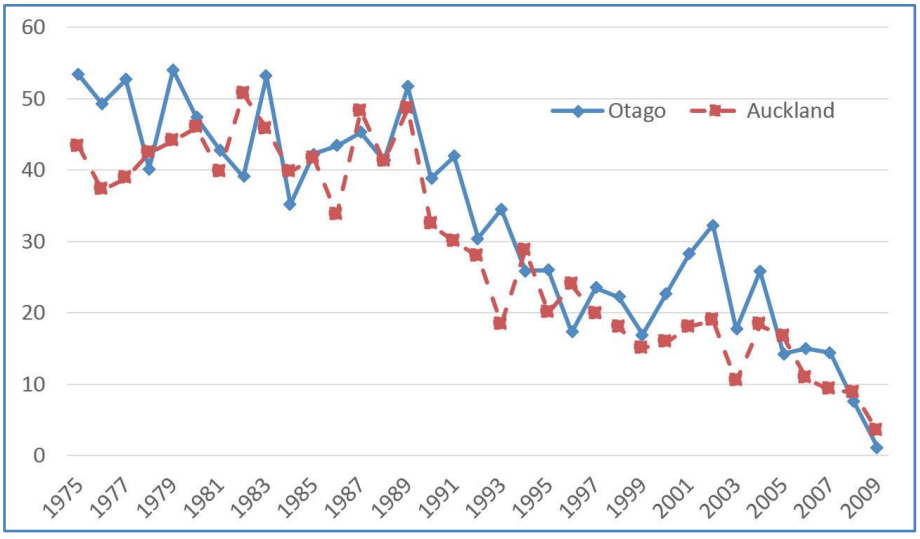
3.3 "Since 2009 there have been seven graduating classes of which 62% of graduates have chosen family medicine (predominantly rural) training. Almost all other MD graduates are training in general specialties. 94% of the doctors who completed undergraduate and postgraduate training with NOSM are practising in Northern Ontario."

4. CURRENT SITUATION

4.1 The University of Waikato's view is that New Zealand is not producing enough medical graduates and the health services are increasingly relying on imported foreign doctors (IMGs) (In 2014, 43.4% of the country's medical workforce was trained overseas). This trend is particularly apparent in the 'unpopular specialties' (psychiatry, geriatrics, rehabilitation medicine, palliative care and obstetrics and gynaecology, all have more than 50% IMGs), and in general practice. Historically medical students have chosen general practice or specialty medicine in equal measures, however since the late 1980's this preference has changed dramatically (Figure 1).

4.2 Partly, this is driven by the trend for medical students/graduates to have come from a narrow band of the NZ population, and background, with the students admitted to the two existing medical schools more likely to come from privileged high-decile schools and be of high socio-economic status. This leads to a preference of high paying/high status specialties, and inevitably an over representation of students from the main centres seeking to stay in main centres, this leaves rural areas hit by two reinforcing trends. Firstly, there are not enough GPs being trained, and the ones that are trained preferentially choose urban areas where they can maximise their incomes and better control their working hours. In the work done for the business case, the University of Waikato found that the most deprived region with the highest proportion of Māori (the Midland Region) has 13% fewer doctors than the rest of the country (253 compared to 292 doctors per 100,000).

4.3 ***Figure 1:*** *Percentage of medical school graduates vocationally registered in general practice by year of qualification (Source MCNZ 2016).*



4.4 Taking students from privileged high-decile schools also means that Māori doctors are under-represented in the profession. For Māori communities and Māori students, the issue is not just about recruiting more students, but about identifying outstanding students who bring tangible connections with their communities as well as Māori language and culture with them into the programme. They would be encouraged to retain and enhance their cultural knowledge as part of their medical training, and return to their communities as medical practitioners.

4.5 ***Table 1:*** *Ratio of doctors (all specialties) to population. In some cases, the 'urban population has been used instead of 'district population' because the 'number of doctors' data refer to where the doctors live.*

Town/district	Population	Number of registered doctors (all specialties)	Ratio
Wairoa (district)	7,890	4	1:1,970
Hawera	11,800	6	1:1,970
Stratford (district)	8,8980	5	1:1,800
Carterton	5,130	3	1:1,710
Feilding	14,000	9	1:1,560
Morrinsville	7,600	5	1:1,520
Tokoroa	13,700	9	1:1,520
Waipukurau	4,080	3	1:1,360
Taupo (urban)	24,100	23	1:1,050
Napier	62,100	65	1:955
Taumarunui	4,640	5	1:930
Matamata (urban)	7,730	9	1:860
Te Aroha	3,906	5	1:780
Whakatane (district)	34,400	46	1:750
Dannevirke	5,200	9	1:580
Te Kuiti	4,600	8	1:575
Gisborne (district)	43,656	91	1:480
Rotorua	57,800	193	1:300
New Plymouth (urban)	57,000	193	1:295
Hastings (urban)	4.6 68,900	251	1:275

5. DOCTORS IN RURAL AREAS LIKE WAIROA

5.1 The New Zealand Medical Register lists only four doctors currently resident in Wairoa – Dr. Janes. Dr. Banister. Dr. O'Sullivan and Dr. Arrieta; this is a ratio of doctors per head of population of 1:1,970; this compares poorly to Gisborne which has a ratio of 1:480. Table 1 lists the ratios for a range of some central North Island communities.

5.2 For a number of reasons, the data are not always easy to analyse and compare. First, there is a considerable amount of commuting going on from one town to another. For

example, in the Waikato some individuals in the rural communities will chose to access medical services by driving into Hamilton, and some rural towns are served by doctors living, and driving out from Hamilton. It is likely that some of the doctors registered as living in Napier may work at the base hospital in Hastings as a specialist, or in general practice.

5.3 Secondly, the data are skewed in relation to towns that are the location for the base hospital (for example, Napier and Hastings, Stratford and New Plymouth) resulting in the four communities in this table (above) with the highest ratio, and some communities with the lowest.

5.4 In the case of Wairoa (and places like Taumarunui), apart from fly-in specialist clinics, the ratio is a fair representation as Wairoa is too remote for any significant commuting to be occurring.

Key points:

- New Zealand is not producing enough doctors to serve the communities' needs; either GPs or some specialties;
- New Zealand is increasingly relying on imported foreign doctors;
- The number of students choosing general practice has fallen dramatically;
- The lack of doctors is particularly acute in rural and remote areas;
- Medical students are increasingly drawn from privileged high-decile schools;
- Medical students are likely to return to or stay in communities where they were raised;
- Rising student fees and associate student debt has reduced the sense of community service amongst graduates and focused them on maximising income to pay off debts; and,
- Māori doctors are underrepresented in the profession.

Key components of the University of Waikato partnership model that are essential for the operation of the proposed medical school are:

- Community support for investment in clinical education sites in each community;
- Community support for the selection of students and the funding of scholarships for students to study in the medical training programme;
- Community support for training (by serving as patients), and mentoring programmes when students undertake clinical placements in the communities; and,
- Ongoing mechanisms to obtain community feedback about the success of the programme and their alignment with community needs.

6. WHAT DOES WAIROA OFFER WAIKATO MEDICAL SCHOOL

6.1 The University of Waikato recognises that there is evidence that recruiting rural students will help the retention of doctors practising family medicine in rural areas, all other things being equal, medical graduates who grew up in rural, small town and provincial city environments are more likely to return there to work. Places like Wairoa require more doctors, so it makes sense to work to recruit students from places like Wairoa.

6.2 The University of Waikato wishes to recruit Māori students who can demonstrate engagement with their community, especially rural communities. Therefore, Wairoa with its high Māori population is a good location choice.

6.3 The University of Waikato aims to meet the challenge of addressing improved health care access in provincial and rural communities. Bringing a student training programme to Wairoa will increase services through the use of student run clinics, and aid in the attraction and retention of qualified GPs by bringing students to live in and experience Wairoa and allowing Wairoa students to come home for training.

6.4 To minimise the costs of establishing a training centre the University of Waikato needs to identify communities with available buildings for training and for clinics, and available accommodation for students. Wairoa has these facilities.

6.5 The University of Waikato is proposing a programme that is fully imbedded in its location community. In the Waikato, they have found that many small centres are served by doctors commuting in from Hamilton resulting in a medical network that is not truly part of the community. The distance of Wairoa from either Napier or Gisborne precludes commuting GPs and therefore makes it an ideal community for the University's training model.

6.6 Wairoa offers the University of Waikato a community location with a proven track record of student internships.

7. WHAT DOES WAIKATO MEDICAL SCHOOL OFFER WAIROA

7.1 Auckland Medical School training placements outside the hospital setting that are as short as seven weeks, while the Otago Medical School rural immersion program is only available to 20 students per year. Under the University of Waikato proposal, each student will spend at least a year in community placements. This will involve a high level of community engagement with their education and community and result in the students becoming part of the community.

7.2 The University of Waikato proposal is built around involving the community in selecting students and in developing the programme that will produce the doctors that they need for the next half century and beyond. Therefore, it would be in Wairoa's interest to be involved.

7.3 This proposal would increase the training opportunities for Wairoa College students and also assist with GP attraction and retention.

7.4 The establishment of a training location in Wairoa will bring investment in building infrastructure and tutors to the town, as well as the money spent by students during their time in the community.

7.5 Putting students from rural communities into the community while training as doctors will establish additional role models for Wairoa's young people.

8. NECESSARY PARTNERS FOR THIS INITIATIVE TO SUCCEED

8.1 The Wairoa community;

8.2 Wairoa GPs;

8.3 Wairoa District Council;

8.4 University of Waikato;

8.5 Waikato District Health Board;

8.6 Hawke's Bay District Health Board;

8.7 Ngāti Kahungunu - Wairoa Taiwhenua

8.8 Ngāti Tūhoe;

8.9 Ngāti Kahungunu Incorporated; and,

8.10 Wairoa College.

9. OPTIONS

9.1 Option A: Do nothing.

9.2 Option B: Support the establishment of a third medical school and an associated medical student training presence in Te Wairoa.

9.3 Option A: This option is not preferred as to take no action will not enhance the health of the community of Te Wairoa (including enhancing community resilience through improved training, recruitment and retention of rural GPs).

9.4 Option B: This option is preferred as the strengthening of medical training activities in Te Wairoa will enhance the health of the community of Te Wairoa (including enhancing community resilience through improved training, recruitment and retention of rural GPs).

Further Information

None.

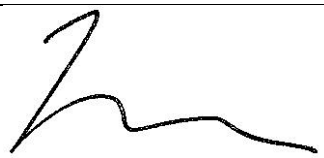
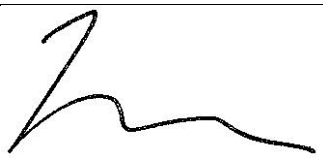
Background Papers

None.

References (to or from other Committees)

Initial discussions have been held with the Wairoa Hospital management team, Kirsti Luke (CEO of Tūhoe Te Uru Taumatua, the University of Waikato, and the Waikato District Health Board.

Signatories

	
Fergus Power Author	Fergus Power Approved by

A COMMUNITY-ENGAGED GRADUATE ENTRY MEDICAL SCHOOL: THE CASE FOR A THIRD MEDICAL SCHOOL IN NEW ZEALAND

SUBMITTED BY
THE UNIVERSITY OF WAIKATO
AND WAIKATO DISTRICT HEALTH BOARD

17 OCTOBER 2016

Executive Summary

The Concept

This document outlines the case for the establishment of a new Community-Engaged Graduate Entry Medical School (CEGEM) at the University of Waikato, creating a third medical school in New Zealand. The Waikato Medical School would be based in the Waikato and at regional clinical education sites in 12-15 locations throughout the central North Island (depending on the community partnerships that are built).

The Waikato Medical School will offer a medical degree programme which reflects international best practice and is unique in New Zealand. Specifically it will be:

1. Graduate entry only (requiring an undergraduate degree from any university in any subject, compared to the current requirement to take health sciences at Auckland or Otago Universities to have the option to enter medicine);

2. Four years in length rather than the five years currently required at Auckland and Otago Universities.

3. Community engaged, involving communities outside the tertiary hospital centres in the design of the programme, selection of students, and training of students;

4. Proactive in adding to rather than utilising existing clinical placement opportunities for medical students across the Midland region[1]; and

5. An opportunity to build a new medical school in genuine partnership with Māori and with other high health needs communities.

The returns available to the New Zealand government from strategic social investment in a dedicated CEGEM programme are high, reflecting the fact that it would produce health workforce outcomes aligned with the primary care needs of communities outside the main centres in New Zealand, where the need is greatest and the potential for improved health outcomes is highest. Achieving this will require investment to establish a new medical school that is community engaged and socially accountable in every aspect of its operation. The Waikato Medical School will focus on producing graduates with a passion for community-based primary care, willing to serve communities with high needs and meet the needs of the populations living outside the main centres,[2] fully conversant with the use of modern communication technologies in providing health care, and with practical experience of community based health and social service partnerships.

With one medical school for every 2.35 million people, New Zealand has among the lowest ratios of medical schools to population in the OECD. The relevant ratios are 1:1.7 million in the UK, 1:1.6 million in the US and Canada, and 1:1.2 million in Australia. Based on any of these comparators New Zealand should be well advanced in developing a third medical school, and against Australian standards we would already have a third medical school and be considering a fourth. New Zealand's need for a third medical school is increased by the similarity in the medical education provided by the two existing New Zealand medical schools compared to the diversity of approach in medical training available internationally. The key lesson learned from Australia, North America and the UK is that the provision of additional medical schools needs to be about increasing both capacity and

[1] The Midland Region encompasses Bay of Plenty, Lakes, Tairawhiti and Waikato District Health Boards.
[2] We define our area of focus "outside the main centres" to mean centres of population without a tertiary hospital, including small cities, provincial towns and rural areas.

diversity in medical education and training models. The proposed Waikato Medical School complements the work of the two existing medical schools in New Zealand, providing the diversity of training and workforce outcomes that is necessary to meet New Zealand's challenges with the geographical location and specialist choices of its health care workforce.

The primary driver for a third medical school is the shortage of doctors that is most acute in particular specialties and regions. To address these shortages we need to recruit a different sort of student, and train a different sort of doctor. Each year New Zealand currently imports 1,100 doctors trained in other countries (IMGs - International Medical Graduates) to meet our health workforce needs. Most of these doctors stay for a short time, and only 25% are still here three years after their arrival. Psychiatry, palliative medicine, obstetrics, rehabilitation, and care of the elderly are main specialties where IMGs make up around 60% of the workforce. In addition, only 15% of the graduates from Auckland and Otago elect to be General Practitioners (GPs) and as a consequence 60% of GPs outside the main metropolitan areas are IMGs. Despite this, the vacancy rate in rural general practice is 20-25% and 40% of our current GPs plan to retire by 2025 (i.e., 1,850 GPs who will need to be replaced). The shortage of primary care doctors and the above specialists in provincial and rural centres and hospitals increases costs to the health system as a whole (because patients do not seek treatment early, have more advanced conditions requiring more medical intervention and use the emergency department as a general practice).

The key elements of the proposed Waikato CEGEM education model benchmarked against best practice internationally are:

- A student selection and admissions process that reflects engagement with communities in the identification of students with appropriate academic ability, personal characteristics, and commitment to providing care in the communities from which they are drawn;
- A substantial proportion of clinical learning occurring in community clinical settings in which the doctors would be expected to practice after graduation;
- An ethos focussed on provincial and community-based care and on a duty to serve these populations; and
- A high proportion of graduates who choose a specialty most relevant for health care outside the main centres. Our aim is to have 50-60% of graduates of the Waikato Medical School choosing general practice as a specialty with a commitment to practise outside the main centres, and a high proportion of the remaining 40% choosing a specialty and sub-specialty relevant to provincial and rural workforce needs.

The Investment Objectives are:

- 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; and
- 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.

Active community participation is an essential enabler of success in delivering the Waikato Medical School model, together with a high level of formal collaboration between the University of Waikato and the Waikato District Health Board (DHB). The governance structure and operations of the School will reflect a partnership between the institutions and communities needed for the School to achieve its potential. The programme of the Waikato Medical School will be implemented under the auspices of the Institute of Health and Medicine, an entity currently being established pursuant to a strategic alliance between the University of Waikato and Waikato District Health Board (DHB). This alliance will incorporate other DHBs, community health and primary care entities, iwi, and social agencies who wish to engage with the work of the Institute. The Institute creates a framework for joint leadership, co-investment in community clinical education sites and community engagement and social accountability, in accordance with international best practice in the provision of a CEGEM programme.

Our analysis sets out the issues affecting the medical workforce and the serious health service deficiencies impacting communities of the Waikato and other areas of the central North Island, as well as across other provincial and rural centres in New Zealand. It establishes the link between purposeful medical school programme design and workforce outcomes, to explain why the proposed Waikato Medical School will produce medical graduates unlike those currently produced by the University of Auckland and University of Otago medical schools. The selection and training of Waikato Medical School students will reflect an ethos of commitment to medical practice in community environments. International experience indicates that this approach will result in a high proportion of Waikato Medical School graduates serving communities outside the main centres, where the opportunities to improve health outcomes are greatest.

The graduates of the proposed Waikato Medical School are needed, as demonstrated by health workforce data and health disparities outside the main centres. It is an opportunity for the New Zealand government to make a clear social investment statement which meets its stated aims to improve access to primary care and health outcomes in provincial and rural communities. The model proposed is low risk because it follows models that are well established in other developed countries and can be implemented as a partnership between an existing University with strong science and health-related education and research capability and a DHB that is committed to meeting the needs of a large provincial and rural community.

Based in a region of New Zealand with many communities where Māori make up a high proportion of the population, the Waikato Medical School represents an opportunity to engage higher proportions of Māori students in medical training and to focus them on returning to provide primary care in their communities. This will be achieved not just by focusing on the recruitment of Māori students, but also by involving iwi and Māori communities throughout the region in the governance, design and operation of the new School. This engagement will make them partners in the challenge of selecting and supporting students who identify with their communities and would respond to the ethos of the Waikato Medical School. Engagement with Māori communities represents one of the most important strengths of this proposal, and is consistent with the strategic positioning of the University of Waikato in the tertiary sector.

Chapter 1 – Strategic Case

The Concept

This document outlines the case for the establishment of a new Community-Engaged Graduate Entry Medical school (CEGEM) at the University of Waikato, to create the third medical school in New Zealand. What is proposed is the establishment of a medical school that is community engaged and socially accountable in every aspect of its operation including education, training and research. The Waikato Medical School will primarily focus on producing graduates with a passion for community-based primary care, willing to serve the communities and meet the health needs of the population that lives outside the main centres,[3] fully conversant with the use of modern communication technologies in providing health care, and with practical experience of community based health and social service partnerships.

The key elements of the proposed CEGEM education model are:

- A student selection and admissions process that reflects engagement with communities in the identification of students with appropriate academic ability, personal characteristics, and commitment to providing care in the communities from which they are drawn;
- A substantial proportion of clinical learning occurring in community clinical settings where the newly trained doctors would be expected to practise after graduation;
- An ethos focused on provincial and community-based care and on a duty to serve rural, provincial and high-needs populations; and
- A high proportion of graduates who will choose a specialty most relevant to health care outside the main centres. Our aim is to have 50-60% of graduates of the Waikato Medical School choosing general practice as a specialty with a commitment to practice outside the main centres, and a high proportion of the remaining 40% choosing specialties and sub-specialties relevant to provincial and rural workforce needs.

Active community participation is an essential enabler of success in delivering the Waikato Medical School model, as is a fully integrated partnership between the University of Waikato and the Waikato DHB. Based in a region of New Zealand with many communities where Māori are a high proportion of the population, the Waikato Medical School represents an opportunity to engage Māori students in medical training that will focus them on returning to provide primary care in their communities and entering specialties that currently under recruit doctors. This will be achieved not just by focusing on the recruitment of Māori students, but also by involving iwi and Māori communities throughout the region in the governance, design and operation of the new School.

With one medical school for every 2.35 million people, New Zealand has among the lowest ratios of medical schools to population in the OECD. The relevant ratios are 1:1.7 million in the UK, 1:1.6 million in the US and Canada, and 1:1.2 million in Australia. Based on any of these comparators New Zealand should be well advanced in developing a third medical school, and against Australian standards we would already have a third medical school and be considering a fourth. New Zealand's need for a third medical school is increased by the similarity in the medical education provided by

[3] We define our area of focus "outside the main centres" to mean centres of population without a tertiary hospital, including small cities, provincial towns and rural areas.

the two existing New Zealand medical schools which are large by international standards[4] and thus limit New Zealand's ability to provide the diversity of medical education available in Australia, the UK and US. The key lesson from Australia, North America and the UK is that the provision of additional medical schools needs to be about increasing both capacity and diversity in the medical training models. Replication of New Zealand's existing medical education model is unlikely to provide an efficient or effective means of addressing the increasing health workforce shortages and increasing population health needs. For these reasons, the proposed Waikato Medical School complements the work of the two existing medical schools in New Zealand and provides diversity of training and workforce outcomes that is necessary to meet New Zealand's challenges with the geographical location and specialist choices of its medical workforce.

The proposed Waikato Medical School is an opportunity for the New Zealand government to make a clear social investment statement about its aims to improve access to primary care and improving health outcomes in provincial and rural communities. The model proposed is low risk, because it follows models that are well established in other developed countries and can be implemented as a partnership between an existing University with strong science and health-related education and research capability (see Appendix 2) and a DHB that is committed to meeting the needs of a large provincial and rural population. The proposed Waikato Medical School conforms to an internationally established model that has met with demonstrable success in Australia, North America and the UK.

Health Care and Health Workforce Issues

Disparities in Health

While it is difficult to quantify disparities in health outcomes in isolation from deprivation and ethnicity factors in the New Zealand setting,[5] strong evidence exists in the Midland region that its provincial and rural populations have poorer health than in urban areas, and that this disparity corresponds to their lower level of access to primary care.

Amenable mortality is a key System Level Measure (SLM), and is more focused than overall mortality in assessing deaths that may be decreased through health interventions. As an example, the Midlands DHBs all have excess amenable mortality compared to the New Zealand average, implying that medical and health care interventions can reduce these excess deaths. Māori have particularly high amenable mortality rates and reductions should be expected through increased numbers of GPs, better trained GPs, more NZ-trained GPs (with appropriate cultural and contextual understanding), better retention (continuity) and stronger practices – through increased training/CPD requirements.

Table 1.1. Amenable deaths in the Midland Region

Additional 0-74 year old amenable deaths per year 2007-2011 compared to NZ average						
	Waikato	BOP	Lakes	Tairawhiti	Taranaki	Total
Deaths	75	54	50	31	19	228

Ambulatory sensitive hospitalisations (ASH) for 0-4 year olds is a key System Level Measure (SLM) for the New Zealand health system, and ASH age 0-74 is also used routinely as a performance measure. The ASH measure is intended to reflect the primary care impact on the wider health system. Many (but not all) Midland DHBs have excessive emergency department (ED) attendances and ASH admissions compared to the New Zealand average.

[4] Frenk J., Chen L., Bhutta, Z., Cohen J., Crisp N., Evans T., Fineberg H., Garcia P., Ke Y., Kelley P., Kistnasamy, B., Meleis A., Naylor D., Pablos-Mendez A., Reddy S., Scrimshaw S., Sepulveda J., Serwadda D. (2010). Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *The Lancet* 376 (December) 1923-1958.

[5] National Health Committee. (2010). *Rural health: Challenges of distance; opportunities for innovation.* Wellington: NHC.

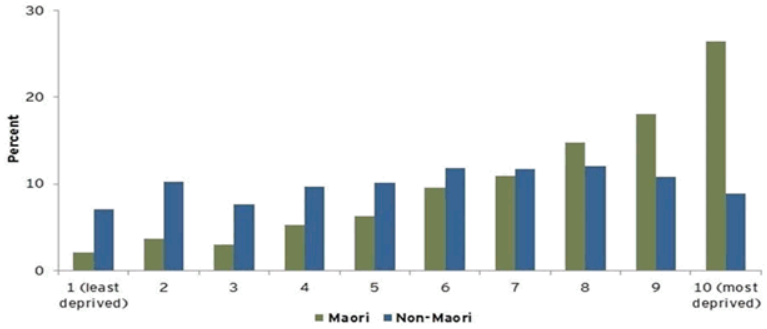
Table 1.2. ED attendances in the Midlands Region

ED attendances per 100 population in 2015/16 compared to NZ average

	Waikato	BOP	Lakes	Tairawhiti	Taranaki	Total
No	59,700	39,130	31,160	12,350	31,200	173,540
Rate/100 pop	15	18	30	26	27	
NZ rate/100	14					
Excess / year	6,050	8,750	16,900	5,900	15,300	52,900

Health inequalities are particularly apparent throughout the Midland region in relation to the health of Māori and Pasifika people.[6] To a significant extent this is because a high proportion of Māori and Pasifika people live in the most deprived areas, where access to health care is most constrained.

Figure 1.1: Health Inequalities in Communities of the Midland Region



Hospitalisation rates for Māori and Pacific peoples associated with infectious diseases (such as influenza, rheumatic fever and tuberculosis) are consistently higher than those for the population as a whole. Māori children under 15 years are 21-times more likely than non-Māori children to be hospitalised for acute rheumatic fever. Of the avoidable hospitalisations for Māori children in 2015/16, 1,190 were potentially avoidable through preventive or treatment intervention in primary care (ambulatory sensitive hospitalisations, or ASH), with a rate 25% higher than for non-Māori children. In the adult population heart failure admission rates were five-times higher for Māori than for non-Māori, while rates for hypertensive disease and stroke were twice as high. The all-cause rate of hospital admissions was 16% higher for Māori than for non-Māori during 2011-2013.

The 2014 RNZCGP Workforce Survey showed low numbers of Māori GPs in the workforce, with only 3.5% identifying as Māori compared to the 16% that might be expected through population counts. Attempts to address the burden of ill health in rural Māori communities will be hindered if the GP workforce cannot be brought more in line with the profile of the population being served.

The shortage of medical practitioners in provincial and rural communities results in access barriers for patients, which in turn contributes to disparity in health outcomes, and additional health system costs. This problem is well recognised, but is difficult to quantify in isolation from deprivation and ethnicity factors in the New Zealand setting (National Health Committee 2010).[7] Work in larger populations internationally suggests that there are clear deficits flowing from GP shortages,

[6] University of Otago. (2015). *District Health Board Māori health profiles*. www.otago.ac.nz/MHP2015

[7] National Health Committee. (2010) *Rural health: Challenges of distance; opportunities for innovation*. Wellington: NHC

including increases in premature mortality, increased ill-health through lack of effective management of long term conditions (such as diabetes and cardiac and respiratory conditions) and increased ambulatory sensitive hospitalisations (Duckett et al 2013; Hisock et al 2008).[8] In addition, "Primary care physician supply [is] associated with improved health outcomes, including all-cause, cancer, heart disease, stroke, and infant mortality; low birth weight; life expectancy; and self-rated health. Pooled results for all-cause mortality suggest that an increase of one primary care physician per 10,000 population was associated with an average mortality reduction of 5.3 percent, or 49 per 100,000 per year".[9]

The findings of the studies in the literature on the health impact of physician supply are that low levels of primary care supply can lead people to:

- Suffer/self-medicate with conditions that could have been ameliorated or otherwise treated;
- Be dissatisfied with care;
- Have fewer investigative and diagnostic tests;
- Present to a hospital with conditions that could have been treated in community settings;
- Seek help later in the course of a disease, when it is usually harder to treat; and
- Migrate to a place where care is more readily available, further weakening rural community viability.

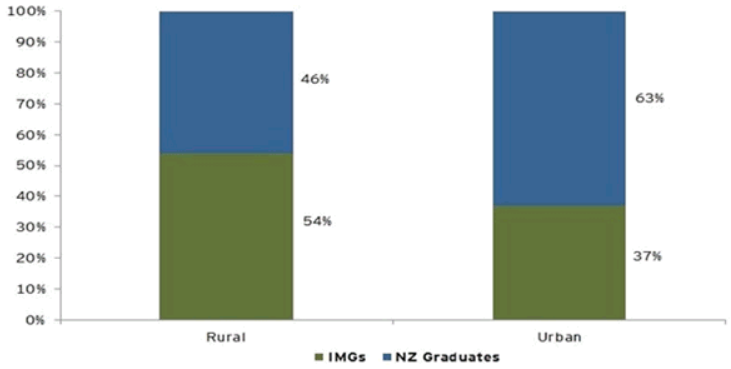
New Zealand Medical Workforce

In 2008 the Medical Training Board demonstrated that New Zealand has a shortage of doctors. Moreover, New Zealand's existing practitioners are 'maldistributed', to the extent that rural and non-metropolitan areas find it increasingly difficult to recruit and retain doctors.[10] There is no evidence that increases in medical school intakes since 2008 will resolve this problem.

To mitigate this shortage, New Zealand relies heavily on locums and overseas-trained doctors, or International Medical Graduates (IMGs). In 2014 43.4% of the country's medical workforce was trained overseas, a percentage that makes New Zealand the OECD nation that is most heavily dependent on an IMG workforce. We are currently importing over 1,100 doctors a year to fill the shortages that are not being met by the current domestic medical education and training system, a number much greater than the current or planned ability of the two existing medical schools to produce medical graduates.[11] This situation cannot be reconciled with the claim that there is no medical workforce shortage in New Zealand, or that IMGs are used only to manage short-term fluctuations in supply. IMGs predominantly fill specialties such as general practice, care of the elderly, psychiatry, rehabilitation medicine, palliative care, and obstetrics and gynaecology. In addition, most IMGs fill short fixed-term appointments and locum positions, with only 25% remaining in New Zealand for the long-term.

[8] Hiscock R., Pearce J., Blakely T., & Witten K. (2008). Is neighborhood access to health care provision associated with individual-level utilization and satisfaction? *Health Services Research, 43*(6), 2183-2200.
Duckett S., Breadon P., & Ginnivan L. (2013). *Access all areas: new solutions for GP shortages in rural Australia*. Melbourne: Grattan Institute.
[9] Macinko J., Starfield B., & Shi, L. (2007). Quantifying the health benefits of primary care physician supply in the United States. *International Journal of Health Services, 37*(1), 111–126.
[10] Medical Training Board. *The Future of the Medical Workforce – First Annual Report, November 2007 – December 2008.*
[11] Medical Council of New Zealand. (2016). *The New Zealand medical workforce in 2013 and 2014.*

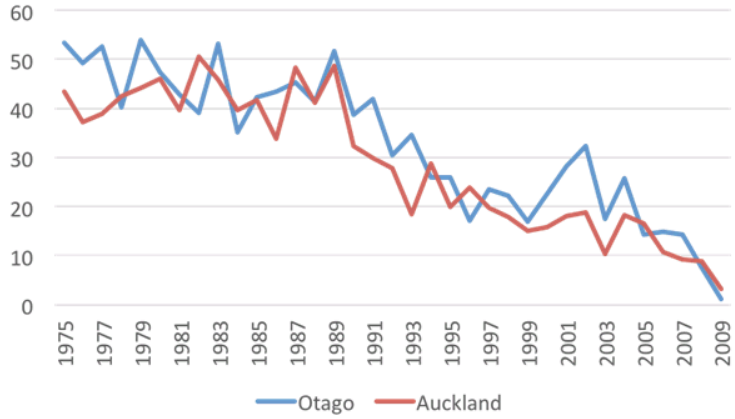
Figure 1.2: Comparison of the proportion of IMGs among rural and urban practices



Source: RNZCGP 2014.

The high proportion of IMGs in general practice and in rural areas reflects the medical specialty choices of New Zealand medical graduates and the risk is of continuing graduate preference to practise in urban rather than provincial centres or rural areas. Currently only 2% of medical school graduates indicate a preference to settle in a community of less than 10,000 people,[12] suggesting that current workforce policy initiatives have not had a significant impact on medical graduates career choices. In addition, over the last 25 years there has been a dramatic decline in the proportion of each graduating class electing to specialise in general practice (Figure 3).

Figure 1.3: Percentage of medical school graduates vocationally registered in general practice by year of qualification[13]



New Zealand's shortage of doctors will progressively worsen as the population ages – and indeed, the population is already ageing rapidly. It is estimated that by 2050 a quarter of the population will be 65 or older (Statistics NZ). To meet the medical requirements of an ageing population, the New Zealand Institute of Economic Research (NZIER) predicts the country will need 40-70% more doctors

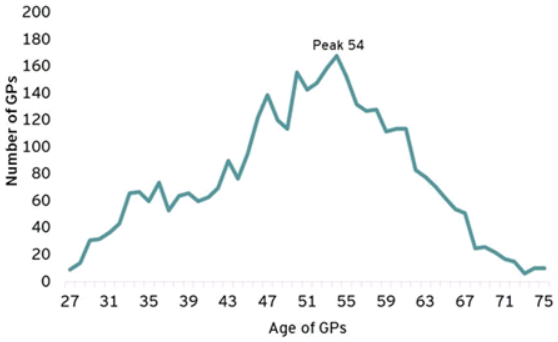
[12] Medical Schools Outcomes Database, July 2013.
[13] Medical Council of New Zealand. (2016). (*Unpublished data*).

by 2030. Yet other OECD nations with similarly ageing populations will compete with New Zealand for the supply of doctors. How will New Zealand remain competitive? While many European and British and North American doctors may identify with New Zealand's sports, scenery and lifestyle, doctors from many developing nations do not share these values and are consequently not attracted to New Zealand to the same extent.[14]

At the same time as New Zealand is ageing, the population has also been growing – by 80,000+ per annum, as immigration increases and births outpace deaths (NZIER). To meet the medical care requirements generated just by our level of population growth, the NZIER predicts the country will need an additional 240 doctors per year.

The dual effects of ageing and population growth mean that even a conservative estimate of 2.5% annual increase in population results in New Zealand needing 19,000 doctors by 2030, or an additional 6,000 doctors in the next 15 years. Auckland's population alone is expected to reach 2 million people by 2030 – therefore at its current density of 290 doctors per 100,000 people, Auckland will need to find an additional 1,800 doctors. These estimates do not take account of the need to replace the high proportion of doctors who will retire over that same 15 year period, a problem that is particularly acute among GPs.[15] As Figure 4 shows, the combined effect of New Zealand's failure to convert medical graduates into GPs over the last 20 years, and the high proportion of our GPs aged 50 years or more will create a crisis in primary care supply in in the future if New Zealand does not begin to address it immediately.[16]

Figure 1.4: Age profile of New Zealand GPs[17]



As a reflection of population health and health workforce needs, Hamilton and the central North Island combine a rapidly growing urban population with a large population in smaller and dispersed communities with high health needs. Medical education solutions developed at a medical school based in the Waikato will therefore have a wide applicability to New Zealand as a whole.

[14] Verma P., Ford J. A., Stuart A., Howe A., Everington S., & Steel, N. (2016). A systematic review of strategies to recruit and retain primary care doctors. *British Medical Council Health Services Research, 126*. The supply of Indian doctors for the NHS is drying up at source, and may no longer be counted on; the Indian middle class is coming under the same global pressures on students to elect more profitable careers than the Humanities, Social Sciences and Medicine can provide.

[15] A specific example of the way in which population growth and potential retirements will impact on the requirement to train additional numbers of general practitioners is provided in Appendix 4.

[16] This is in part because of the long lag time between the creation of new medical training places and the availability of fully qualified doctors. Australian medical journals and health planners have been discussing the consequences of the retirement of baby-boom generation GPs since at least 2006.

[17] Medical Council of New Zealand. (2016). *The New Zealand Medical Workforce in 2013 and 2014*.

A Crisis in our Rural Communities

The greatest shortages of doctors are in our rural, most highly deprived communities. The most doctor-deprived New Zealand health region – the Midland region – has the highest proportion of Māori in its population, with 13% fewer doctors than the rest of the country (253 per 100,000 compared with 292 doctors per 100,000). Yet this is the region of New Zealand that is (in conjunction with Auckland) undergoing the greatest population growth.

Table 1.3. Projected growth in Midland Region DHBs and New Zealand, 2013-2033

	Projected growth - Total Population			
	2001-2013	2013-2023	2023-2033	2013-2033
Waikato	+15.0	+11.6	+6.0	+18.3
Lakes	+3.8	+2.6	-0.7	+1.9
Bay of Plenty	+17.2	+11.5	+7.5	+19.8
Tairawhiti	+3.3	+2.8	+0.8	+3.6
Taranaki	+7.4	+8.0	+4.2	+12.5
Midland DHBs	**+12.3**	**+9.5**	**+5.1**	**+15.1**
New Zealand	+14.5	+12.8	+7.8	+21.7

Table 1.4. Projected growth in Māori population in Midland Region DHBs and New Zealand, 2013-2033

	Projected growth - Māori Population			
	2001-2013	2013-2023	2023-2033	2013-2033
Waikato	+20.2	+21.0	+18.1	+42.9
Lakes	+4.3	+10.1	+8.9	+20.0
Bay of Plenty	+13.7	+16.5	+15.5	+34.5
Tairawhiti	+7.1	+10.4	+9.1	+20.4
Taranaki	+27.3	+27.0	+24.6	+58.3
Midland DHBs	**+14.8**	**+17.6**	**+15.8**	**+36.2**
New Zealand	+18.2	+20.7	+18.5	+43.1

Moreover, rural communities are rapidly losing access to local primary care services. Graduates from Auckland and Otago medical schools are unlikely to live or work in these communities, regardless of whether they are ideal locations or more challenging. These graduates have been systematically moving away from careers in general practice and consequently the communities with the greatest health needs suffer the most, because they cannot reap many of the benefits of New Zealand's primary care strategy. These problems will only worsen as the country grapples with the nationwide shortfall of doctors described earlier.

In recent years, more than 50% of GP posts in the Midland Region have been filled with international medical graduates. While importing IMGs may be appropriate to fill short-term workforce needs, a more positive impact on community health will be achieved at lower cost by GPs who are embedded in the communities, understand their cultures and social issues, and are prepared to make a broad long-term contribution to community life. Doctors who are drawn from, trained in and return to these communities when qualified, are most likely to possess these attributes.

Changes in Primary Health Care

The ageing population and the increase in the prevalence of long term conditions mean that there is increasing recognition that the focus of health care needs to change. In 2000, New Zealand adopted a Primary Care Strategy to ensure that the emphasis on community-based care was enhanced. In 2007 the "Better Sooner More Convenient" discussion document was released seeking to shift health care provision to "a high-quality patient-centred health system that cares about the wellbeing of New Zealanders". In the foreword to the "New Zealand Health Strategy: Future Direction (2016)" the Minister noted "The health sector will need to be adaptable in coming years as developing technology changes how services can be delivered in ways we do not yet understand. The support of being one team with a common purpose provides the base for adaptation and innovation needed for value and high performance that will in turn lead to a sustainable and enduring public health service". The strategy recognises "the need to continually invest in training so that our health workforce has the skills needed to meet the health needs and expectations of caring for New Zealanders".

New Zealand requires a new generation of doctor who understands the model of technology-driven patient-centred health care, and who has the ability to integrate medical and communication technologies into all aspects of their training. We need doctors who are familiar with effective multidisciplinary teamwork, and who are able to adapt to the challenges presented by the ageing of the population and the changing health care needs that result. We also need doctors who will respond to the increasing numbers of people living with long term conditions, cancer, co-morbidities and the developing epidemic of dementia.

Workforce and Training Needs

The increase in funded medical places at the two existing medical schools that has been implemented from 2010 cannot meet New Zealand's medical workforce requirements in the medium term. Demand is expected to increase because of population ageing and population increase from immigration, and increased incidence and complexity of chronic long-term conditions. We anticipate that:

a. As GP numbers per 100,000 have declined over the last 20 years, there will be increased demand for consultations with fewer doctors.

b. Maldistribution of doctors makes the decline in GP numbers a major problem in provincial and rural NZ.[18]

c. Shortages will continue in specialist fields such as psychiatry, obstetrics, geriatrics, rehabilitation medicine and palliative care.

d. Our reliance on the importation of IMGs to meet our health workforce needs will continue – despite concerns that it is risky, inefficient and unsustainable for New Zealand to have such a high reliance on an imported workforce.

To meet these workforce challenges New Zealand requires an increase in medical student places in a new medical school that is focused on selecting and training students who will in high proportions specialise and practice in the areas of high current and anticipated workforce need. The principal requirement is for this new medical school to deliver medical practitioner retention in the

[18] We are aware of the suggestion that Physician Assistants may assist in meeting some of our primary care challenges, and we accept that they may – but there is no reason to expect that Physician Assistants will be any more willing to locate in areas of high need than any other graduate from the current medical training model.

geographical areas and the specialties in which the greatest shortages currently exist. Given that it will probably take 7 years to produce graduates (and 12-15 years to produce vocationally qualified practitioners) from the time a decision is made to establish a new medical school, New Zealand needs to move now to address the medical workforce shortages are predicted. A benefit of the proposed Waikato Medical School is that via its investment in regional medical education centres it will have an impact on high needs communities before graduates are produced.

In the following sections we show that this requires a new type of medical school focused on community engagement in the development of curriculum, student selection, and student education.

Approaches to Addressing the Shortage of Doctors Outside the Main Centres

The health workforce issues described above are not unique to New Zealand; indeed, they are challenging the health systems in most developed countries. As a guide to how New Zealand should address these issues, we can look to overseas exemplars. Here we profile two: the Northern Ontario School of Medicine (NOSM) and the rural programmes of Flinders University School of Medicine in South Australia. The University of Waikato and Waikato DHB are not proposing to "reinvent the wheel" or attempt a project without a proven model in overseas experience. The model we propose is already in operation and it is working. At its heart is the idea that students should be drawn from the communities which the workforce needs to serve, and both the students and the communities should be stakeholders in the mission of the medical school. For Māori communities and Māori students, the issue is not just about recruiting more students, but about identifying outstanding students who bring tangible connections with their communities as well as Māori language and culture with them into the programme. They would be encouraged to retain and enhance their cultural knowledge as part of their medical training, and return to their communities as medical practitioners.

Community-Engaged Graduate Medical Education

Community-engaged graduate entry medical education (CEGEM) is now considered to be best practice in Australia, Canada and the US for addressing contemporary health workforce issues, and for providing health care to rural, remote and small communities. It is a delivery model recognised and supported by the Ontario Ministry of Health, the South Australian Department of Health and the Medical Councils of Canada and Australia.

The CEGEM approach to medical education is supported and informed by a growing bibliography of articles and reviews, starting with an authoritative article based on University of Texas research,[19] reporting that:

- Courses that emphasised primary care at a general medical school had no observable impact on students' decisions whether or not to become a GP;
- Students who expressed interest in primary care at their selection and entrance were more likely than other students to enter general practice;
- The more academic the student was in orientation and the more the student identified with the academic mission of the Medical School rather than its social and community mission, the less likely they were to become GPs;

[19] Molloy M. H., & and Stroup-Benham C. (2001). Impact of generalist initiatives on residency selection. *Medical Education* (2001).

- The more students identified with values and associations external to the medical school, and the more these identifications were reinforced through clinical placements in community settings, the greater the likelihood that they would become GPs;

- Selection processes for medical school students ought to concentrate on characteristics associated with primary care, such as older students, students in partnerships, students who were parents, rural students, and students from minority communities with an ambition to alleviate inequalities; and

- A medical school should select students motivated by powerful external values and associations and civic stakeholder interests.

In other words, a nation gets the medical workforce outcomes that our selection processes and our approach to medical training determine. Medical Schools that select students whose ambition is to join a global medical elite have a role, but that role is not primarily to produce graduates who will in high proportions elect to focus on primary care or to practise in geographical areas distant from a tertiary hospital.

The Council of Ontario Faculties of Medicine reviewed the entire system of medical education.[20] The first CEGEM project in Ontario began at Moose Factory in James Bay in 1968. The medical authorities of Ontario therefore not only have experience of a range of different CEGEM initiatives, but also a long time frame for comparison. In the context of this experience in training doctors who will practice in remote regions amongst dispersed communities and First Nations peoples, the Northern Ontario School of Medicine is regarded as being the leader in the field of rural practice education and service delivery.

The Council of Ontario Faculties of Medicine identifies the following Critical Success Factors for CEGME initiatives: -

- Government investment and partnership and support;
- Collaboration with regional communities and community physicians;
- Local oversight including academic lead and administrative coordination and support; and
- Development of a core of family physicians in family medicine specialties who are willing and able to teach and act as exemplars of the required characteristics and commitment.

Similarly, a recent study demonstrates the veracity of the CEGEM model in Wales, providing evidence that in order to instil a community focus amongst medical graduates the current training model needs to change to allow graduates to train in rural clinical education sites, and to provide a greater focus on training for a role in these communities.[21]

Reinforcing these findings, the British Medical Council recently published a systematic review of results from related strategies to increase the numbers of rural GPs in a variety of developed nations.[22] This study reported that the best schemes achieve retention rates of 53%-63% in rural practice in Japan, Norway, Canada, and regions of the USA. The New Zealand Voluntary Bonding Scheme and ROMPE were reported as least successful among the programmes surveyed. The study also considered financial incentives for rural practice and found that these are effective in some countries, but do not work in others.

[20] Council of Ontario Faculties of Medicine. (2014). Distributed medical education in Ontario.
[21] Edwards S. L.; Sergio Da Silva A. L.; Rapport F. L., McKimm J., & Williams R. (2015). Recruitment of doctors to work in 'our hinterland': First results from the Swansea Graduate Entry Programme in Medicine. *Rural and Remote Health, 15*(3187).
[22] Verma P., Ford J. A., Stuart A., Howe A., Everington S., & Steel, N. (2016). A systematic review of strategies to recruit and retain primary care doctors. *British Medical Council Health Services Research, 126*.

The selection of students and the nature of the training scheme therefore emerge as the most important factors in achieving high rural retention rates, with community engaged graduate entry medical programmes the leading providers. This study therefore supports the findings of many earlier studies in claiming that it is possible to select candidates who are more or less likely to enter family medicine if the selection processes target those students with characteristics that are known to be highly correlated with a commitment to practice in rural and high needs communities. [23]

The Northern Ontario School of Medicine

The track record of Northern Ontario School of Medicine (NOSM) is summarised as follows:

Since 2009 there have been seven graduating classes of which 62% of graduates have chosen family medicine (predominantly rural) training. Almost all other MD graduates are training in general specialties. 94% of the doctors who completed undergraduate and postgraduate training with NOSM are practising in Northern Ontario.[24]

The NOSM project possesses a strong "civic image" because, as communities and their political leaders claim, they had fought for it – they lobbied for a CEGEM school in Northern Ontario, a region of 800,000 people living in a geographical area twice the size of New Zealand.

The success of NOSM since 2005 has been about winning over the hearts and minds of both students and communities. What distinguishes NOSM as a CEGEM provider is its social accountability to stakeholder communities. In effect, the NOSM model rigorously identifies socially accountable community-engaged distributed medical education, with the entire region as the campus. It is a medical school "without walls". NOSM delivers CEGEM through distance learning technologies and with reference to the similar kinds of communities, if not the actual community, from which the student comes. The course involves less life disruption and life change to settled relationships. The student selection model emphasises a calling to medical education (in the sense of *e pluribus unum* – "one called from among many") and the expectation that the students will go back to serve their communities.

The other structural filter, so effective at inculcating a commitment to rural practice, is NOSM's distributed learning model. Distributed learning lies at the heart of CEGEM. NOSM originally formed 13 (and now has 17) Local NOSM Groups, or LNGs, as community reference points throughout the vast region where the medical education programme takes place. From the second year onwards there is assignment to, and experience of general practice, and by the third year, these groups and practices become the learning base for the clinical placements in the programme. This is a graduate entry medical school that offers graduate entry medical training, and post-graduate and continuing education for physicians in practice in Northern Ontario, by means of distance learning and digital technologies. NOSM works primarily because of its commitment to CEGEM.

Why have 64% of NOSM graduates, as of their tenth anniversary, opted to work in the vast geographical spaces of Northern Ontario? And why don't the graduate medical practitioners seek social mobility and enter general practice in urbanised Eastern or Southern Ontario? The answer is that the graduates already belong to the Northern Ontario communities and have developed a personal stake in them. They have also been educated in the specialty of providing medical services to them. Throughout the OECD it is apparent that doctors who grew up in urban areas and were trained in tertiary hospitals are highly unlikely to have the inclination or the aptitude to practise in provincial and rural environments. Such practise requires a developed sense of emotional

[23] E.g., Shortt S. E. D., Green M. E., & Keresztes C. (2005). Physicians for Ontario: An approach to production and retention policy. *Canadian Public Policy, 31*(2), 207-221.
[24] Northern Ontario School of Medicine. *Achievement report 2015*.
http://www.nosm.ca/uploadedFiles/About_Us/Media_Room_2/NOSM%20Achievement%20Report%202015-web.pdf

intelligence, specific to such communities and cultures. NOSM, however, develops a virtuous circle of community support, medical provision and medical education that ensures that an ecosystem of health services can be sustained over a vast region with a dispersed population.

NOSM's high retention rate in Northern Ontario can be explained by the fact that most of the students' clinical learning occurs in rural and remote settings with rural generalist practitioners as students' primary role models. This is reinforced by rigorous selection from among communities, and successful inculcation of the values of rural medical practice among people who already have attachments to the region and its communities.

The application of the NOSM model in New Zealand would involve strong engagement with communities in provincial New Zealand. Included in this would be engagement with Māori communities regarding population health needs and the local context for the curriculum, the selection of students with appropriate commitment to the community and the ethos of the medical school, and support for students undertaking clinical placements in their communities. Regional clinical education sites in the New Zealand context will involve partnerships with individual iwi where appropriate. In this context, the NOSM model is readily applicable to the provision of clinicians who would provide health care in provincial and rural New Zealand, and it offers multiple advantages by comparison with the current practice of importing IMGs to spend (usually) short periods of time as locums.

Flinders University Rural Programmes

In 1996, Flinders University School of Medicine became the first Australian medical school to introduce a 4-year graduate entry medical (GEM) programme. Flinders piloted two clinical teaching programmes:

- The Parallel Rural Community Curriculum (PRCC), which allowed students to complete their entire year 3 study based in primary care in small rural communities; and
- The Northern Territory Clinical School (NTCS), which allowed students to complete their entire year 3 study in a remote tertiary referral centre.

All other students completed the year 3 programme based at Flinders Medical Centre (FMC), the urban tertiary teaching hospital affiliated with the University.

Research on the career trajectories of graduates of all programmes showed that 70% of students on the PRCC programme and 50% of NTCS graduates chose rural career paths compared with 18% of FMC graduates. Further, 62% of PRCC and 53% of NTCS graduates chose general practice specialisation compared with 38% of FMC graduates. As is the case with the results achieved by NOSM, the high rates of election for the general practice specialty and the high retention rates in rural areas achieved by the Flinders GEM programme stand in stark contrast to the results achieved by the Otago and Auckland Medical Schools.

Comparison with the Rural and Regional Programme at the University of Auckland and University of Otago

The Rural Origin Medical Preferential Entry (ROMPE) scheme introduced in 2002 and further expanded in 2007 was designed to increase the number of graduates from the University of Auckland and the University of Otago entering general practice outside the main centres. Both schools have had considerable difficulty attracting enough students to fill these places.

The published information on ROMPE at the University of Auckland (Pūkawakawa) suggests that such programmes cannot achieve outcomes similar to those of NOSM or Flinders:

- Students spent most of their penultimate (5th) year of study at Whangarei Hospital, with one general practice and integrated care placement in smaller Northland towns;
- Only 15% of Pūkawakawa graduates have general practice as their first choice specialisation and the majority of the graduates work in hospitals rather than general practice; and
- The results are similar for general entry students who elected into the Pūkawakawa programme and students who entered through ROMPE, suggesting that the programme does not achieve the advantages of rural origin that a medical school modelled on the NOSM programme could achieve.

A review of the University of Otago's rural entry pathway and rural immersion programme suggests similarly low levels of election for general practice in provincial and rural areas.[25] Students with a rural background/training were more likely than other Otago medical graduates to specialise in general practice (13.8% as against 9.7% for the students as a whole) and more likely to work outside major urban areas (11.7% as against 6.6%) although the small sample of students meant that the differences were not statistically significant.

In general, therefore, there does not appear to be strong evidence that the rural immersion and rural origin programmes of the two existing medical schools in New Zealand have produced a major change in their ability to meet health workforce needs, especially with respect to general practice outside the main centres and largest provincial centres. This in turn suggests that expanding the existing medical training programmes at the University of Auckland and University of Otago will not provide a cost-effective means of increasing the number of medical graduates who will work in general practice and/or work in other specialisations outside the main centres.

Past Consideration of the Benefits of a Graduate Entry Medical Programme in New Zealand

Despite the potential for a graduate entry medical training programme having been first raised in serious way 15 years ago,[26] there has been only one substantive investigation of the issue since that time. The report of Health Workforce New Zealand (2011) (HWNZ) has been carefully considered in the preparation of the case of the Waikato Medical School. The conclusion of HWNZ (2011) was equivocal in that it found evidence to support the introduction of a graduate entry medical school option in New Zealand, but concluded that there was no "compelling" evidence such a programme was needed by comparison with the alternative of increasing the number of medical training places in the two existing undergraduate entry programmes at Auckland and Otago.

HWNZ (2011) found evidence that graduate entry programmes might produce graduates more likely to practice outside the main centres and elect to specialise in general practice, produce doctors of equivalent quality to undergraduate entry programmes despite compressing the medical school training into four years, and benefit from students who were more mature and had different life experiences, but considered this evidence to be "limited". HWNZ (2011) also noted that, even at that time, between 60 and 70 students per year were emigrating to study medicine in Australia because of the restricted places and lack of a separate graduate entry programme in New Zealand.

[25] Shelker W., Zaharic T., Sijnja B., & Glue P. (2014). Influence of rural background and rural medical training on postgraduate medical training and location in New Zealand. *New Zealand Medical Journal, 127*, 12-16.
[26] Donald R. (2000). Is there a place for a graduate entry medical course in New Zealand? *New Zealand Medical Journal, 113*, 323-324.

The analysis undertaken by the University of Waikato and the Waikato DHB differs in its conclusions from those in HWNZ (2011) because:

- By comparison with the finding of "limited" evidence that graduate entry programmes can increase retention in provincial and rural practice, there is now very strong data on the health workforce outcomes achieved by community-engaged graduate entry programmes such as those reviewed above, and these data were not available at the time of the HWNZ (2011) report. Further, HWNZ did not consider a particular model of graduate entry programme, and in particular, of the community-engaged medical programme of the type proposed by the University of Waikato and the Waikato DHB. Nor was there a focus on the benefits of selecting students at graduate level, and with a strong emphasis on characteristics that would reflect their willingness to practise in high needs communities.

- There was in 2011 insufficient evidence about the potential workforce impact of the ROMPE Scheme and the voluntary bonding schemes. By comparison, we now have evidence that these schemes alone cannot address New Zealand's need for physicians outside the main centres; and evidence that compared to other OECD nations New Zealand's efforts have produced a relatively weak impact on rural GP retention.[27]

- HWNZ (2011) failed to focus on the fact that if it is assumed that students for a graduate entry programme would be drawn from the existing pool of graduates (that is, that all potential students for a separate graduate entry programme would enter tertiary study whether or not there was a graduate entry medical programme), then there would be substantial savings to the government in training additional doctors through a four year graduate entry medicine programme.

- HWNZ (2011) contemplated the possibility that the lack of need for a separate graduate entry programme was demonstrated by the fact that over 20% of the students accepted by Auckland and Otago Universities were graduates, rather than focussing on the need for graduate entry to be a different programme and approach; that is for diversity in training and health workforce outcomes and difference from the two existing schools to be a key benefit of a graduate entry programme.

- HWNZ (2011) was concerned about the availability of clinical placements for an additional cohort of students but it did not consider the potential for a new medical school to invest in increasing the number of clinical training placements, as the business case for the Waikato Medical School proposes (see Appendix 5).

- HWNZ (2011) focussed on a contemporary issue – retention rates in New Zealand and the loss of our medical graduates overseas – whereas the significance of this issue has been surpassed by regional and specialty-specific health workforce shortages and our continuing reliance on large numbers of international medical graduates to fill workforce shortages.

- HWNZ (2011) did not focus on outcomes, especially on the ability of a programme to train Māori and Pacific doctors who will actually return to serve Māori and Pacific communities.

Some of the themes of HWNZ (2011) might still be echoed today by those opposed to the creation of a new medical school. In particular, it might be suggested that consideration of a third medical school should wait until the additional tranches of students that have been allocated to Auckland

[27] Verma P., Ford J. A., Stuart A., Howe A., Everington S., & Steel, N. (2016). A systematic review of strategies to recruit and retain primary care doctors. *British Medical Council Health Services Research, 126*.

and Otago work their way through the system. A similar argument might be made about changes in the availability of places in different specialisations designed to require more students to elect to specialise in general practice. But the data presented in this study make it clear that the long lead times to produce medical graduates mean action is required now to address the looming health workforce challenges of a decade from now. Further, the experience of other countries suggests that to address health workforce needs New Zealand must recruit students who are committed to practicing in high needs locations and specialisations rather than hoping that restrictions on specialisation options will produce doctors with the required level of interest and commitment to serve rural, provincial and high needs communities.

Achieving a Close Link between Health Workforce Needs and Medical Training

Addressing the identified health workforce needs requires strong alignment between medical schools and workforce outcomes. Partnerships between the medical school and the community are necessary for successful selection of students, their clinical placement, and workforce outcomes that meet the needs of the communities in which it is intended that graduates will work.

The literature makes it clear that both the selection process and the nature of the training have a profound effect on the careers that medical graduates choose, and on the location in which they ultimately work. These two variables will inform the Waikato Medical School's innovative approach to addressing New Zealand's shortage of doctors.

Selection

The very substantial excess demand for places in medical training programmes in New Zealand, and the very high academic standing of those applying for entry to medical training, creates an opportunity to focus on the selection of students with the characteristics and dispositions that are most likely to lead to desired health workforce outcomes. The proposed University of Waikato Medical School will select students who:

- Have demonstrated high levels of academic achievement in an undergraduate degree;
- Are from the communities in which medical practitioners are required – all other things being equal, medical graduates who grew up in rural, small town and provincial city environments are more likely to return there to work;
- Have personal characteristics that are a good fit for front-line clinical care, especially where excellent empathy, communication skills and capacity for teamwork are key attributes; and
- Have a strong commitment to the ethos of a community-engaged medical school, and clinical care in a community setting.

In addition, the Waikato Medical School will select Māori students at least in proportion to their share of the population in the Midland Region, and ensure that every cohort includes students with a strong understanding of reo, tikanga and mātauranga Māori. These students will act as leaders in assisting the engagement of their cohort with Māori language and culture.

The Waikato Medical School will create a dedicated brand for a new kind of doctor, and in doing so expand the market for doctors in New Zealand. The existing medical schools are unable to do this because their selection and training model is inconsistent with what can be achieved when a university works in partnership with high needs communities to produce a more relevant workforce.

Training

In community-engaged medical training, students have greatly increased opportunities to learn medicine through supervised interaction with patients in a community setting. Community-engaged graduate entry medical programmes minimise the time spent learning medicine in classrooms or tertiary hospitals, and maximise the time spent in the community. Typically, most of the third year of the four-year degree is spent in community placements, with additional community placements occurring in years 2 and 4. This approach to training has the effect of:

- Ensuring that the students build a deeper understanding of, and a stronger affinity with, clinical care in the community setting;
- Reinforcing the students' pre-existing social networks in the communities from which they have been recruited, maximising the likelihood of their returning there; and
- Reinforcing the students' commitment to the ethos of the CEGEM medical school.

Graduate Entry

Graduate entry programmes have a number of well-documented attributes that reinforce the selection and training effects described above, by:

1. Providing the opportunity for a wider range of students to meet the academic requirements for entry to medicine. The quality of a student's high school performance becomes less relevant once a student holds an undergraduate degree. Graduate entry therefore gives students from low decile, provincial and rural schools wider opportunity to demonstrate the required academic standard.

2. Training students who have a variety of educational backgrounds. In the US, where graduate entry to medical school is always required, empirical evidence shows that no single undergraduate degree best prepares students for success. In fact, for 20 years, New York's Mount Sinai Medical School has tracked the performance of graduate medical students who enter with humanities degrees. Compared to their counterparts with a strong undergraduate science background, these humanities majors excelled in clinical placements, "where textbooks and Petri dishes give way to real patients and clinical problem solving".[28] In the New Zealand context, graduate entry recruitment will provide enhanced medical training opportunities to students who have undertaken substantial study of reo and tikanga Māori at high school and/or university level by reducing the disadvantage associated with limited study of science subjects.

3. Allowing students more time to demonstrate their commitment to the ethos of the medical school. Graduate entry can encourage students to volunteer or gain relevant work experience during their undergraduate degree, and cultivate community support for their application to the medical school. Worley et al. (2008) found that in their sample, each year's increase in age at admission to the medical school produced a 15% increase in the likelihood of choosing general practice as a specialization.[29]

4. Recruiting students who are more mature, and who therefore can be placed in community settings at an earlier point in their training. A graduate student may already be in a stable relationship linking them to their community and have a much stronger and clearer sense of their personal values and ambitions.

[28] Schwartz A. W., Abramson J. S., Wojnowich I., Accordino R., Ronan E. J., & Rifkin M. R. (2009). Evaluating the impact of the humanities in medical education. *Mount Sinai Journal of Medicine: A Journal of Translational and Personalized Medicine, 76*, 372-380.
[29] Worley P., Martin A., Prideaux D., Woodman R., Worley E., & Lowe M. (2008). Vocational career paths of graduate entry medical students at Flinders University: A comparison of rural, remote and tertiary tracks. *Medical Education, 188*(3), 177-178.

5. Drawing on the research on selection processes that is discussed in the medical education literature.

Partnership

Integral to the creation of a community-engaged medical school is the concept of establishing partnerships with the communities where the greatest health workforce needs exist. Creating a Waikato Medical School provides the potential for the University of Waikato and the Waikato DHB to build partnerships with communities from the outset, learn about each community's needs, and develop the curriculum with this information in mind. These are essential components in the foundation of the medical school that is proposed.

The Waikato Medical School's structure will reflect the partnership between the three parties needed to achieve the potential for the Waikato Medical School: the University of Waikato, the Waikato DHB, and iwi of the central North Island.[30] Engagement with iwi is critical since a core objective of the Waikato Medical School is to improve Māori health. The Waikato Medical School will ensure that all of its graduates are equipped with the cultural knowledge to work with Māori people in Māori communities.

The spirit of partnership is already demonstrated in the extremely close co-operation between the Waikato DHB and the University of Waikato and in the high levels of support that the proposed Waikato Medical School has received from iwi leaders and representatives, and civic leaders from across the central North Island. This support demonstrates tangible commitment to partnering with the University of Waikato to create the proposed medical school. Key components of partnership that are essential for the operation of the medical school are:

- Community support for investment in clinical education sites in each community;
- Community support for the selection of students and the funding of scholarships for students to study in the medical training programme;
- Community support for training (by serving as standardised patients) and mentoring programmes when students undertake clinical placements in the communities; and
- Ongoing mechanisms to obtain community feedback about the success of the programme and their alignment with community needs.

How is this training model different from the current medical training models at Auckland and Otago Universities?

An alternative to the creation of the Waikato Medical School is to simply provide additional funding to the existing medical schools. Compared to this option, several advantages accrue from creating a new, graduate entry Waikato Medical School:

1. The ability to produce medical graduates from the existing national pool of students with undergraduate degrees on a basis that will represent a lower cost and higher return on the additional government expenditure. The value of a community-engaged distributed learning model of medical education comes from looking at the whole picture and focusing on the

[30] The approach to engagement is outlined in Appendix 3. The approach reflects the tongikura of Kīngi Tawhiao "Kotahi te kohao o te ngira i kuhuna ai te miro ma te miro pango me te miro whero" – there is but one eye of the needle through which the black, white and red thread enters. The framework for engagement with Māori is set out in Appendix 3.

returns arising from improved health outcomes, new economic activity associated with the medical education programme, and reduced expenditures on recruitment of doctors over time.

2. Based on international evidence from medical schools such as Flinders and NOSM (and also from others around the world), the model of medical education proposed by the University of Waikato should produce medical graduates who are different in kind but not in quality from those whom the University of Auckland and the University of Otago produce, and whose choices of medical specialty and geographical location would far better address current and prospective health workforce needs.

3. The partnership between the University of Waikato and the Waikato DHB creates a unique opportunity to align the interests of the Waikato Medical School with that of Waikato Hospital and the health care and health workforce needs of the region and nation. Co-operation between the University and the DHB as a foundational principle ensures an alignment of strategy and implementation.

4. The opportunity to build a new medical school from the ground up, in partnership with the communities in the central North Island and in partnership with Māori.

5. The potential to train technology-savvy doctors who can integrate new virtual health care technologies with the cultural knowledge appropriate to the communities they serve through the newly established Centre for Virtual Health between the University of Waikato and the Waikato DHB.

6. The opportunity to create a medical school in which engagement with communities with high health needs will be central to the ethos and a substantial part of the training of all of the students in the school. The Waikato Medical School would be developed with a focus on specialist and generalist provincial and rural health needs, underpinned by an ethos of social accountability. This is consistent with the World Health Organisation's (WHO) definition of social accountability: "*...the obligation to orient education, research, and service activities towards priority health concerns of the local communities, the region and/or nation one has a mandate to serve.*"[31]

More Cost-Effective Training of Better Doctors

A graduate entry medical school will provide the most cost-effective way of increasing the pool of medical graduates, because training is for four years rather than for the five years in the existing medical training programmes in New Zealand. Currently, 23% of the students accepted by Auckland and Otago are graduates, but those graduates are still required to undertake the five-year medical programme. By contrast, the proposed University of Waikato Medical School will require a shorter period of education, which will reduce both the cost to government of training each graduate (the public cost) and the cost carried by students (tuition fees and living costs).

In addition, in drawing from the existing pool of graduates at all New Zealand universities, the proposed University of Waikato programme will not distort the university preferences of undergraduate students in the way that the existing Auckland and Otago programmes do. Both Auckland and Otago require students to study there to establish eligibility for selection. A CEGEM education does not require medical students to be domiciled at or around the traditional campus. Auckland is expensive to live in while Dunedin is distant from New Zealand's main centres of population. Airfares and household removal costs are a major barrier to the study of medicine for

[31] *Training for Health Equity Network. Background to the Framework for Socially Accountable Health Workforce Education.* http://thenetcommunity.org/social-accountability-framework-background/

graduate students (who often have domestic commitments and families) from outside the Auckland and Otago regions. The proposed Waikato programme will therefore enable more doctors (including more Māori doctors) to be trained at a lower social cost from within the growing population base and the large number of high needs communities in the central North Island.

Even by establishing separate graduate entry medical training programmes, which would require separate facilities, curriculum and placement models, the University of Auckland and the University of Otago cannot offer the New Zealand government the value that the University of Waikato graduate entry programme would provide. In addition, the University of Waikato community engaged graduate entry medical programme is likely to stimulate new economic activity in Central North Island communities reducing expenditures on recruiting doctors for these communities, while at the same time providing an extremely high social investment return as a result of the social and health benefits that will result in these high needs communities.

Selection

The student selection model proposed by the Waikato Medical School is not 'experimental' in nature, but tried and tested – in Canada, the United States, the UK, Japan, Norway, and Australia. Selection at the University of Auckland and the University of Otago is principally based on academic achievement and on the score achieved in the Undergraduate Medical Assessment Test (UMAT). The result is a medical workforce that is academically able but not necessarily well suited or willing to provide health care in the heartlands of provincial and rural New Zealand or to relate to the communities, including Māori communities, who live there.

Empirical data suggest the UMAT has little predictive power compared with Grade Point Average, yet neither do a particularly good job of predicting success at Year 6, the year most similar to the experience of junior doctors.[32] Moreover, while GPA makes sense as a predictor for training scientist-clinicians, it is unable to select those students who possess the personal characteristics and dispositions that are necessary to deliver effective frontline clinical care in our rural and high needs communities. Although some aspects of the Auckland and Otago selection criteria could be changed, it is not clear how it would be possible for them to significantly adjust their existing programmes to include the community-engaged selection criteria being proposed by Waikato. It is also not clear that the selection criteria proposed by the University of Waikato would be as effective when applied to first year undergraduate students as they are when applied to graduates because the characteristics that need to be identified are less clearly defined in those of 18 or 19 years of age.

Medical Education

At the Waikato Medical School, each student will engage with clinical care in a community setting integrated into all aspects of their programme, and will spend a high proportion of their 3rd year in supervised engagement with doctors, health workers and patients in community clinical education sites. There will be a high level of community engagement with this clinical education and community support for the students on clinical placements. Such 'longitudinal clinical clearkships' (LICs) have been proven to lead to better engagement with communities, a high quality of clinical competence and more likelihood to return to practice in rural and remote areas (Worley et al 2008). By comparison, the rural training schemes currently run by Auckland and Otago involve placements outside the hospital setting that are as short as seven weeks[33].

[32] Poole P., Shulruf B., Rudland J., & Wilkinson T. (2012). Comparison of UMAT scores and GPA in prediction of performance in medical school: A national study. *Medical Education, 46*, 163-171.
[33] Matthews et al 2015

To facilitate this approach to clinical education, the University of Waikato and Waikato DHB would commit to invest in the physical infrastructure and supervisory capability in up to 15 clinical education sites in the Midland region outside Hamilton. Thus, rather than placing students only in facilities where the capacity to accept students already exists (as Auckland and Otago primarily do), the Waikato Medical School will invest in creating the capacity to train students in community settings and thus increase the national capacity for community-based clinical placements.

Community Engagement

Optimisation of the clinical placement opportunities in the wider Midland Region will require a very strong partnership between the University of Waikato, the relevant DHB, and the communities in those regions. The strength of the collaboration between the University of Waikato and the Waikato DHB, and the demonstrably high level of support for the University of Waikato Medical School initiative from civic and iwi leaders in this region, indicate that the University of Waikato can achieve a level of community engagement and support that is higher than could be achieved by the existing medical schools. The medical school proposal outlined in this document has already attracted strong expressions of interest in providing philanthropic financial support from individuals, community trusts, and iwi of the central North Island.

The Waikato Medical School project proposes to undertake continual community engagement in the central North Island at levels difficult for the existing New Zealand medical schools to achieve because it is a significant departure from their existing model of medical education and training.

The barriers that the existing medical schools face in introducing a CEGEM model of medical education to New Zealand can be overcome by the creation of the new medical school proposed in this document. The close working relationship between the Waikato DHB and the University of Waikato in developing this proposal, the opportunity that will be available to appoint new dedicated CEGEM staff in support of the community-engaged ethos of the medical school, and the ability to design from the ground up a curriculum and approach to medical education consistent with the best international CEGEM models from overseas might reasonably be expected to yield results that represent great improvement on the current performance of the existing medical schools in terms of meeting medical workforce needs for underserved regions.

Features of the Waikato Medical School GEM Programme

The University of Waikato would ensure that the Waikato Medical School reflects contemporary international best practice in community engaged graduate entry medical programmes. The programme is compared with the programmes currently offered by Auckland and Otago in the following table (Table 1.5).

Table 1.5 – Comparison of Medical Education Structures

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Auckland / Otago Undergraduate	1 Yr BHSc/ BSc (Biomedical Sciences)	Phase 1 Medical programme	Phase 1 Medical programme	Phase 2 Clinical training	Phase 2 Clinical training	Trainee Intern
Auckland / Otago Graduate Entry	Not relevant		➢ 4 weeks intensive education at medical school. ➢ GP placements for 2 weeks ➢ DHB placement for 30 weeks	➢ GP 2 weeks ➢ 30 weeks clinical training ➢ 6 weeks in-house training at medical school	➢ GP 4 weeks ➢ 30 weeks clinical practice in hospital ➢ 4 weeks intensive training at medical school	➢ 4 weeks General Practice ➢ 20 weeks placed in DHB ➢ Elective period
Waikato Medical School Graduate Entry Only	➢ Introduction to medicine and medical sciences. ➢ Community-based learning in General Practice one day a week for 20 weeks	➢ 8 weeks intensive education at medical school. ➢ GP placements one day a week for 20 weeks ➢ DHB placements for 30 weeks	➢ 30 weeks community placements for all 60 students including general practice ➢ 10 weeks intensive education and skills training	Trainee Intern ➢ 6 weeks community practice ➢ 20 weeks placed in DHB ➢ Elective period	Not relevant	Not relevant

** Note at Otago graduate entry is only possible within 3 years of completing an undergraduate degree*

Key features of the proposed Waikato GEM programme are:

- Entry on the basis on an undergraduate degree in any discipline from any recognised University with a minimum GAMSAT score of 50, together with a minimum of 50 in paper 3 (Reasoning in Biological and Physical Sciences).
- 4 years (rather than the traditional 5 years of medical education and training at Auckland or Otago) focused solely on students who already have a tertiary education degree (i.e., graduates);
- Based in Hamilton, but with clinical education and training centres throughout the central North Island to enable the medical students to undertake a higher proportion of their clinical placements in community settings outside the main centres;
- A strong emphasis on medical specialties currently served by high proportions of IMGs, on provincial community and rural engagement, and on general medicine.
- A tailored curriculum that meets the Australian Medical Council (AMC) standards for accreditation, to be developed in conjunction with a prominent Australian medical school with an existing CEGEM programme, but with key elements of the programme customised to address New Zealand communities and New Zealand health issues, including Māori health;
- Minimising the need for capital investment through use of existing facilities and technologies; and
- Flexible learning approaches that support student participation in education and training.

Developing inter-professional learning centres

Waikato DHB is currently reviewing its rural health strategy and is considering developing its rural hospitals and community bases into primary care support centres. This would give the opportunity to turn these sites into inter-professional learning centres with the facilities and staff to support students for extended periods. These centres would be developed through engagement with public health providers, local general practices, other primary care providers (e.g., pharmacists, physiotherapists, podiatrists) and the wider community including Iwi, local council and the voluntary sector.

It is envisaged that each site will provide a learning environment for four medical students for up to 30 weeks of the year, a PGY1 doctor in training for 4 X 13 week attachments, and also general practice or rural hospital medical registrars. The placements could also include nurses on primary care attachments, midwives, social workers, and pharmacy, physiotherapy and occupational therapy students. Each site would have a medically trained academic co-ordinator who is suitably qualified, together with tutors for other professional groups. During an attachment senior students would take on a clinical workload, such as immunisation clinics, diabetes and cardiovascular disease routine assessments, cognitive behavioural therapy sessions, and elderly care in the community or in an aged residential care facility. Opportunities for engaging with Māori providers and local iwi would also be an essential requirement of students' longitudinal community engaged placements.

It has been shown that training New Zealand medical students in rural locations has a number of benefits, and academic outcomes are at least as good as traditional hospital based models. For example, the Whakatane Rural Health Inter-professional Immersion Programme has demonstrated the value of medical students learning with students from other professional groups (e.g., nursing,

pharmacy, physiotherapy). The Gisborne-based Inter-professional Programme has also been shown to be effective. Other examples of rural learning centres include Wairoa and the West Coast, where facilities have been developed to aid learning.

Development of the Waikato Medical School Curriculum

The aims and learning outcomes of the Waikato GEM curriculum would be tailored to the intended mix of students and orientation of medical graduates. The specific clinical experiences and teaching activities would emphasise innovation, and build on the experience of other OECD countries that offer GEM programmes, such as Australia where 13 of their 19 medical schools offer GEM programmes, a number of these tailored to producing graduates who serve the needs of provincial and rural communities.

The University of Waikato will explore the potential for partnering with an Australian University's Faculty of Medicine to provide an outcome-focused curriculum tailored for New Zealand's requirements. This would be developed in conjunction with international experts in CEGEM curricula and regional Māori representatives. The following criteria would be used to select a potential partner:

- A highly credible organisation with the capacity to provide curriculum transfer and support;
- Innovative / state of the art teaching and learning delivery with an orientation to specialist and generalist provincial health needs, and an ethos of social accountability and multidisciplinary teamwork;
- A strong research programme preferably focusing on the health of high needs communities and existing comprehensive international linkages in research and teaching collaboration; and
- A willingness to work with the Waikato Medical School to develop aspects of the curriculum specific to Māori, Pacific and rural populations that are most relevant to New Zealand.

A number of Australian medical schools have been approached and from these approaches it is clear that there are existing CEGEM schools who would be willing and have the capacity to transfer curriculum and support to the development of the Waikato Medical School.

REDACTED: SECTION 1, APPENDICES 1-7
AND SECTIONS 2-6

Background paper, prepared for Wairoa District Council

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University of Waikato – Medical School

2 May 2017

The new Waikato Medical School will take a community-focused approach to health, selecting students who have already completed a three-year degree and providing them with four years of intensive, practical training, as opposed to five years at the existing medical schools in New Zealand.

The medical school is being proposed through a strategic alliance between the University of Waikato and the Waikato District Health Board.

Introduction

A third medical school has been proposed for New Zealand at the University of Waikato. The new Waikato Medical School will take a community-focused approach to health, selecting students who have already completed a three-year undergraduate degree and providing them with four years of intensive, practical medical education, as opposed to five years at the existing medical schools in New Zealand.

The Waikato Medical School is being proposed through a strategic alliance between the University of Waikato and the Waikato District Health Board. The proposed community-engaged graduate-entry medical school will focus on selecting graduates who are willing to serve high-needs communities and meet the health care needs of the population that lives outside the main centres (i.e. small cities, provincial towns and rural areas).

During their education students will become conversant with the use of modern technologies in providing health care, and will gain practical experience of community-based health and social service partnerships. The Waikato Medical School is being proposed in response to health workforce shortages, especially in the provincial and rural primary health sector where there is a reliance on overseas-trained doctors.

New Zealand currently has one of the lowest ratios of medical schools to population in the OECD, with one medical school for every 2.35 million people, and each year New Zealand imports 1100 doctors to meet health workforce needs. In comparison, Australia has one medical school for every 1.2 million people.

The Waikato Medical School will follow a widely accepted and successful model currently in use in Australia, Canada and other developed countries by focusing on primary care at its core. This approach to medical education will enable the training of a new breed of doctor who will serve the primary health needs of their communities.

Primary care practitioners work across a range of areas, including preventative medicine, chronic disease management, mental health, child health and acute care medicine.

Key players?

- Vice Chancellor, Professor Neil Quigley
- Dr Nigel Murray, CEO Waikato District Health Board
- Bob Simcock, Chairman Waikato District Health Board
- Professor Ross Lawrenson, University of Waikato Population Health
- Sir Owen Glenn
- Helen Morgan-Banda, CEO New Zealand College of General Practitioners
- Wendy McGowan, National President Rural Women New Zealand
- Dalton Kelly, CEO New Zealand Rural General Practice Network
- David Bennett, National Hamilton East MP
- Hon. Jonathan Coleman, Minister of Health
- Hon. Paul Goldsmith - Minister for Tertiary Education, Skills and Employment
- Professor Graham Mellsop, Auckland University, Acting Assistant Dean, Waikato Clinical Campus

FAQs

What is being proposed?

The University, in partnership with the Waikato District Health Board, has submitted a business case to the New Zealand Government proposing the establishment of a new Community-Engaged Graduate Entry Medical School at the University of Waikato, the third medical school in New Zealand.

The Waikato Medical School will offer a medical degree programme which reflects international best practice and is unique in New Zealand. Specifically, it will be:

1. Graduate entry only (requiring an undergraduate degree from any University in any subject, compared to the current requirement to take health sciences at Auckland or Otago Universities to have the option to enter medicine)
2. Four years in length rather than the five years currently required at Auckland and Otago Universities
3. Community engaged, involving communities outside the tertiary hospital centres in the design of the programme, selection of students, and training of students
4. Proactive in adding to, rather than utilising existing clinical placement opportunities for medical students across the Midland region (Bay of Plenty, Lakes, Tairawhiti and Waikato District Health Board)
5. An opportunity to build a new medical school in genuine partnership with Māori and with other high health needs communities.

Why do we need a third medical school?

With one medical school for every 2.35 million people, New Zealand has among the lowest ratios of medical schools to population in the OECD. The relevant ratios are 1: 1.7 million in the UK, 1:1.6 million in the US and Canada, and 1:1.2 million in Australia. Based on any of those comparators New Zealand should be well advanced in developing a third medical school, and against Australian standards we would already have a third medical school and be considering a fourth.

New Zealand's need for a third medical school is increased by the similarity in the medical education provided by the two existing New Zealand medical schools compared to the diversity of approach in medical training available internationally. The key lesson learned from Australia, North America and the UK is that the provision of additional medical schools needs to be about increasing both capacity and diversity in medical education and training models. The proposed Waikato Medical School complements the work of the two existing medical schools in New Zealand, providing the diversity of training and workforce outcomes that is necessary to meet New Zealand's challenges with the geographical location and specialist choices of its health care workforce.

We need a third medical school because there is a shortage of doctors specialities, and regions. To address these shortages, we need to recruit a different sort of student, and train a different sort of doctor.

Each year New Zealand currently imports 1100 doctors trained in other countries (IMGs - International Medical Graduates) to meet our health workforce needs. Most of those doctors stay for a short time, and only 25% are still here three years after their arrival. Psychiatry, palliative medicine, obstetrics, rehabilitation, and care of the elderly are main specialties where IMGs make up around 60% of the workforce. In addition, only 15% of the graduates from Auckland and Otago elect to be General Practitioners (GPs) and consequently 60% of GPs outside the main cities are IMGs. Despite this, the vacancy rate in rural general practice is 20-25% and 40% of our current GPs plan to retire by 2025 (that is 1850 GPs who will need to be replaced). The shortage of primary care doctors and specialists in provincial centres and hospitals increases costs to the health system (e.g. not seeking treatment early, using the emergency department as a general practice).

Why Waikato?

The development of the School will be supported by the existing research strengths of the University of Waikato, and by the medical practitioners and facilities at Waikato Hospital which is not only the tertiary hospital for a population of over 900,000 people, but also the largest tertiary hospital in New Zealand.

The Waikato region is experiencing rapid population growth which is putting pressure on health services that are already struggling to provide health services to the large geographical area and high proportion of Māori and other high health needs communities.

The greatest shortages of doctors are in provincial and high health needs communities. The Midland region is the most doctor-deprived region in New Zealand with 13% fewer doctors than the rest of the country (253 per 100,000 compared with 292 doctors per 100,000). Yet

this is the region of New Zealand that also happens to have the highest proportion of Māori and is undergoing rapid population growth.

What do we mean by community-engaged medical school?

Integral to the creation of a community-engaged medical school is the concept of establishing partnerships with the communities where the greatest health needs exist. Creating a Waikato Medical School provides the potential for the University of Waikato and the Waikato DHB to build partnerships with communities from the outset, learn about community needs, and develop the curriculum with this information in mind. These are essential components in the foundation of the medical school that is proposed.

The Waikato Medical School's structure will reflect the partnership between three parties needed to achieve the potential for the Waikato Medical School; the University of Waikato, the Waikato DHB and the iwi of the central North Island.

Key components of partnership that are essential for the operation of the medical school are:

1. Community support for the investment in clinical education sites in each community;
2. Community support for the selection of students and the funding of scholarships for students to study in the medical training programme;
3. Community support for training (by serving as standardised patients) and mentoring programmes when students undertake clinical placements in the communities; and,
4. Ongoing mechanisms to obtain community feedback about the success of the programme and their alignment with community needs.

What will the programme look like?

The Waikato Medical School will be a four-year, graduate entry programme. A big focus will be on community healthcare and areas of (geographical and specialist) health workforce shortage, with students undertaking placements in provincial and rural community practices as part of their clinical education. Students will spend all of their third year in supervised engagement with patients in community clinical education sites. Key features of the proposed Waikato GEM programme are:

1. Entry on the basis of having an undergraduate degree in any discipline from any recognised University;
2. Four years (rather than the traditional 5 years of medical education and training at Auckland or Otago) focused solely on students who already have a tertiary education degree (i.e., graduates);
3. Based in the Waikato and with clinical education and training centres throughout the central North Island to enable the medical students to undertake a higher proportion of their clinical placements in community settings outside the main centres;
4. A strong emphasis on medical specialties currently served by high proportions of International Medical Graduates (doctors not trained in New Zealand), on provincial community and rural engagement, and on general medicine;
5. A tailored curriculum that meets the Australian Medical Council (AMC) standards for accreditation, to be developed in conjunction with a prominent Australian medical

school, but with key elements of the programme customised to address New Zealand communities and New Zealand health issues, including Māori health;

6. Minimising the need for capital investment through use of existing facilities and technologies; and,
7. Flexible learning approaches that support student participation in education and training.

Why is it only four years?

The programme follows the standard international graduate entry medical education model over four full years of study (January – December). This allows for an intensive learning model, and for longer practical placements for students.

How is this different to the current model of medical education?

The model of medical education as we know it is not meeting our current medical workforce needs.

In contrast, the key elements of the proposed Waikato education model benchmarked against best practice internationally are:

- A student selection and admissions process that reflects engagement with communities in the identification of students with appropriate academic ability, personal characteristics, and commitment to providing care in the communities from which they are drawn;
- A substantial proportion of clinical learning occurring in community/clinical settings where the doctors would be expected to practice after graduation;
- An ethos focussed on provincial and community-based care and on a duty to serve these populations; and,
- A high proportion of graduates who will choose the specialisations most relevant and most highly demanded for health care outside the main centres. This means 60% of graduates choosing general practice as a specialisation with a commitment to practice outside the main centres, and a high proportion of the remaining 40% choosing specialisations and sub-specialisations relevant to provincial practice.

Why should we care about primary care in provincial and rural areas?

Provincial and rural communities are losing access to local primary care services as their existing doctors retire and it proves extremely difficult to recruit new doctors. Graduates from Auckland and Otago medical schools are unlikely to live or work in these high needs communities. Consequently, in the Midland Region in recent years more than 50% of GP posts have been filled with international medical graduates.

Lack of access to health care in provincial and rural communities, places high costs on the health system resulting from higher treatment costs when treatment is delayed, increased hospital admissions and increased emergency department visits. Poor health in communities also increases the demand for allied health and social services and reduces labour productivity.

Who can apply?

Waikato Medical School will be open to all applicants with an undergraduate degree in any discipline, providing the opportunity for a wider range of students to meet the academic requirements for entry to medicine.

Will students be at a disadvantage if they haven't studied science before?

Having a variety of educational backgrounds is an advantage for the medical profession. In the US, where graduate entry to medical school is universal, empirical evidence shows that no particular undergraduate degree best prepares students for success in medical study.

The student selection model being proposed by the Waikato Medical School will require an undergraduate degree in any discipline from any recognised University with a minimum GAMSAT (Graduate Medical School Admissions Test) score of 50, together with a minimum of 50 in paper 3 (Reasoning in Biological and Physical Sciences). Grades will be one of the entry criteria used, alongside personal aptitude, demonstrated links with provincial, rural and high needs communities, and commitment to the ethos of a community-engaged medical school.

Why not just add extra spaces to Auckland and Otago's medical schools?

The Universities of Auckland and Otago are highly-regarded schools of medicine. But New Zealand has specific health workforce needs in provincial and rural areas, and most other developed countries have addressed these needs by creating new medical schools rather than adding to existing medical schools. This is because a different type of medical school with different entry criteria and a different education programme is required to produce a different type of medical graduate. Compared to this option, several advantages accrue from creating a new, graduate entry Waikato Medical School:

1. The ability to produce medical graduates from the existing national pool of students with undergraduate degrees on a basis that will represent a lower cost and higher return on the additional government expenditure. The value of a community-engaged distributed learning model of medical education comes from looking at the whole picture and focusing on the returns arising from improved health outcomes, new economic activity associated with the medical education programme, and reduced expenditures on recruitment of doctors over time;
2. Based on international evidence from medical schools such as Flinders and Northern Ontario School of Medicine (and also from others around the world), the model of medical education proposed by the University of Waikato should produce medical graduates who are different in kind but not in quality from those who the University of Auckland and the University of Otago produce, and whose choices of medical specialty and geographical location would far better address current and prospective health workforce needs;
3. The partnership between the University of Waikato and the Waikato DHB creates a unique opportunity to align the interests of the Waikato Medical School with that of Waikato Hospital and the health care and health workforce needs of the region and nation. Co-operation between the University and the DHB as a foundational principle ensures an alignment of strategy and implementation;

4. The opportunity to build a new medical school from the ground up, in partnership with the communities in the central North Island and in partnership with Māori;
5. The potential to train technology-savvy doctors who can integrate new virtual health care technologies with the cultural knowledge appropriate to the communities they serve through the newly established Centre for Virtual Health between the University of Waikato and the Waikato DHB; and,
6. The opportunity to create a medical school in which engagement with communities with high health needs will be central to the ethos and a substantial part of the training of all the students in the school. The Waikato Medical School would be developed with a focus on specialist and generalist provincial and rural health needs, underpinned by an ethos of social accountability.

When will the first lot of students be admitted?

It is anticipated that the first intake of students will be in 2020.

Are there other Schools of Medicine like this elsewhere?

Community-engaged distributed medical education (CEDME) is now considered to be best practice in Australia, Canada and the US for addressing modern health workforce issues, and for providing health care to provincial and rural communities.

The health workforce issues are not unique to New Zealand - indeed they are challenging the health care systems in most developed countries. As a guide to how New Zealand should address these issues, we can look to overseas exemplars. The model we propose is already in operation and is working in other developed countries.

Will the school cost the taxpayer any money?

Funding for the school, as with all other tertiary programmes and qualifications, will operate under the current tertiary funding model which includes Government funding of domestic student places.

Will there be scholarships available?

The University will be working with the community to provide scholarships for outstanding students entering the Waikato Medical School.

Are there any incentives for students coming from the regions to study then going back to the regions to practice?

The commitment to practice in the regions from which they are drawn will be a key part of the selection criteria for Waikato medical students and will be reinforced by the ethos of the Waikato Medical School and the large amount of time that students spend in clinical placements in those communities as part of their training.

Is there a preferred undergraduate pathway to ensure my selection to the programme?

No. The student selection and admissions process will reflect engagement with communities in the identification of students with appropriate academic ability, personal characteristics, and commitment to providing care in the communities from which they are drawn. The

student selection model emphasises a calling to medical education and the expectation that the students will go back to serve their communities.

Will graduates be guaranteed a job at the end of their studies?

Because of the severe shortage of doctors in provincial and rural communities, and New Zealand's growing population, it is unlikely that there will not be jobs when students graduate.

Where will the teaching staff come from?

Many of the teaching staff required are already employed at the Waikato DHB and the University, but additional staff will be recruited over the next three to four years as the School becomes operational.

Will the qualification stack up overseas?

The Waikato Medical School will follow best international practice in community-engaged medical education. The School will be supported by the existing research strengths of the University of Waikato, and by the medical practitioners and facilities at Waikato Hospital which is not only the tertiary hospital for a population of over 900,000 people but also the largest tertiary hospital in New Zealand. It will be accredited by the Australian Medical Council following the many graduate entry medical programmes successfully established in Australia in the past 20 years.

It will be 2024 before students start graduating. How will we solve the shortage of rural GPs in the meantime?

We recognise the shortage of GPs, particularly in rural communities, is one that will take time to solve. However, the proposed investment in community medical education centres across the central North Island will have a positive health, social and economic impact on rural communities from the time that the Waikato Medical School is operational.

How confident are you that you will get the green light from Government to progress this?

The University of Waikato and Waikato District Health Board have prepared the case at the request of Government, but having submitted the case it will now be up to Government to evaluate the case and make a decision.

What has been the feedback from stakeholders you have engaged so far?

Very positive. The stakeholders we have engaged with, across a wide variety of groups, all share our concerns about current community health needs – particularly in the greater Waikato region.

Where will the Waikato Medical School be based? On both University and DHB Campuses?

Combining both the University and DHB's resources in teaching and learning, we anticipate that the primary home of the Waikato Medical School will be at Waikato Hospital, but that it will also make substantial use of community medical education centres around the central North Island.

Business Case

http://cms.its.waikato.ac.nz/__data/assets/pdf_file/0019/330418/GEM-Business-Case-Publicly-Available.pdf

Executive Summary

The Concept

This document outlines the case for the establishment of a new Community7Engaged Graduate Entry Medical School (CEGEM) at the University of Waikato, creating a third medical school in New Zealand. The Waikato Medical School would be based in the Waikato and at regional clinical education sites in 12715 locations throughout the central North Island (depending on the community partnerships that are built).

The Waikato Medical School will offer a medical degree programme which reflects international best practice and is unique in New Zealand. Specifically, it will be:

1. Graduate entry only (requiring an undergraduate degree from any university in any subject, compared to the current requirement to take health sciences at Auckland or Otago Universities to have the option to enter medicine);
2. Four years in length rather than the five years currently required at Auckland and Otago Universities.
3. Community engaged, involving communities outside the tertiary hospital centres in the design of the programme, selection of students, and training of students;
4. Proactive in adding to rather than utilising existing clinical placement opportunities for medical students across the Midland Region[1]; and,
5. An opportunity to build a new medical school in genuine partnership with Māori and with other high health needs communities.

The returns available to the New Zealand government from strategic social investment in a dedicated CEGEM programme are high, reflecting the fact that it would produce health workforce outcomes aligned with the primary care needs of communities outside the main centres in New Zealand, where the need is greatest and the potential for improved health outcomes is highest. Achieving this will require investment to establish a new medical school that is community engaged and socially accountable in every aspect of its operation. The Waikato Medical School will focus on producing graduates with a passion for community based primary care, willing to serve communities with high needs and meet the needs of the populations living outside the main centres[2], fully conversant with the use of modern communication technologies in providing health care, and with practical experience of community based health and social service partnerships.

With one medical school for every 2.35 million people, New Zealand has among the lowest ratios of medical schools to population in the OECD. The relevant ratios are 1:1.7 million in the UK, 1:1.6 million in the US and Canada, and 1:1.2 million in Australia. Based on any of these comparators New Zealand should be well advanced in developing a third medical school, and against Australian standards we would already have a third medical school and be considering a fourth. New Zealand's need for a third medical school is increased by the similarity in the medical education provided by the two existing New Zealand medical schools compared to the diversity of approach in medical training available internationally. The key lesson learned from Australia, North America and the UK is that the provision of additional medical schools needs to be about increasing both capacity and diversity in medical education and training models. The proposed Waikato Medical School complements the work of the two existing medical schools in New Zealand, providing the diversity of training and workforce outcomes that is necessary to meet New Zealand's challenges with the geographical location and specialist choices of its health care workforce.

The primary driver for a third medical school is the shortage of doctors that is most acute in particular specialties and regions. To address these shortages, we need to recruit a different sort of student, and train a different sort

[1] The Midland Region encompasses Bay of Plenty, Lakes, Tairawhiti and Waikato District Health Boards.

[2] We define our area of focus "outside the main centres" to mean centres of population without a tertiary hospital, including small cities, provincial towns and rural areas.

of doctor. Each year New Zealand currently imports 1,100 doctors trained in other countries (IMGs 7 International Medical Graduates) to meet our health workforce needs. Most of these doctors stay for a short time, and only 25% are still here three years after their arrival. Psychiatry, palliative medicine, obstetrics, rehabilitation, and care of the elderly are main specialties where IMGs make up around 60% of the workforce. In addition, only 15% of the graduates from Auckland and Otago elect to be General Practitioners (GPs) and as a consequence 60% of GPs outside the main metropolitan areas are IMGs. Despite this, the vacancy rate in rural general practice is 20725% and 40% of our current GPs plan to retire by 2025 (i.e., 1,850 GPs who will need to be replaced). The shortage of primary care doctors and the above specialists in provincial and rural centres and hospitals increases costs to the health system as a whole (because patients do not seek treatment early, have more advanced conditions requiring more medical intervention and use the emergency department as a general practice).

The key elements of the proposed Waikato CEGEM education model benchmarked against best practice internationally are:

- A student selection and admissions process that reflects engagement with communities in the identification of students with appropriate academic ability, personal characteristics, and commitment to providing care in the communities from which they are drawn;
- A substantial proportion of clinical learning occurring in community clinical settings in which the doctors would be expected to practice after graduation;
- An ethos focussed on provincial and community7based care and on a duty to serve these populations; and,
- A high proportion of graduates who choose a specialty most relevant for health care outside the main centres. Our aim is to have 50760% of graduates of the Waikato Medical School choosing general practice as a specialty with a commitment to practise outside the main centres, and a high proportion of the remaining 40% choosing a specialty and sub7specialty relevant to provincial and rural workforce needs.

The Investment Objectives are:

- 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; and,
- 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.

Active community participation is an essential enabler of success in delivering the Waikato Medical School model, together with a high level of formal collaboration between the University of Waikato and the Waikato District Health Board (DHB). The governance structure and operations of the School will reflect a partnership between the institutions and communities needed for the School to achieve its potential. The programme of the Waikato Medical School will be implemented under the auspices of the Institute of Health and Medicine, an entity currently being established pursuant to a strategic alliance between the University of Waikato and Waikato District Health Board (DHB). This alliance will incorporate other DHBs, community health and primary care entities, iwi, and social agencies who wish to engage with the work of the Institute. The Institute creates a framework for joint leadership, co7investment in community clinical education sites and community engagement and social accountability, in accordance with international best practice in the provision of a CEGEM programme.

Our analysis sets out the issues affecting the medical workforce and the serious health service deficiencies impacting communities of the Waikato and other areas of the central North Island, as well as across other provincial and rural centres in New Zealand. It establishes the link between purposeful medical school programme design and workforce outcomes, to explain why the proposed Waikato Medical School will produce medical graduates unlike those currently produced by the University of Auckland and University of Otago medical schools. The selection and training of Waikato Medical School students will reflect an ethos of commitment to medical practice in community environments. International experience indicates that this

approach will result in a high proportion of Waikato Medical School graduates serving communities outside the main centres, where the opportunities to improve health outcomes are greatest.

The graduates of the proposed Waikato Medical School are needed, as demonstrated by health workforce data and health disparities outside the main centres. It is an opportunity for the New Zealand government to make a clear social investment statement which meets its stated aims to improve access to primary care and health outcomes in provincial and rural communities. The model proposed is low risk because it follows models that are well established in other developed countries and can be implemented as a partnership between an existing University with strong science and health7related education and research capability and a DHB that is committed to meeting the needs of a large provincial and rural community

Based in a region of New Zealand with many communities where Māori make up a high proportion of the population, the Waikato Medical School represents an opportunity to engage higher proportions of Māori students in medical training and to focus them on returning to provide primary care in their communities. This will be achieved not just by focusing on the recruitment of Māori students, but also by involving iwi and Māori communities throughout the region in the governance, design and operation of the new School. This engagement will make them partners in the challenge of selecting and supporting students who identify with their communities and would respond to the ethos of the Waikato Medical School. Engagement with Māori communities represents one of the most important strengths of this proposal, and is consistent with the strategic positioning of the University of Waikato in the tertiary sector.

Social media - Facebook

https://www.facebook.com/WaikatoMedicalSchool/

News media

Waikato backers look to pick up medical school baton

Stuff – 1 May 2017

Auckland University missed a major opportunity when it opted against establishing a graduate-entry medical programme in Hamilton a decade ago. Waikato University professor of population health Ross Lawrenson worked on the proposal in 2007 and said the idea enjoyed considerable political backing.

http://www.stuff.co.nz/national/health/92082529/waikato-backers-look-to-pick-up-medical-school-baton

Waikato medical school can fix our GP problem

Stuff – 29 April 2017

OPINION: Over the last few weeks discerning readers will have noticed a brace of stories about the mighty Waikato's bid to create the country's third medical school. The plan is to provide specialist GP training to address the dire shortage of rural and small town GPs. This is a great idea but sadly not everyone is a fan. Those with vested interests - namely Otago and Auckland medical schools - are seeking to derail the bid.

http://www.stuff.co.nz/national/health/92027540/waikato-medical-school-can-fix-our-gp-problem

Prime Minister Bill English steps into Waikato med school debate

Stuff – 28 April 2017

Momentum is building behind a push for a Waikato medical school with the Prime Minister saying the status quo for training doctors hasn't always worked. The comments from Bill

English during a visit to Hamilton on Thursday are a boost to backers of a proposed Waikato medical school who aim to train GPs to meet a dire shortage felt keenest in rural areas.

At a glance

- Takes graduates from any three-year degree
- Four years of training
- Partnerships with iwi
- Aim to have 60 per cent of graduates specialising as a GP
- Placements in regional training centres around the central North Island
- Likely to have an intake of 60 New Zealand students each year
- Students selected on basis of: results, commitment to community
- Number of Maori students in cohort in line with percentage in population

http://www.stuff.co.nz/national/health/92004479/prime-minister-bill-english-steps-into-waikato-med-school-debate

NZMSA Concerned by Consequences of Waikato Medical School

Scoop = Press Release – 27 April 2017

The New Zealand Medical Student's Association (NZMSA) has significant concerns regarding the ability of the health system to accommodate the increase in medical students proposed by the potential Waikato Medical School.

http://www.nzmsa.org.nz/wp-content/uploads/2011/06/NZMSA-Waikato-Medical-School-Position-Statement.pdf

http://www.scoop.co.nz/stories/PO1704/S00288/nzmsa-concerned-by-consequences-of-waikato-medical-school.htm

Waikato University bids for a medical school

NZ Herald – 22 April 2017

The bid by Waikato District Health Board and Waikato University for a medical school has greatly perturbed Otago and Auckland universities, writes Eileen Goodwin.

http://www.nzherald.co.nz/education/news/article.cfm?c_id=35&objectid=11843250

Waikato call for 'radical' medical education reform

Otago Daily Times – 22 April 2017

It is time for "radical reform" of medical education in New Zealand, Waikato District Health Board chief executive Dr Nigel Murray says. He said a third medical school would fix the "rural crisis in healthcare" by training doctors to work in those areas.

https://www.odt.co.nz/news/dunedin/waikato-call-radical-medical-education-reform

Medical schools jolted into action

Otago Daily Times – 22 April 2017

There is nothing like a common threat to unite old foes. Waikato's bid to set up a third medical school has forced traditional rivals Otago and Auckland into an unlikely alliance.

https://www.odt.co.nz/news/dunedin/medical-schools-jolted-action

Auckland University secrecy alarms academic

Stuff – 19 April 2017

A leading academic has slammed Auckland University after it refused to release emails and documents related to the proposed Waikato medical school. Universities are expected to act as the critic and conscience of society and must be open to public scrutiny, according to Otago University law professor Andrew Geddis.

http://www.stuff.co.nz/national/health/91456666/auckland-university-secrecy-alarms-academic

Waikato councils back medical school proposal

Scoop – 11 April 2017

The joint proposal from the University of Waikato and the Waikato District Health Board to establish a medical school in the region, was discussed at a meeting of the Mayoral Forum in Hamilton yesterday (Monday 10 April).

http://community.scoop.co.nz/2017/04/waikato-councils-back-medical-school-proposal/

Waikato med school proposal: pros and cons

Stuff – 7 April 2017

Arguments for and against a proposed Waikato medical school have been laid out in the latest New Zealand Medical Journal. In October, Waikato University and the Waikato District Health Board announced a bid to establish the country's third medical school. A key driver of the med school proposal is to address the health workforce needs of disadvantaged rural and provincial communities.

http://www.stuff.co.nz/national/health/91227610/waikato-med-school-proposal-pros-and-cons

Waikato Medical School

KiwiBlog – David Farrar 3 April 2017

A Waikato medical school wouldn't be a priority under Labour. The proposal is for future doctors from rural communities to be selected for four years of training – much of that out of the city environment. The idea is driven by two major Waikato players – the university and the district health board – and has the full support of Waikato mayors and a $5 million pledge from Sir Owen Glenn.

http://www.kiwiblog.co.nz/2017/04/waikato_medical_school.html

New Waikato health institute to foster innovation

Stuff - 30 March 2017

A new venture that will help pull together major health initiatives for the Waikato, including a proposed medical school and virtual health innovations, has been formed. The Waikato Institute of Medicine and Health is a new joint venture between Waikato University and Waikato DHB.

http://www.stuff.co.nz/national/health/90922103/new-waikato-health-institute-to-foster-innovation

New institute promises innovative health solutions for Waikato communities

Waikato DHB Newsroom – 30 March 2017

A joint venture just announced by the University of Waikato and the Waikato District Health Board (DHB) is already bearing fruit.

http://www.waikatodhbnewsroom.co.nz/2017/03/30/new-institute-promises-innovative-health-solutions-for-waikato-communities/

School of Rural Health proposal timely initiative

NZ Herald – 30 March 2017

The announcement by Otago and Auckland universities for a proposed School of Rural Health couldn't be better timed and if implemented will underpin the rural health workforce for the medium to long term future. This is the view of New Zealand Rural General Network.

http://www.nzherald.co.nz/the-country/news/article.cfm?c_id=16&objectid=11828592

Rural doctor shortage: GPs considered 'lesser beings'

Radio NZ – 29 March 2017

For 25 years, Dr John Burton has been a lifeline for people in the isolated Waikato community of Kawhia, but, he says, GPs are considered "lesser beings" so job training is not producing good doctors for rural areas.

http://www.radionz.co.nz/news/national/327699/rural-doctor-shortage-gps-considered-'lesser-beings'

Waikato medical school proposal fights off challenge

Radio NZ – 29 March 2017

The battle comes as a Waikato GP celebrates an anniversary that is becoming rare in rural communities struggling to attract doctors, as Jo O'Brien reports.

http://www.radionz.co.nz/national/programmes/morningreport/audio/201838365/waikato-medical-school-proposal-fights-off-challenge

Labour lukewarm on Waikato Medical School

Waikato Times – 25 March 2017

A Waikato medical school wouldn't be a priority under Labour. The proposal is for future doctors from rural communities to be selected for four years of training - much of that out of the city environment. The idea is driven by two major Waikato players - the university and the district health board - and has the full support of Waikato mayors and a $5 million pledge from Sir Owen Glenn.

http://www.stuff.co.nz/national/education/90835285/labour-lukewarm-on-waikato-medical-school

Stoush over rural health school idea

Radio NZ – 23 March 2017

Waikato University and the country's two medical schools are in a stoush over how to overcome a chronic shortage of rural health professionals in New Zealand.

http://www.radionz.co.nz/news/country/327295/stoush-over-rural-health-school-idea

Proposed Waikato med school faces challenge from Otago and Auckland

Stuff – 21 March 2017

A proposal by Otago and Auckland to reverse a shortage of rural doctors has been slammed as too little, too late, by backers of a Waikato med school.

http://www.stuff.co.nz/national/health/90663860/proposed-waikato-med-school-faces-challenge-from-otago-and-auckland

Students Support Waikato Medical School

Scoop – 21 March 2017

Waikato Students' Union President William Lewis is pleased to announce the Union's support of the University of Waikato's proposed medical school.

http://www.scoop.co.nz/stories/ED1703/S00091/students-support-waikato-medical-school.htm

English says Waikato bid has merits

ODT – 14 March 2017

Prime Minister Bill English says he does not know why the University of Otago is worried by the prospect of a third medical school.

https://www.odt.co.nz/news/campus/university-of-otago/english-says-waikato-bid-has-merits

Waikato medical school proposal focuses on diversity

Stuff – 16 March 2017

A proposed Waikato Medical School is needed to plug a looming GP shortfall, backers say.

http://www.stuff.co.nz/national/health/90450605/waikato-medical-school-proposal-focuses-on-diversity

Kawhia GP a rarity that University of Waikato med school could fix

Stuff – 5 March 2017

Kawhia GP John Burton is a rarity. A scion of Auckland's private school system, he has spent his career in a rural community.

http://www.stuff.co.nz/national/health/89964863/kawhia-gp-a-rarity-that-university-of-waikato-med-school-could-fix

Plan to redress rural GP shortage

Waikato DHB Newsroom – 22 February 2017

GP shortages in rural areas are a huge, escalating problem and bold solutions are needed, says Dr Nigel Murray, Waikato District Health Board (DHB) chief executive.

http://www.waikatodhbnewsroom.co.nz/2017/02/22/plan-to-redress-rural-gp-shortage/

King: Waikato medical school proposal 'absolutely massive'

Stuff – 9 February 2017

A proposed medical school could be the biggest public-sector development in Hamilton since the creation of Waikato University, the city's mayor says. Andrew King attended a black-tie function at Waikato University on Tuesday, where philanthropist Sir Owen Glenn pledged $5 million toward the creation of a medical school in Waikato.

http://www.stuff.co.nz/national/health/89209568/king-waikato-medical-school-proposal-absolutely-massive

Sir Owen Glenn makes $5 million pledge to Waikato medical school proposal

Stuff – 8 February 2017

Sir Owen Glenn is pledging $5 million towards the creation of a medical school in Waikato. The 76-year-old philanthropist made the announcement at a function at Waikato University on Tuesday.

http://www.stuff.co.nz/national/health/89150731/Sir-Owen-Glenn-makes-5-million-pledge-to-Waikato-medical-school-proposal

More doctors needed

Hamilton News NZ Herald – 31 January 2017

The Royal New Zealand College of General Practitioners has made calls for the Government to urgently train more GPs as communities, particularly in rural areas such as the Waikato, feel the strain from reduced ability to see a doctor.

http://www.nzherald.co.nz/hamilton-news/news/article.cfm?c_id=1503366&objectid=11791899

Bob Simcock: Waikato medical school proposal not about money

Stuff – 4 November 2016

OPINION: Max Christoffersen's recent critique of the Waikato Medical School proposal reminds us that while everyone has an opinion only those with some knowledge of the facts are really worth being heard.

http://www.stuff.co.nz/waikato-times/86084257/bob-simcock-waikato-medical-school-proposal-not-about-money

Waikato DHB chief executive Dr Nigel Murray addresses proposed Medical School at Waikato Hospital

Waikato DHB Newsroom – 11 November 2016

This week Dr Nigel Murray spoke about the proposed new Waikato Medical School at Grand Round, the weekly Waikato DHB medical information forum for junior and senior hospital medical staff.

Fifteen-minute video - https://vimeo.com/191091932

http://www.waikatodhbnewsroom.co.nz/2016/10/25/proposed-rurally-focussed-medical-school-wins-praise/

Appointments hard to get at short notice as GP shortages grow

Stuff Dominion – 1 November 2016

Patients in Wellington, Hawke's Bay, and the Hutt Valley are among those finding it hardest to get a doctor's appointment within 24 hours, as new figures reveal worryingly high GP vacancies around the country.

http://www.stuff.co.nz/national/health/85904662/appointments-hard-to-get-at-short-notice-as-gp-shortages-grow

Waikato wants a medical school: university and health board put request to Government

Stuff – 23 October 2016

The Waikato is making a bid for the country's third medical school in a move that could put more doctors into rural areas that struggle to attract them. The joint proposal by the University of Waikato and the Waikato District Health Board was put before government ministers on Monday and is a potential major shake-up in the way doctors are taught.

What would make this medical school different?

- Takes graduates of any three-year university degree - *Currently students must first take medical sciences at Auckland or Otago*
- Four years of training - *Five at Auckland or Otago*
- Partnerships with iwi
- Aim to have 60% of graduates specialising as a GP – *15% of current graduates choose to become a GP*
- Placements in regional training centres around the central North Island
- Students selected on basis of: results, commitment to community

- Number of Māori students in cohort in line with percentage in population - *3.5% of GPs were Māori in 2014*

How will it work?

Broadly speaking, each year will have a different focus.

- Year one: medical sciences
- Year two: clinical practice - in Hamilton, at Waikato Hospital
- Year three: students working with patients in the community education centres
- Year four: in Hamilton, at Waikato Hospital

(1:45 video)

http://www.stuff.co.nz/national/health/85339265/waikato-wants-a-medical-school-university-and-health-board-put-request-to-government

Waikato medical school could end GP shortage

Stuff – 23 October 2016

Keith Buswell is wondering who will pick up the stethoscope when he retires. Buswell has been a GP at the Te Kuiti Medical Centre for 30 years and is among the 41 percent of GPs set to retire within a decade.

http://www.stuff.co.nz/national/health/85396447/waikato-medical-school-could-end-gp-shortage

Waikato communities back medical school proposal

Stuff – 20 October 2016

A proposed Waikato medical school has been welcomed by the rural sector. The University of Waikato and Waikato District Health Board presented a business case to government ministers on Monday to establish a graduate-entry medical school in the Waikato.

http://www.stuff.co.nz/national/health/85505474/waikato-communities-back-medical-school-proposal

Proposed Medical School sets new direction for GP training

Scoop 18 October 2016

PRESS RELEASE New Zealand Rural General Practice Network, October 18, for immediate use

The concept of training medical students from rural backgrounds in rural communities to work in those communities, as proposed by The University of Waikato, is a huge shot in the arm for the sector, says the New Zealand Rural General Practice Network.

http://www.scoop.co.nz/stories/ED1610/S00065/proposed-medical-school-sets-new-direction-for-gp-training.htm

University of Auckland labels proposed new Waikato medical school 'expensive folly'

NZ Herald – 18 October 2016

The University of Auckland has hit out at what it calls a "potentially costly" proposal for a third medical school in New Zealand. Yesterday, Waikato University announced a proposal for a Waikato Medical school, aligned with Waikato District Health Board (DHB). The new school would provide four years of intensive practical medical education for university graduates with undergraduate bachelor degrees.

http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11731324

Health system can't take 240 more medical students: med schools

Stuff – 18 October 2016

A proposal for a Waikato medical school has ruffled the feathers of existing medical schools, with one dubbing it "an ill-considered and expensive folly". The University of Waikato and Waikato District Health Board presented their proposal for a third, Hamilton-based, medical school to the Government on Monday. The postgraduate programme would have a rural focus, picking students from rural areas and training them in similar settings, before returning them as fully fledged doctors.

http://www.stuff.co.nz/national/education/85455276/health-system-cant-take-240-more-medical-students-med-schools

A third medical school proposed for New Zealand

University of Waikato press release - 17 October 2016

A third medical school has been proposed for New Zealand at the University of Waikato. The new Waikato Medical School will be a community-engaged, graduate entry medical school based in the Waikato and at regional clinical education sites in 12-15 locations throughout the central North Island.

http://www.waikato.ac.nz/news-events/media/2016/a-third-medical-school-proposed-for-new-zealand

Waikato wants a medical school: university and health board put request to Government

Stuff – 17 October 2016

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http://www.stuff.co.nz/national/health/85339265/waikato-wants-a-medical-school-university-and-health-board-put-request-to-government

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http://www.stuff.co.nz/national/health/85396447/waikato-medical-school-could-end-gp-shortage

New medical campus for Bay of Plenty

NZ Herald – 24 August 2016

Bay of Plenty is set to get a medical campus to cater for the increasing length of time trainee doctors are spending in the region. Bay of Plenty District Health Board Clinical School head Professor Peter Gilling said it became an academic site for the University of Auckland medical students in 2010 but due to growth he expected Tauranga Hospital and Whakatane Hospital to become campuses within two years.

http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11696422

More GPs needed in rural areas says Waikato University professor

Stuff – 20 July 2016

A doctor's appointment can be a coveted thing in the middle of flu season. But fewer medical students are choosing to become the people we go to for help with those everyday ailments, according to a health professor.

What's our GP workforce like?

- Shortage of general practitioners
- Average age of male GP: 53
- Average age of female GP: 47
- More than half of all GPs work part-time
- NZ population increased by 17% between 1998 and 2012. GP numbers increased by 14%, hospital specialists by 69%.
- "It is known that some regions within New Zealand struggle to attract GPs and, in these locations, vacancies remain unfilled for extended periods."
- Practices with vacancies at time of survey: overall 22%; rural 34%

***Source**: 2015 Workforce Report, The Royal New Zealand College of General Practitioners*

http://www.stuff.co.nz/national/health/82154590/more-gps-needed-in-rural-areas-says-waikato-university-professor