



DECEMBER 2006

OPTOMETRIST: OCCUPATIONAL SKILL SHORTAGE ASSESSMENT

Current Situation: No shortage

Short-term Outlook: No shortage

1 Executive Summary

- 1.1 Growth in demand for optometrists has been driven by a number of factors including: population growth, ageing of the population, rising income levels, and greater recognition of the importance of vision care. The demand for optometrists, as measured by total hours worked by all optometrists, has risen by 2.5% per annum between 2000 and 2005.
- 1.2 The supply of newly qualified optometrists has remained relatively steady in recent years with the number achieving a Bachelor of Optometry fluctuating between 22 and 29 over the period 2001 to 2005. However, strong growth in the number of migrants registering with the Optometrists and Dispensing Opticians board and a low number of optometrists retiring each year has seen supply grow strongly. Since 2001, the number of optometrists purchasing annual practising certificates has increased on average by 7.4% per annum.
- 1.3 The Department of Labour's analysis does not provide a strong basis for concluding that a shortage of optometrists exists. Supply growth has been strong and has most likely outstripped growth in demand. While the total hours worked by all optometrists has increased, strong growth in the number of optometrists has meant that the average number of hours worked per week by each optometrist has decreased strongly over the last five years from 39.1 in 2000 to 34.0 in 2005. In addition, the number of optometrists per 100,000 people is increasing and appears to be adequate.
- 1.4 The key factors driving demand for optometrists are likely to continue in the short-term. Over the longer term, demand is expected to grow further due to an ageing population and an increasing recognition of the importance of vision care. Growth in the number of newly qualified optometrists is expected to increase as the number of places being offered to new optometry students is raised. In addition, high levels of net inward migration are expected to continue in line with high levels of residency and work permit approvals. As current supply trends are likely to be maintained, the Department of Labour predicts the absence of a shortage to persist over the next one to two years.

2 Introduction

- 2.1 The purpose of this report is to investigate skill shortages for optometrists in New Zealand.
- 2.2 The following section presents key findings from the Department of Labour's (the Department's) *Survey of Employers who have Recently Advertised* (SERA). This survey provides an indication of employer's success in filling advertised vacancies for optometrists. The next two sections investigate trends in the demand for, and supply of, optometrists. The penultimate section presents some of the issues that arise from the matching of demand and supply in the labour market, such as wage rates. Finally, the 'Assessment' section considers all the information presented in the report and provides a view on whether the occupation is in shortage, and if so, the type of shortage being experienced. A short-term outlook for the shortage situation is also offered.



- 2.3 Further background to this occupational report, including a discussion of the methodology; a glossary of terms; and an overview of the Department's *Survey of Employers who have Recently Advertised*, including the survey questionnaire, can be found in the 'Background and technical note' at <http://www.dol.govt.nz/publications/jvm.asp>.
- 2.4 ***Optometrists in New Zealand***
- 2.4.1 Optometrists (code 22261 in the New Zealand Standard Classification of Occupations 1999 [NZSCO]) examine, diagnose, treat and manage vision disorders and diseases and provide correction where required. They prescribe spectacles, contact lenses or vision training where necessary.
- 2.4.2 This report focuses specifically on optometrists and excludes ophthalmologists and dispensing opticians. An *Optometrist* is a specialist in vision care who is trained to detect, measure and correct vision problems. Optometrists are trained

to detect signs of disease and diagnose eye conditions. They refer patients for medical attention as required, usually to an Ophthalmologist. An *Ophthalmologist* is a qualified medical practitioner, who undertakes both medical management and surgical procedures for eye disease. A *Dispensing Optician* is qualified to advise on what frames and lenses best suit your needs, prescription and consequently make up the spectacles for you. A Dispensing Optician does not test eyes¹.

- 2.4.3 In order to work in New Zealand, all optometrists need to be registered and hold an annual practising certificate (APC). This certificate must be renewed annually to ensure the holder is aware of current legislation, codes of practices and safe working procedures. In 2005, there were 660 optometrists active in the workforce in New Zealand, according to the Optometrists and Dispensing Opticians Board. About 60% of optometrists are self-employed either in sole or group practice, and nearly the entire workforce is employed in private practice². The optometry workforce has a relatively even gender distribution with about 57% of the workforce being male.

2.5 ***Note on Occupational Classification***

- 2.5.1 Household Labour Force Survey and External Migration data from Statistics New Zealand are only available at the 3-digit occupational level, with Optometrists falling in the 3-digit category *health professionals (except nursing)*. As optometrists comprise only a very small proportion of this broader group (3% in the 2001 Census), trends in employment and migration cannot be assessed through these sources.

3 **Survey of Employers who have Recently Advertised**

- 3.1 The SERA allows the Department to gain insights into skill shortages by investigating how difficult it is for employers to fill vacancies. A 'fill rate' is calculated for occupations with adequate sample size – the fill rate being the proportion of vacancies included in the SERA sample which were filled with an adequately qualified and experienced person within ten weeks of advertising. A fill rate has not been calculated for optometrists as there were not enough records included in the SERA. Only three employers, who were trying to fill four vacancies, were interviewed. Three of the four vacancies were filled.

4 **Demand for Optometrists**

- 4.1 This section investigates trends in the demand for optometrists and the factors underlying these trends. Demand is measured by the number of optometrists required by employers at current wage rates.

4.2 ***Historical Demand***

- 4.2.1 Employment growth in the 'Optometry and Optical Dispensing' sector (of which about a third are optometrists) suggests there has been a strong increase in the

¹ Definitions sourced from Hon Annette King Media Release, 3/05/2005, www.beehive.govt.nz.

² New Zealand Health Information Service, 'Optometrist and Dispensing Optician Workforce', 2005 Health Workforce Annual Survey results.

number of employed optometrists. Employment in the sector grew by 6.1% per annum in the four years to 2005 (see Table 1). This level of growth was greater than the total employment growth in the economy of 4.1%, as measured by Business Demographic Statistics, over the same period.

Table 1: Annual Average Employment in the Optometry and Optical Dispensing Industry, 2001-2005

	2001	2002	2003	2004	2005	Annual Growth in Employment
Optometry and Optical Dispensing	1,080	1,100	1,190	1,220	1,370	6.1%

Source: Business Demographic Statistics, Statistics New Zealand.

- 4.2.2 Employment growth in this instance may not be a reliable indicator of demand growth as the majority of optometrists are self-employed and there are few barriers to trained optometrists entering self-employment. This rapid growth in employment of optometrists has been accompanied by a decline in the average number of hours worked per week by each optometrist (from an average of 39.1 hours in 2000 to 34.0 hours in 2005) (see Table 2). This suggests that growth in the number of optometrists active in the labour market has exceeded the growth in demand for services of optometrists. Total number of hours worked is therefore a preferable measure of demand for optometrists. Between 2000 and 2005, the total number of hours worked by all optometrists increased by 2.5% per annum.

Table 2: Optometrist Hours Worked Per Week, 2000–2005

Year	Total Hours Worked ³	Average Hours Worked per Optometrist
2000	19,856	39.1
2001	18,646	37.6
2002	20,965	38.1
2003	19,986	37.6
2004	21,275	37.2
2005	22,444	34.0

Source: New Zealand Health Information Service, Department of Labour calculations.

- 4.2.3 A number of the factors that have influenced the demand for optometrists are discussed below.
- 4.2.4 Growth in the New Zealand adult population is a major driver of demand for optometrists, as most adults require some degree of optometric services. Between 2001 and 2005 population growth was strong (averaging 1.4% per

³ 'Total Hours Worked' has been adjusted by the Department of Labour to take into account differing response rates in the Health Workforce Annual Survey's between 2000 and 2005. This assumes that non-respondents work the same average number of hours as respondents to the survey.

annum) driven by record net inward migration. While the New Zealand population is growing, it is also ageing, with the proportion of individuals aged 45 and over increasing. The need for optometry services increases with age, particularly after the mid-forties. In 2005, 35.6% of the population were over the age of 45, up from 33.4% in 2000⁴. As the New Zealand population continues to age, the increased need for diagnosis and correction of age-related eye diseases will cause demand for optometrists to rise.

- 4.2.5 On the back of strong growth in the economy, real per capita disposable income has risen by almost 13% since 2001⁵. This is likely to have increased per capita expenditure on optometric services and hence the demand for optometrists as there is at time a discretionary element to the decision to visit an optometrist.
- 4.2.6 Changes in living patterns have also influenced the demand for optometrists. With the increasing use of personal computers and gaming machines, the visual demands placed on individuals are greater. There is also increasing recognition of the importance of vision care, with people now seeing optometrists for regular eye checkups, rather than just when they have a vision problem. In addition, there are now more eye problems that can be treated than in the past.

4.3 *Future Demand*

- 4.3.1 The demand for optometric services will increase in the future due to the ageing population⁶, with its increased likelihood of eye problems. There will also be greater demand for optometrists due to vision problems in the middle aged group, as the number of computer-related vision problems increase. Increasing recognition of the importance of vision care and rising per capita income will also cause the demand for optometrists to increase.

5 **Supply of Optometrists**

- 5.1 This section investigates the various sources contributing to the supply of optometrists. Supply is measured by the number of people willing and able to work as optometrists at current wage rates.

5.2 *Tertiary Education*

- 5.2.1 A Bachelor of Optometry (BOptom) from the University of Auckland or an equivalent overseas qualification recognised by the Optometrists and Dispensing Opticians Board is required to practise as an optometrist in New Zealand.

⁴ Statistics New Zealand, 'Estimated Resident Population of New Zealand, 1991-2005.

⁵ Statistics New Zealand, 'Gross Domestic Product', December 2005.

⁶ 2004 Statistics New Zealand Population Projections indicate that the number of people in New Zealand aged 65 and over is expected to be 1.33 million by 2051, 2.7 times the 2004 total. The largest growth will occur between 2011 and 2037 as the baby-boomers move into this 65+ age group. From 2039, the 65+ age group will make up about one-quarter of all New Zealanders, compared with 12% in 2004.

Table 3: Enrolments and Number Achieving a Bachelor of Optometry, 2001–2005

Year	Degree Achievements
2001	22
2002	28
2003	25
2004	25
2005	29

Source: University of Auckland.

5.2.2 The number of students graduating with a BOptom has fluctuated between 22 and 29 per annum since 2001 (see Table 3). Degree achievements have remained fairly steady over this period due to enrolment restrictions in place at Auckland University's Optometry School. However, the number of places being offered to new students will be raised to 50 in 2007, up from the approximate 35 places offered over the 2001 to 2005 period. This suggests the outflow of new graduates will increase in the future.

5.2.3 The training rate for optometrists is given in Table 4. This indicator provides an approximate measure of the rate at which the supply of fully qualified optometrists can potentially grow through training. The training rate is calculated by expressing the number of trainees achieving the relevant qualification as a percentage of total employment in that occupation. The training rate for optometrists has remained fairly steady over the last five years, measuring 4.4% in 2005. The training rate for optometrists in 2005 is lower than the average training rate of 6.6% for all professionals.

Table 4: Training Rate for Optometrists, 2001-2005

	Optometrists	All Professionals ⁷
2001	4.4%	8.1%
2002	5.1%	6.9%
2003	4.7%	7.0%
2004	4.4%	7.2%
2005	4.4%	6.6%

Source: Department of Labour.

5.3 **Migration**

5.3.1 Registration data from the Optometrists and Dispensing Opticians Board shows that migration is having a major effect on the workforce. Of the 169 optometrists registered between 1 April 2004 and 31 March 2005, only 39 were from New Zealand, with 122 being from the UK, and 8 from other countries such as Australia and the USA. This indicates that of all the new registrations over this period, 77% were from immigrant optometrists.

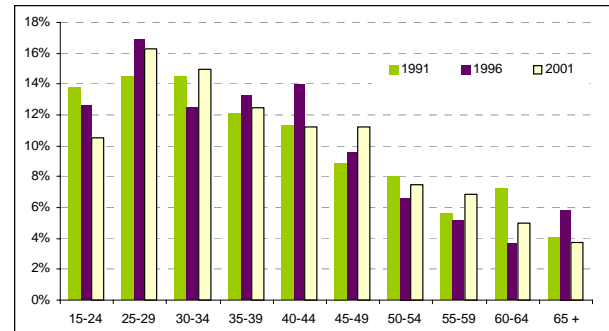
⁷ The training rates for 'all professionals' were calculated by expressing the total number of bachelor degrees achieved in New Zealand, as a proportion of total employment in all professional occupations.

5.3.2 Employers interviewed in the 2005 SERA mentioned that many optometrists, especially recent graduates, leave the country - mainly for better pay. Employers also had the opinion that new regulations requiring immigrants to sit bridging exams was making it more difficult to find optometrists from overseas.

5.4 **Retirements**

5.4.1 Based on 2001 Census data, it is estimated that approximately 1.7% of the optometrist workforce retires each year (assuming a retirement age of 65). This equates to about 10 optometrists per annum. Census data shows that the optometrist workforce did not age between 1991 and 2001 (see Figure 1). The percentage of optometrists over 45 remained the same between 1991 and 2001 and the average age remained steady at 39. As 94% of optometrists are under 55, and the workforce appears not to be ageing, retirements should not impact hugely on the optometrist profession in the short-term.

Figure 1: Age Profile of Optometrists, 1991-2001



Source: Census of Population and Dwellings, Statistics New Zealand.

5.5 **Registration**

5.5.1 All optometrists must be registered with the Optometrists and Dispensing Opticians Board. Once registered, those optometrists wishing to practice must obtain a practising certificate on an annual basis from the board.

5.5.2 The number of optometrists holding APCs provides an indication of the practising workforce in New Zealand. Changes in the size of this workforce reflect all the factors influencing supply, including migratory flows, retirement and occupational change. There were 660 practising optometrists in 2005 according to the Optometrists and Dispensing Opticians Board (see Table 5).

Table 5: Registration of Optometrists, 2001–2005

Year	Total Number of Annual Practising Certificates Issued	Growth in Number of Practising Certificates Issued	Number of Registrations	New Registrations
2001	496	-5	927	45
2002	550	54	1,135	37
2003	531	-19	1,053	73
2004	572	41	1,134	93
2005	660	88	1,292	169

Source: Optometrists and Dispensing Opticians Board.

5.5.3 The number of APCs issued for optometrists grew by 7.4% per annum on average between 2001 and 2005, with particularly strong increases measured in the last two years. In 2005, the number of APCs issued grew by 15%. These statistics indicate an extremely strong growth in the supply of optometrists in New Zealand.

6 Matching of Supply and Demand

6.1 This section considers some of the issues that arise from the labour market matching of the supply of optometrists with the demand for optometrists.

6.2 According to New Zealand Health Information Service data, the number of optometrists per 100,000 people has increased between 2000 and 2005⁸. In 2000, there were 9.2 optometrists per 100,000 people. This increased to 10.4 optometrists per 100,000 people in 2005. In most developed countries 10 optometrists per 100,000 people is generally regarded as being adequate⁹, although there are suggestions that this ratio needs to fall over time as the demand for optometrists is increasing faster than population growth. In 2005, the regions with the lowest number of optometrists per 100,000 were South Canterbury, Waitemata, Southland and Counties-Manakau, while Auckland recorded the highest rate with 20.8 per 100,000.

7 Assessment

7.1 This section considers all the information presented in this report on employers' recruiting experiences, supply and demand trends, and matching issues. Furthermore, it offers a view on whether there is a shortage of optometrists. A short-term outlook for the shortage situation is also offered.

7.2 The Department's analysis does not provide a strong basis for concluding that a shortage of optometrists exists. Indeed, the Department believes there is not a national shortage. The conclusion is based on the following considerations:

- Growth in supply has been high relative to growth in demand. There has been growth of 7.4% per annum in the number of optometrists purchasing APCs over the last four years, with particularly large increases being measured in the last two years. In contrast, demand, measured by total hours worked by all optometrists, has risen by 2.5% per annum between 2000 and 2005. The stronger growth in supply relative to demand means a declining average number of hours worked per optometrist, and suggests an absence of a shortage. In 2000, the average number of hours worked each week by optometrists was 39.1. This decreased to 34.0 hours in 2005. This is low compared with other medical professionals, for example, general practitioners who worked an average of 40.4 hours per week in 2004.

⁸ Estimates for the number of optometrists per 100,000 people are based on the number of Full-Time Equivalents (FTEs) per 100,000 people. FTEs are calculated by dividing the total number of hours worked by 40 hours. The total number of hours worked by active optometrists has been sourced from the 2005 Annual Health Workforce Survey which had a response rate of 79%. Hence, the data should be treated as estimates only.

⁹ Optometrists Association Australia, "Response to Productivity Commission Issues Paper: The Health Workforce", page 3, July 2005, <http://www.pc.gov.au/study/healthworkforce>.

- The number of optometrists per 100,000 people is increasing, and at 10.4 per 100,000 people in 2005 it is above 10 per 100,000 optometrists which is generally regarded as being adequate.

- 7.3 While the Department conclude that there is not a nationwide shortage of optometrists there appears to be regions in New Zealand where shortages do exist. There is an uneven geographical distribution of optometrists which leads to shortages, often in rural areas. Some regions, such as South Canterbury, Southland, Counties-Manakau, and Waitemata, have a low number of optometrists per 100,000 people.
- 7.4 The drivers behind the demand for optometrists are likely to continue in the short-term. Over the longer term, demand is expected to grow further due to New Zealand's ageing population and an increasing recognition of the importance of vision care. Growth in the number of newly qualified optometrists is expected to increase as the number of places being offered to new optometry students is raised. In addition, high levels of net inward migration are expected to continue in line with high levels of residency and work permit approvals. As current supply trends are likely to be maintained, the Department predicts the absence of a shortage to persist over the next one to two years.

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