

## Clinical academic career pathways in medicine

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The following position statement has been adapted from the Australian Medical Association (AMA) position statement on clinical academic pathways in medicine.<sup>1</sup>

### 1. Introduction

Clinical academics provide the essential underpinnings of an evidence-based healthcare system. International academic communities agree there is a need to identify, train, support, consolidate and strengthen clinical academic career pathways to ensure the sustainability of academic medicine.<sup>2</sup> Wider recognition of the value of clinical academic careers is also needed among other segments in the health sector, which in New Zealand include the Ministry of Health, Health Workforce New Zealand (HWNZ) and District Health Boards.

There is poor quality data regarding the clinical academic workforce in New Zealand. Internationally, the demise of clinical academic hospital departments, a decline in academic positions, and an ageing, increasingly part-time workforce have made it difficult for existing clinical academics to continue research and meet the demand for education and training from growing numbers of medical graduates and vocational trainees.<sup>3,4,5</sup>

Clinical academic careers in primary care are associated with particular challenges, including difficulties accessing funding and inadequate infrastructure to support research (eg, lack of access to university libraries). Yet community-based research is vitally important as it considers the needs and problems of patients set in the context of their everyday lives. In addition, the increased emphasis on community-based training means there is an even greater need for clinical academics in primary care who can provide community-based teaching.

Junior doctors are less inclined to consider a career in academic medicine because of the challenges associated with career progression, job security and remuneration.<sup>6</sup> The current focus on medical workforce planning creates an opportunity to develop sustainable training pathways, funding models and infrastructure in support of clinical academic practice, and to revive the attractiveness of clinical academic medicine as a career.<sup>3</sup>

This document outlines the NZMA's position on building and supporting a defined clinical academic pathway for medical students, trainees, senior doctors and existing clinical academics.

### 2. The clinical academic pathway in medicine model

The NZMA has adopted, with some modifications, an AMA-developed model outlining clinical academic training and career options in support of a career in clinical academic medicine (Figure 1). Key tenets of this model are the following:

- (a) Medical students must have an opportunity to experience research at medical school.
- (b) Clear and well-articulated training and funding pathways must be in place for trainees, senior doctors and clinical academics to pursue a clinical academic career.
- (c) Strong mentors and role models must support early career clinical academics.
- (d) Flexible entry and exit points must be a key feature of the pathway.
- (e) Academic promotion and recognition of performance should be protected.

- (f) More funding for clinical academic positions and research is needed to support academic development in both hospital and primary care settings.
- (g) Support for academic medicine must be embedded in every aspect of the health system, including in primary care and at policy/funding levels.
- (h) Opportunities and support for teaching should be provided for clinical academics.

Lessons from international experience, such as the introduction of the Academic Foundation Programme in the UK in 2010,<sup>7</sup> should inform the development of clinical academic pathways in the New Zealand context. The UK programme has reportedly been successful in stimulating an interest in research amongst trainees, with 89% of trainees describing their experience as worthwhile.<sup>8</sup>

The Government, Ministry of Health, workforce agencies, universities, medical colleges, research institutes and employers, including DHBs, need to work together to review current policies and support structures affecting clinical academic careers, and develop strategies to cultivate and retain a well trained and skilled clinical academic workforce.

HWNZ should be tasked with the development of a dedicated workforce plan to assess and monitor the number of clinical academic training posts required, and build and retain a high-quality clinical academic workforce.

**Figure 1. A model to encourage career clinician academics**

Clinical pathway	Enablers	Academic training pathway options
Medical students	<ul style="list-style-type: none"> <li>• Flexible entry and exit points</li> <li>• Strong mentors and role models</li> <li>• Academic workforce recruitment and retention initiatives, rewards and incentives</li> <li>• Research culture embedded in health system</li> </ul>	<ul style="list-style-type: none"> <li>• Research elective</li> <li>• Academic rotations</li> <li>• Intercalated research degrees that combine a Bachelor, Honours, Masters, MD and/or Doctorate degree with the MBChB programme</li> </ul>
Residents		<ul style="list-style-type: none"> <li>• Combined MBChB/MD-MPH/MCR/PhD programme</li> <li>• Academic internships</li> </ul>
Interns		
Registrars		<ul style="list-style-type: none"> <li>• Combined speciality/Doctorate programme</li> <li>• Doctorate as a component of advanced training</li> <li>• Clinical fellowship/lectureship</li> </ul>
Specialists (including GPs)	<ul style="list-style-type: none"> <li>• Post-fellowship higher degree</li> <li>• Doctorate by publication</li> </ul>	

▲  
**Underpinned by**  
▲

A range of robust funding models and options:

- Project and programme grants
- Strategic research awards
- People support awards
- Competitive scholarships/fellowships
- Financial support for sectors appointing new researchers

▲  
Supportive host environment in partnership with universities and medical colleges:

- Clinical networks of excellence
- Academic health science centres

▲  
Health workforce planning articulates with clinical academic research, education, training and health care priorities

### 3. Exposure to research should begin in medical school

Over one third of New Zealand medical students planned to be involved in research throughout their career and 22% were interested in pursuing higher degrees (MD or PhD) following graduation.<sup>9</sup> Despite this, a considerable proportion of medical students have misconceptions about what a career in academic medicine involves, and there are system-based barriers to a career in research and education.<sup>9,10,11</sup> Medical students cite time pressures and the absence of a clear career path as concerns when considering a research career, and many do not want to take up research options that extend the length of their studies.<sup>9,10,12</sup> Finance is another barrier due to higher student debt and lower income (if opting for academic activity over private practice).

Encouragement is needed from within the medical education and academic sectors to support medical students to undertake higher degrees, overcome perceived barriers, and to convey the satisfaction that a clinical academic career can offer. Medical schools should evaluate and adopt a range of initiatives to encourage medical students to complete research projects during their training. Examples of how this is already being achieved include the following:

- (a) offering research electives (in basic and clinical research), non-compulsory academic rotations, and experience in education and administration
- (b) intercalated research and higher degrees in related fields (such as an Honours, Masters, MD or PhD) alongside the MBChB
- (c) offering competitive scholarships for medical students who wish to pursue a higher research degree
- (d) promoting publications that showcase undergraduate student research and introduce junior authors and medical students to scientific publishing.

Models must be sustainable and should take into account the clinical, administrative, research and educational demand on medical school departments and senior clinicians.

### 4. Structured research opportunities must be in place for prevocational and vocational trainees

Interest in a clinical academic career decreases as trainees transition from prevocational to vocational training.<sup>6</sup> This has been attributed to several factors including:

- a lack of structured opportunities for research
- difficulty combining meaningful research with the demands of clinical training
- family and financial pressures
- inadequate recognition
- poorer career opportunities, financial rewards and job security when compared to clinical practice.<sup>12,13</sup>

Creating opportunities for trainees to undertake targeted research will help them develop research skills, improve the quality of academic work and contribute to evidence-based clinical practice and improved patient care. Autonomy in choice of academic work, relevance to vocational training, attainment of a higher degree, protected academic time, and flexible entry and exit points can also positively influence a trainee's decision to combine academic study with postgraduate and specialist

training.<sup>14,15</sup> Any clinical academic pathway must provide trainees with sufficient time to consolidate clinical skills and achieve clinical competencies while undertaking research or academic study.

The NZMA supports the development of a range of prevocational and vocational training options in support of a clinical academic career. These include the following:

- (a) specific academic rotations and academic clinical internships as part of early postgraduate training with the opportunity to continue through to vocational training
- (b) junior and senior clinical academic fellowships and lectureship positions in partnership with universities and medical colleges that allow trainees to complete vocational training requirements while undertaking further research, teaching or post-doctoral training
- (c) medical education registrar positions, jointly funded by the university and hospital sector (or the Royal New Zealand College of General Practitioners for GP registrars), that allow trainees to maintain their clinical knowledge while undertaking further study in medical education theory and research methods<sup>16</sup>
- (d) a standardised academic training framework across medical colleges and universities to encourage and support trainees to undertake relevant, high-quality research.

#### **5. Strong mentors and role models must support early career clinical academics**

The ability of early researchers to access positive academic role models has an important influence on career paths and research productivity, including publication and grant success.<sup>17</sup> Mentoring capacity, including programmes that enhance and develop the skills of mentors, must be expanded and appropriately funded to ensure early career academics are supported in their endeavours. Medicine already has a long history of mentoring within the established clinical teaching hierarchy and this model should be translated to clinical academic training pathways.

#### **6. Flexible entry and exit points must be a key feature of the pathway**

Providing enough flexibility to allow clinical academics to achieve both clinical and academic goals as part of an integrated career development process will help retain more clinical academics in the system.<sup>18,19</sup> Having a variety of entry and exit points during and post training will provide trainees and fellows with flexible options to pursue an academic career and, similarly, a process to return to full-time clinical practice. Having the flexibility to work part time or take a career break without penalty should also be an option.

#### **7. Academic promotion and competitive remuneration is essential**

Combining clinical training with research requires significant personal and financial commitment. Incentives that maximise recruitment and retention of clinical academic staff at all levels will help support and retain a high quality, clinical academic workforce. These include improved access to flexible or part time training, higher stipends, research grants, and competitive training and career fellowships.<sup>19</sup> Programmes of continuous professional development that allow further training of academic staff commensurate with career requirements will also help reward clinical academic staff.

Competitive remuneration is important to reward and retain the clinical academic workforce. Dual contract/employer models, with funding from Vote Education (University) and Vote Health (DHB), can be useful as they allow a clinical academic to be job-sized in the two separate environments. Research grants need to be more accessible to GP academics to support research in the primary care environment. Other remuneration initiatives include health research fellowships that provide salary support to practicing clinicians to undertake clinical or health service research, and clinical academic

fellowships that provide salary support for new positions funded jointly by health facilities and universities.

### **8. More funding is needed to support academic development**

Dedicated clinical academic training posts and academic appointments must be available for trainees and fellows to provide career certainty and retain clinical academics in the system. This will require adequate funding. Funders of research, education and training must work together to develop a strategic and effective approach to investing in the workforce and infrastructure required to undertake basic and clinical research and teaching, as well as operational research into systems. Incentives should be available to health service providers and universities willing to build clinical academic capacity and to support research in areas and disciplines in line with healthcare priorities, or indeed research that materially contributes to setting those healthcare priorities; this could take the form of time-limited seeding grants that encourage new research and reward research outcomes. New Zealand's participation in clinical trials has multiple benefits and should be supported, as indeed in health services research.

### **9. Health services must support an academic culture**

Support for clinical academic medicine must be embedded in all aspects of the health system so that New Zealand can gain maximum benefit from the medical expertise that exists in its hospitals, universities and in the community. It is important that existing clinical academics are supported to provide leadership in clinical care, research and education. More research grants from the Health Research Council and various regional medical research foundations are needed.

It is vital to develop further approaches that:

- provide an appropriate environment for clinical academics
- support and strengthen the link between patient care, teaching and research
- advance the next cohort of researchers and educators.

A well supported clinical academic workforce provides the essential underpinnings of an evidence-based healthcare system. This also extends to having robust health policy and funding grounded in high-quality health services research. The NZMA supports the development of initiatives that:

- promote excellence in health and medical research
- encourage collaboration between researchers, clinicians, health services, universities, colleges and research institutes
- cultivate research training opportunities for all healthcare professionals.

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