



Fact File

The Royal College of Pathologists of Australasia

New Zealand Pathology Workforce

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Medicine is Pathology 



PATHOLOGY WORKFORCE IN NEW ZEALAND

Pathology, by the very nature of the discipline, is the area of medicine which provides the scientific understanding of the causes of diseases. In addition, most diseases are diagnosed and the effects of treatment monitored by pathology testing. It is thus vital that medical practitioners of the future have extensive knowledge of Pathology.

The provision of high quality pathology services cannot be achieved without Pathologists to provide and oversee the services.

The Pathology Workforce in New Zealand is in crisis - the recent RCPA review of the Pathology Workforce revealed a serious shortage of Pathologists in New Zealand – and recognized that this was an international problem, not one that could be remedied by importing specialist pathologists from overseas.

In essence, in 2005, there are 206 pathologists, or 156 full-time equivalent pathologists active. With a population of just over 4 million, that gives a population ratio in total of 1 pathologist to 20,250 people, or 1 FTE pathologist to 26,200.

It must be noted that the number of pathologists per head of population is extremely low with New Zealand requiring some 63 more pathologists (a 31% increase) to bring it to the level of Australia, 1:15,500, where the situation is already considered 'in crisis'.

Full Time Equivalent - Specialists practicing mainly in pathology, by sub-speciality, 2003 – 2005

Sub-Specialty	2003	2004	2005	% of total 2005 number
Anatomical Pathology	80.4	85.6	82.9	53.11
General Pathology	10	10.7	10.6	6.79
Microbiology	15.2	18.6	16.6	10.63
Haematology	33.6	22.5	27.1	17.36
Chemical Pathology	13	14	11.8	7.56
Immuno, Genetics, FP	7.2	6.9	7.1	4.55
Total Full Time Equivalent	159.4	158.3	156.1	100.0

Strict quality control measures have to be followed in pathology services to minimize the risk of misdiagnosis and patient harm, further intensifying the professional burden.

The serious shortage of pathologist not only influences the future of the specialty, but will also affect the work of other medical specialties with which pathology closely collaborates and, most importantly, their patients.



If this trend persists, pathology services may even become the capacity-limiting process for many clinical activities: diagnosis and staging of diseases, screening for disorders, and monitoring outcomes. Patients may face long waits before hearing a final diagnosis, or they will have to endure uncertainty about the diagnosis, as the expertise needed is not available.

Importantly, the College is also concerned with the move toward a decrease in pathology teaching and the extent to which pathology will be examined in medical courses at present. This problem has been exacerbated by the change in some medical courses to a problem based learning model.

The lack of exposure to pathology during the basic medical course will not only have a very detrimental effect on the quality of medical graduates, but also the flow on effects in relation to career choices in pathology. At a time when there is a shortage of pathologists, this minimal exposure to the field has the likely flow on that graduates will not choose a career in pathology.

Issues driving the growth in pathology/pathologist workloads

These include:

- **Population based issues:**
 - Ageing population with increasing pathology
 - Prolonged survival of patients with previously untreatable diseases, with the ongoing requirement of monitoring disease status and response to treatment
 - Growing population of patients of different ethnicity with diverse genetic disorders and cultural needs

- **New developments in medicine:**
 - Technological advance will impact on the utilisation of pathology services in two ways – boosting practitioner productivity and broadening the types, and sophistication, of procedures and treatments that are available to the public
 - Genetic testing for early diagnosis disease prevention
 - Genetic testing driving treatment options, e.g., pharmacogenetics, proteogenomics – creating ‘personalised’ health care through the investigation of the individual patients own genetic makeup, either at the level of the gene or the protein generated, to ensure that preventative and therapeutic modalities can be tailor-made to the individual, rather than standardised
 - Increased numbers of transplant procedures
 - Increased numbers of biopsies in general, in part due to the clinical emphasis on early diagnosis

- **New developments in pathology:**
 - Increased numbers of specimens generated by screening programs



- **Government induced effectors:**
 - Increased community-based screening programs
 - Initiatives to implement best practice guidelines

Potential solutions include:

- More training positions need to be made available via direct government funding
- Develop strategies to encourage locally trained pathologists to stay in New Zealand
- Raise the profile of pathology in Medical Schools and Hospitals via education (including hospital management), and greater exposure to pathologists during courses, in all aspects of hospital work and on a personal approach basis
- Strengthen the pathology content in medical courses
- Create additional specialist positions (public and private)
- Increase training posts in smaller centres
- College to redesign training program for general pathology and to provide better program to produce clinical pathologists
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- College to promote, encourage and seek funding for clinical training
- Permit private sector to offer more training
- More emphasis on teaching aides (like digital photos, computer programs, formal assessment as in pattern recognition with computers)
- Retraining via continuing education and quality control programs (eg virtual microscope when operational)
- Survey current conditions for research, study, conferences, remuneration, workload, guidelines, employment (including flexible working arrangements), and develop basic 'minimum' recommendations for all these areas
- Provide exchange posts opportunities overseas (Aust/USA/UK)
- Provision of funding for a project to ensure that junior medical staff and medical students are exposed to pathology when deciding on career paths for the future. If there is no exposure the likelihood of taking up a career in Pathology is remote.