

Debt on graduation, expected place of practice, and career aspirations of Auckland Medical School students

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Abstract

Aims. To determine the debt level that current Auckland medical students expect to graduate with, and evaluate this debt in the context of their career aspirations and intended place of practice.

Methods. Simple check-box and fill-in-the-blank surveys were distributed to Auckland University medical students in Years 1 through to 5 during their second week of scheduled lectures in March 2000. Students were asked to provide demographic details, then complete sections on debt and career aspirations.

Results. 70% of Auckland medical students participated. Average expected debt was between \$60 000 to \$70 000.

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Predicted size of graduation debt was significantly related with plans to practice medicine overseas, and this trend was especially strong among females. In addition, Maori and Polynesian students bear a disproportionate level of the student debt burden compared to Pakeha and Asian groups. 77% of students indicated a preference for working in private or hospital specialty work.

Conclusions. Student debt will have major effects on the composition of the New Zealand medical workforce over coming years. More attention must be paid to the national picture of medical student indebtedness if adequate workforce planning is to be possible.

The large burden of debt faced by young medical graduates in New Zealand has been predicted to have major social and medical workforce implications for New Zealand.¹ This burden is commonly held to be a driving force behind junior doctors striking for improved pay and working conditions, and increasing numbers emigrating in search of greater remuneration.

High debt levels have also been hypothesised to decrease the number of medical students interested in specialities with lower remuneration.¹ Certainly, American research indicates that this is a probable effect.²

The effects of changing workplace preferences in a generation of graduating students could extend well beyond junior doctor years, and the full impact would not be felt for some time.

This study aimed to ascertain the level of debt that current Auckland medical students expect to graduate with, and attempted to place this debt in the context of career aspirations and intended place of practice.

Methods

A survey of current Auckland School of Medicine undergraduate students was conducted in the second week of the University's academic year (2000). Surveys were distributed to students in Years 1 through to 5 during regularly scheduled lectures. Trainee Interns (sixth year medical students) were not surveyed due to a tight timeframe and clinical placements. International full fee-paying students were excluded.

The surveys took the form of simple check box and fill-in-the-blank questions. Students were asked to provide demographic information, including sex, ethnic grouping, country of birth, country of high school attendance (majority and final year), and route of entry into the medical school. Students then completed sections on debt and career plans post-graduation. For the debt projections, students were instructed to assume tuition fees and living costs remained constant. Expected debt size was asked for in groupings of \$10 000, and what proportion would be borrowed under the student loan scheme. They were then asked likely career ambition, as a selection of: general practice; hospital-based specialty; privately-based specialty; research/academic; health management; or other. A further series of questions asked where they expected to undertake further house-surgeon/registrar training and practice, as a selection of: only overseas; mainly overseas; mainly in New Zealand; or only in New Zealand.

Statistical analyses were performed using SPSS. p-values of <0.05 were regarded as statistically significant.

Results

Response rate. There were 407 respondents, representing approximately 70% of the Auckland medical student body (excluding international students) (Table 1). 249 (61.2%)

respondents were of New Zealand European/Pakeha ethnicity, 27 (6.63%) Maori or Pacific Island, 90 (22.1%) Asian, 40 (9.8%) Other, and 1 unspecified. Not all students answered all questions in the survey.

Table 1. Response rate by year of study.

Year of study	Number of respondents	Approximate response rate
Year One	64	73%
Year Two	113	80%
Year Three	94	75%
Year Four*	40	34%
Year Five	96	90%
TOTAL ¹	407	70%

Due to a tight timeframe and clinical placements, *one group of fourth year students only and ¹no sixth year students were able to be sampled.

Expected debt on graduation. Median projected debt range was \$60 000 to \$69 999, with 8.9% of students expecting debts of greater than \$100 000 (Figure 1). 58.1% of students in the pre-clinical years (Years 1-3) estimated total debt in excess of \$60 000, compared with 36.0% (p<0.001) of those in the second half of the degree program, who initially paid lower fees. Most students (79.4%) indicated that 60% or more of their estimated debt would be in the form of Student Loan.

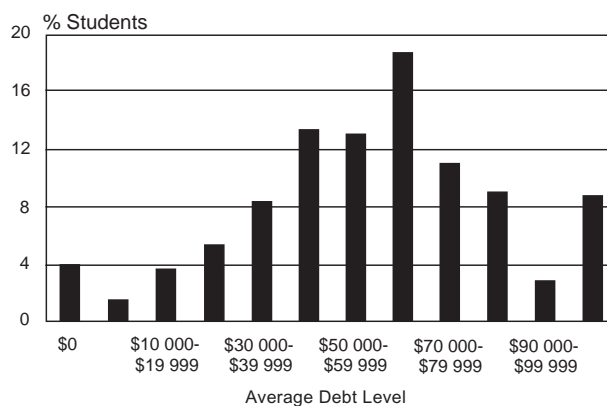


Figure 1. Average debt level expected on graduation.

Likelihood of practicing overseas. 103 of 398 students (25.8%) expected to practice mainly or only overseas. Likelihood of practising overseas was significantly related to size of debt ($p=0.035$) with 31.3% of students with debt of \$60 000 or more planning to mainly or only practice overseas on graduation, compared with 20.3% of those with debts of less than \$60 000. (Figure 2).

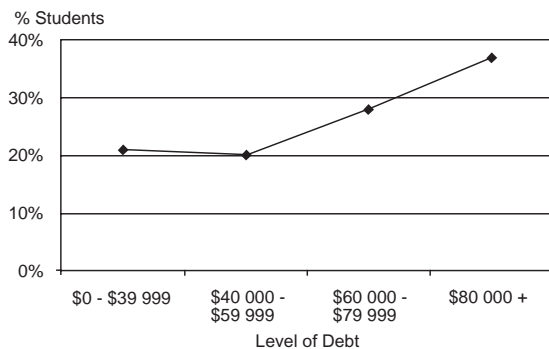


Figure 2. Level of debt versus percentage of students expecting to practice overseas ($p=0.035$).

Approximately the same proportion of males and females expected to practice overseas. However, women showed a statistically significant trend to being more likely to practice overseas in relation to their debt size ($p=0.002$), while males did not ($p=0.56$) (Table 2).

Ethnicity and Debt. Maori and Pacific Island students in this study were significantly more likely than all other ethnic groups, (70.4% compared to 49.3%) to estimate a loan exceeding \$60 000 ($p=0.035$). Besides Maori and Pacific Island students, 51.0% of New Zealand European/Pakeha students expected debts greater than \$60 000, compared to 40.0% of Asians and 60.0% of other ethnic groupings (Figure 3).

Debt and career aspiration. No relationship was demonstrated between size of loan and career aspiration. However, very few medical students demonstrated interest in the generally lower paid careers such as general practice (13.6%) and research/academia (2.8%), compared to hospital/private practice (77.0%). 6.5% recorded interest in other medical careers (Figure 4).

Discussion

Auckland medical students currently expect to graduate from medical school with an average debt of \$60 000 to \$70 000. Expected debt was more likely to be in excess of \$60 000 among pre-clinical students. Maori and Polynesian students are bearing a disproportionate level of the student debt burden when compared to Pakeha and Asian groups. The predicted size of graduation debt was positively correlated with plans to practice medicine overseas, with women owing

high debt having a strong preference towards servicing this overseas. 77.0% of students indicated a preference for working in private or hospital specialty work.

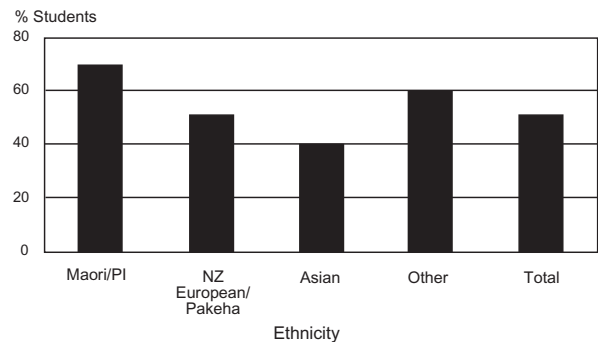


Figure 3. Students with a debt greater than \$60 000. p heterogeneity = 0.02.

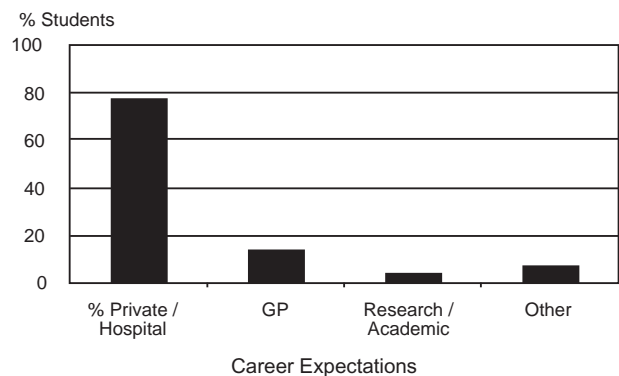


Figure 4. Career aspirations of medical students.

Interpretation of these data requires some caution. Whilst the study achieved a representative sampling of Auckland medical students, they make up less than half of all medical students in New Zealand. Our cohort are not, therefore, necessarily representative of New Zealand medical students as a whole. Furthermore, this study reports student expectation, rather than actual outcome, at and after graduation. It is possible that some students may have under or overestimated the financial commitments of their course. Students were also asked to assume that fee levels remained constant, whereas in reality this is uncertain. Furthermore, and especially for pre-clinical students, it is possible that student attitudes to type and place of practice may be influenced later in their course of study or after their graduation.

This study replaces speculation with fact regarding the negative consequences that a high debt burden is having on the New Zealand health workforce. Collins reported early in 1999 that the average debt for Auckland medical students was \$25 000.³ The increase in debt levels in this study is due

Table 2. Loan vs expectation to practice overseas (by sex).

Predicted size of loan – females only*	N	% to practice overseas	Predicted size of loan – males only*	N	% to practice overseas
\$0-\$39 999	52	19.2%	\$0-39 999	40	22.5%
\$40 000-\$59 999	60	13.3%	\$40 000-\$59 999	45	28.9%
\$60 000-\$79 999	64	25.0%	\$60 000-\$79 999	56	30.4%
\$80 000+	45	44.4%	\$80 000+	36	27.8%
Total	221	24.4%	Total	177	27.7%

* p trend females students: $p=0.002$; male students: $p=0.56$.

principally to the approximately 300% increase in medical course fees at the Auckland School of Medicine from 1998 to 2000. Otago medical students have been paying fees at similarly high levels (around \$10 000 per year) since the early 1990s.

This study has confirmed popular opinion regarding high debt driving the 'brain drain', a major contributor to the current medical workforce crisis. Fears that the student loan scheme adversely affects women greater than men^{4,5} are also validated. This is especially disconcerting given that greater than 50% of the present intake is female. It is possible that publicity at Auckland Medical School regarding special issues facing women in medicine may have contributed to this strong trend.

The high debt burden on Maori and Pacific Island students is born out by the figures in this study. It has been suggested that this is to have a negative effect on the provision of health for Maori and Polynesian communities.¹

Provision of good quality care in the community is also threatened by the fact that only 13.6% of Auckland medical students have indicated a desire to work in primary care. Experience suggests the proportion of a medical class normally expected to proceed to general practice is approximately one third. It appears that the vast majority of Auckland medical students would prefer to work in specialties, where the level of remuneration is generally perceived to be greater.

This study clearly shows that student debt will have major effects on the composition of the New Zealand medical workforce over coming years.

More attention must be paid to the national picture of medical student indebtedness if adequate workforce planning is to be possible. Planning would be further assisted by an adequate evaluation of the levels and effect of debt after graduation. Further major unanswered questions relate to how the financial stress of high debt levels affects the welfare and wellbeing of medical students. There is a poverty of such data available. A greater understanding of the full effects of high fees and debt on medical students and graduates is needed.

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