



**NEW ZEALAND COMMITTEE
OF PATHOLOGISTS**

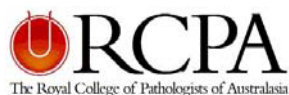
*Affiliated to the Royal College of Pathologists of Australasia
and incorporating the New Zealand Society of Pathologists*

Workforce Analysis

**Pathologists
in New Zealand
2007**

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**2007 NZ WORKFORCE SUMMARY ANALYSIS:
PATHOLOGIST NUMBERS**

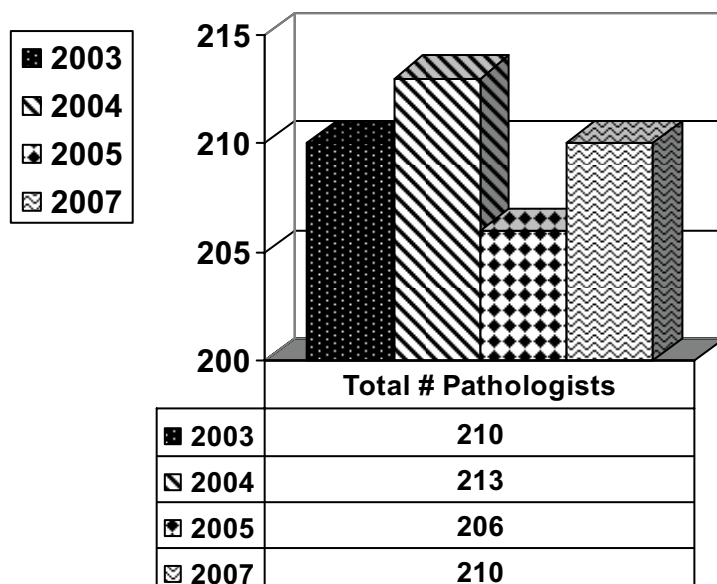
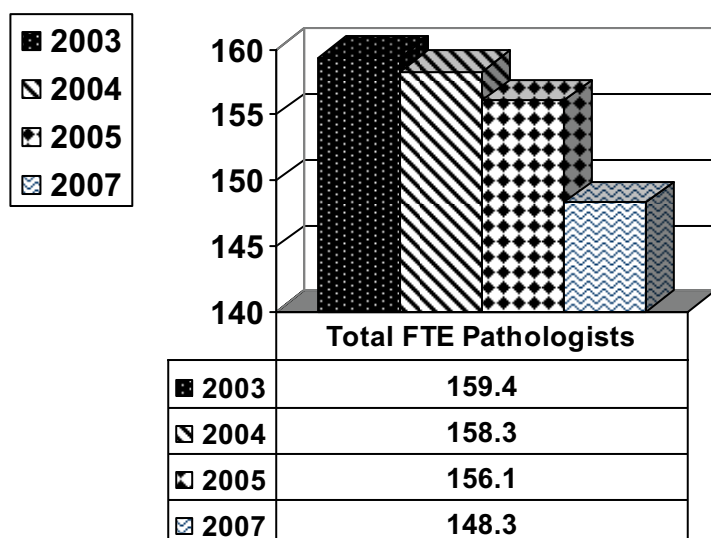
The total number of Pathologists by number over the last 5 years has remained approximately constant:

- In 2003 there were 210 pathologists, in 2007 there are 210.

In terms of FTE there has been a drop of 11.1 FTE or 7%

- In 2003 there were 159.4 FTE, in 2007 there were 148.3

Total Full Time Equivalent Pathologists



POPULATION RATIOS

In 2003 the population of New Zealand was estimated at 4 million people. In 2007 it is estimated to be around 4.2 million - a 5% increase.

At the same time the number of FTE Pathologists have decreased by 7%.

The population ratio for New Zealand now stands at 1 Pathologist per 20,000 people.

In 2003 this ratio was 1 pathologist per 19,048.

In Australia, where there is a severe workforce crisis there is a population ratio of 1 pathologist per 15,925.

This would mean in terms of population, New Zealand would require 58 more pathologists to come up to the same level as Australia.

In terms of FTE there are only 148 FTE giving 1 FTE pathologist per 27,877 head of population.

TRAINEE NUMBERS

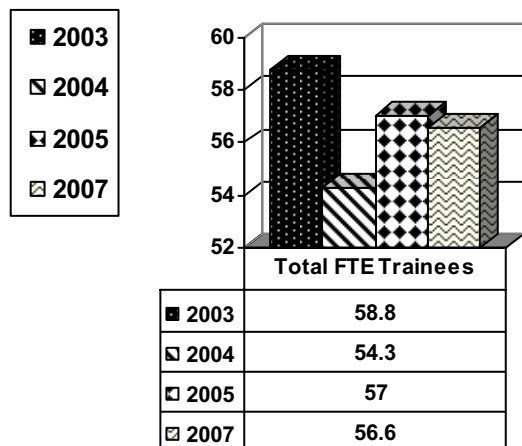
The total number of pathology trainees working in pathology in New Zealand has gone up by 1 in the last five years.

- In 2003 there were 59, in 2007 there were 60 trainees working in pathology in New Zealand.

In terms of the number of FTE Trainees working in New Zealand over the last 5 years, there has also been a decrease of 2.2 FTE or 4%

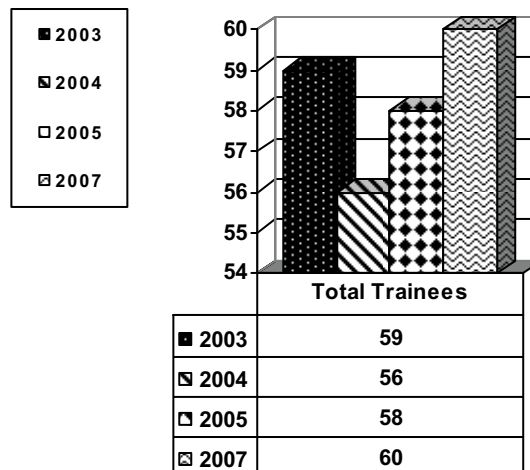
- In terms of FTE in 2003 there were 58.8 trainees. In 2007 there were 56.6

Total Full Time Equivalent Trainees



Total Trainee Numbers working in Pathology in NZ

* In addition there are 3 New Zealand trainees overseas and 6 currently not working in pathology in New Zealand for a variety of reasons



AGE

- In 2007, 35 (16.7%) of pathologists in active practice or 21 FTE (14.2%) were over the age of 60 years. Interestingly this is lower as a % of working Fellows than in Australia (cf 21% over the age of 60 years in active practice)
- 63 (30%) Pathologists indicated that they would be likely to retire in 5-10 years (this assumes a ratio of 6.2 per year) or 4.4 FTE per year
- 77 pathologists (37%) or 54 FTE were in the 50-59 yr age group. (Compared to 29% in Australia)
- 74 Pathologists (35%) or 55 FTE were 40-49 year (Compared to 37% in Australia)
- Only 24 (11%) or 11 FTE were in the 30-39 year age group (Compare 15% in Australia). This is a concern as in terms of normal distribution there should be a higher number in this group

GENDER

- 144 Pathologists or 69% are Male and 66 (31%) are female. This equates to 105.6 FTE and 42.6 FTE respectively
- Interestingly and in keeping with international trends, both male and female doctors are electing to work part time at some stage of their career. For men the average is 7.3 tenths of a full time, and for women this is 6.5 tenths

SPECIFIC DISCIPLINES

Anatomical Pathology				
Year	Pathologist #	Pathologist FTE	Trainees #	Trainees FTE
2003	95	80.4	32	32
2004	99	85.6	33	33
2005	97	82.9	37	37
2007	100	84.8	43	40

- Number of retirements in next 5-10 years = 25 or 25%
- 100% aged 70 plus, 90% of 60-69yrs, 47% aged 50-59yrs and 2% of 40-49 year olds intend to retire

Chemical Pathology				
Year	Pathologist #	Pathologist FTE	Trainees #	Trainees FTE
2003	16	13	3	3
2004	16	14	2	2
2005	14	11.8	4	4
2007	11	8.6	3	2.8

- Number of retirements in next 5-10 years = 4 or 36% or 58% of the 50 plus age group
- Note the decrease in number of Chemical Pathologists (31%) and FTE (34%) over last 5 years

Forensic Pathology				
Year	Pathologist #	Pathologist FTE	Trainees #	Trainees FTE
2003	6	5.1	0	0
2004	6	4.7	0	0
2005	6	4.9	0	0
2007	9	6.8	0	0

- Number of retirements in next 5-10 years = 5 or 56% or 63% of the 50 plus age group

Genetics

There were no genetic pathologists recorded for 2003, 2004, 2005 or 2007.
 There was one trainee in 2004 and 2005. This Trainee is now in Oxford completing training. There is another trainee working 0.9 in pathology. Considering the explosion in Genetic pathology that is occurring, the lack of formal training in this area is a major concern.

General Pathology

Year	Pathologist #	Pathologist FTE	Trainees #	Trainees FTE
2003	13	8.9	4	3.8
2004	12	8.6	3	3
2005	13	9.5	1	1
2007	13	10.3	0	0

- Number of retirements in next 5-10 years = 4 or 31% or 44% of the 50 plus age group

Haematology

Year	Pathologist #	Pathologist FTE	Trainees #	Trainees FTE
2003	50	33.6	14	14
2004	45	22.5	11	9.3
2005	48	27.1	10	9
2007	42	16.5	12	6.5

- Number of retirements in next 5-10 years = 15 or 34% or 58% of the 50 plus age group
- Note the decrease in number of Haematologists by 8% and FTE of 38%

Immunopathology

Year	Pathologist #	Pathologist FTE	Trainees #	Trainees FTE
2003	3	2.1	0	0
2004	4	2.2	1	1
2005	4	2.2	0	0
2007	5	2.1	2	0.4

Microbiology

Year	Pathologist #	Pathologist FTE	Trainees #	Trainees FTE
2003	21	15.2	5	5
2004	23	18.6	5	5
2005	21	16.6	5	5.0
2007	20	14	8	5.5

- Number of retirements in next 5-10 years = 10 or 47% or 80% of 50 plus age group

NUMBER OF NEW FELLOWS OVER THE LAST 5 YEARS

2003	7
2004	6
2005	10
2006	5
2007	4 to-date

- In addition a further 6 have passed part 2 examinations in 2007 but are yet to complete training time.
- This equates to an average of 7.6 new fellows per year over 5 years.
- If you look at the average FTE workload by pathologists $148.3/210 = 0.71$. This equates to 5.4 FTE new fellows per year
- On average there are 60 trainees in the system, which is the actual number working in NZ at present in pathology training positions. As it is a 5 year training programme the maximum to be able to graduate on average each year are 12. As pass rates are on average 75%, there will only be 9 new Fellows, on average per year or 6.4 FTE.
- If the number of trainees on average was 70, the maximum number that could pass is 14, and with 75% pass rates this is 10.5 or 7.5 FTE.

NUMBER OF INTERNATIONAL MEDICAL GRADUATES (IMGs) ENTERING/LEAVING WORKFORCE

- Over a 10 year period 100 IMGs have been interviewed
- Currently 41 are still practising in New Zealand. (there are 21 who did practise, but have moved elsewhere or retired)
- This gives a rate of 4.1 International Medical Graduate pathologists entering the system each year
- If you look at the average FTE workload by pathologists of $149/209 = 0.71$, this equates to 2.9 FTE per year

PATHOLOGISTS LEAVING NEW ZEALAND

- This is hard to quantify. There have been at least 70 pathologists who trained in New Zealand, who are living or working overseas.

Of these, about 30 would have graduated in the last 20 years. This suggests a rate of 1:5 or 1.1FTE per year

SUMMARY OF PROJECTED WORKFORCE CHANGES

TOTAL INFLOWS AND OUTFLOWS ON AVERAGE		
INFLOW	Number	FTE
New graduates	9	6.4
IMG's	4.1	2.9
Sub Total		9.3
OUTFLOWS		
Retirements	6.2	4.1
Leave for OS	1.5	1.1
Sub Total		5.2
TOTAL		4.1FTE per year

Clinical Training Agency Projected Pathologist Numbers Required Vs RCPA Projected Increases

Using the derived figures above, actual RCPA numbers and CTA projected requirements the following table can be derived.

Year	CTA Pathologists Number Projected	Increase per year required per CTA	RCPA Actual to Date FTE	RCPA Projected on Current assumptions	Shortfall from CTA Required Projections
2002	146				
2003	147	1	159.4		
2004	154	7	158.3		
2005	161	7	156.1		
2006	169	8			
2007	178	9	149		
2008	185	7		4.1	2.9
2009	206	21		4.1	16.9
2010	222	16		4.1	11.9
2011	232	10		4.1	5.9
2012	242	10		4.1	5.9
2013	250	8		4.1	3.9
2014	275	25		4.1	20.9
2015	293	18		4.1	13.9
2016	306	13		4.1	8.9
2017	319	13		4.1	8.9
2018	330	11		4.1	6.9
TOTALS		169 (184)		45.1	106.9

Difference in Number of Pathologist CTA Projections V s RCPA Actual Projections

	CTA	RCPA	Difference	Using CTA Base & RCPA Projections	Difference
Number in 2007	178	149	29	178	
Number in 2018	330	194.1	135.9	223.1	106.9

- Based on existing training numbers, current rates of IMG’s entering, retirements and pathologists leaving, by 2018 New Zealand will be 106.9 FTE pathologists short of CTA projected requirements (using CTA’s base figures, or 135.9 FTE and using RCPA actuals).
- Taking the best case scenario to meet this demand there would need to be at least an additional 10 FTE coming into the system each year for 10 years on top of the current 4.1 FTE.
- Unless there is a dramatic increase in migration of pathologists to New Zealand, which is unlikely because of the international crisis in the pathology workforce and the lower pay and workload conditions offered in New Zealand for pathologists, an increase in the number of Training position will be required. This would mean 14 extra graduates per year
- Comparing this to the current average of 7.6 new trainees graduating currently, to meet an extra 14 graduates per year would require a huge increase in training numbers i.e. almost trebling the number of training positions
- An increase like this would not be possible as pathology is an apprenticeship model and there would not be the capacity to train this number
- However, an increase in training numbers up to 90 may be feasible

REGIONAL SPREAD OF PATHOLOGISTS AND TRAINEES

It is evident that Pathologists and pathology training positions are concentrated in Auckland, Wellington and Christchurch. There are major disparities in Pathologists per population ratio across New Zealand. Although there is some variance in geographic representation, Pathologist numbers roughly reflect the distribution of population to major urban centres, at least for AP in which discipline numbers are great enough for comment. Despite the large number of District health Boards for a nation of modest population, which might be expected to normalize geographic distribution, the unplanned and ad hoc nature of the evolution of pathology services has unsurprisingly resulted in an increasing degree of centralization. With small numbers in some disciplines, we continue to face local issues of specialist service, in which a flux of one or two pathologists makes a major impact.

CONCLUSION

The Royal College of Pathologists of Australasia has major concerns over the future of the pathology workforce in New Zealand. As can be demonstrated by this workforce Analysis there has been no real increase in the total number of Trainees actually in training in New Zealand in the last 5 years as demonstrated by the statistics.

Further there has been a real decrease of 7% FTE in the number of pathologists in active practice during a period where population growth has increased by 5%.

Based on estimates of Inflow and outflow of pathologists, New Zealand needs to support a large increase in additional training positions per year to meet CTA’s projections. At least 20-30 positions are required.