

Multiple service use in primary health care

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ABSTRACT

A survey of a random sample of 425 Massey University students was carried out in 2005, with the aim of quantifying multiple primary health service use. The response rate was 59.6%. Multiple service utilisation rates were high, with 58.5% respondents having used alternative primary care services at least once in the previous year; and 10.3% reporting multiple service use on five or more occasions. An average multiple service consultation rate per annum per student was calculated at 1.68 (95% CI=1.6–1.8). This compares with a surveyed Massey student services' consultation rate of 1.87 (95% CI=1.75–2.00) per annum per student. A practice of regular, concurrent, multiple service use was reported by 20.2% respondents. A variety of specific alternative primary care services used were analysed. Multiple primary care service use is clearly a feature of student life. The practice of enrolment of students with their student health service and PHO may reduce multiple service use.

Key words

Primary health care, multiple service delivery, capitation funding.

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Introduction

The shift to capitation funding of primary health care services in New Zealand dates back to 1941.¹ It is in this present decade that capitation funding has become the norm for

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primary health care services in New Zealand.^{2,3} The government has developed a set of primary care reforms – moving from fee-for-service to capitation, promoting population health management and developing a not-for-profit infrastructure with community involvement to deliver primary care.^{2,4} With these reforms, funding for primary care visits will increase by some 43% over the next three years.⁴

Student health clinics attract government funding under the same framework as community or family-based general practice. Historically a general medical services subsidy has been claimable for all New Zealand students who carry a community services card. A top up primary health services subsidy from the university has meant that standard consultation costs to students is low or zero; international students will normally carry health insurance.

Primary health care has frequently been placed at the centre of the health care debate and is likely to remain central to the success of health development.⁵ Alternative approaches to the funding, organisation, and delivery of primary care have

been the subject of ongoing discussion and debate in many industrialised nations for many years. One common recommendation has been to use capitation, as opposed to fee-for-service, as the payment method for primary care physicians.⁴ For example, organised general practice in Canada has been quick to adopt capitation, as opposed to fee for service, as the payment for primary care physicians.⁶

Capitation-based reimbursement significantly influences the practice of medicine.⁷ Primary health physicians under capitation accept higher levels of personal (professional) financial risk.⁷ Risk adjustment is one of the major challenges of capitation, and is the underlying reason for this study.

With the advent of Primary Health Organisations (PHOs) and of capitation funding to New Zealand general practice, a key administrative concern for many general practitioners, and for Student Health Services in particular, has been multiple service use by patients – with the resulting requirement for 'clawback' of capitation funding. Capitated general practices, who receive population-

based bulk funding from the government for serving their patients, will have to pay a 'clawback' fee whenever a patient registered with them attends another primary health services' provider. Multiple primary health services' utilisation can therefore be defined, for the purposes of this research, as any attendance of patients outside their registered primary health care provider, 'within the previous year'. Student lifestyle is known to be even more transitional than that of patients of mainstream family-based general practices. Students are known to use their family GP of origin as well as varied general practices, A&M clinics and A&E services. The aim of this study was to quantify this known multiple service use. From such forecast and accounting estimates of 'clawback' costs could be made, with a view to student health service management and planning for a PHO capitation environment.

Generalisation of the findings of this student health services' research, at least in part, to mainstream primary health services is inviting and motivates the publishing of these research findings.

Method

A survey instrument – postal questionnaire – was developed and pre-tested. The questionnaire was retrospective (previous 12 months) and used a series of 13 questions in both closed and Likert scale format. The survey instrument (questionnaire) was pre-tested extensively using both medical staff at Massey University, as well as academic staff from the departments of General Practice and Public Health, Wellington School of Medicine.

A random sample of 10% (431) enrolled students at Palmerston North (Turitea) campus was drawn using 2005 registry data and the assistance of Massey University ITS (Information Technology Services). Only second year and more senior students were selected in the survey sample: first year students were excluded from

Table 1. Age and gender of respondents

Gender, Age (yrs)	Number	Per cent
Male	86	34.3%
Female	165	65.7%
18–24 yrs	180	71.2%
24–44 yrs	59	23.3%
45+ yrs	12	4.7%

Table 2. Ethnicity of respondents

Ethnicity	Number	Percent
NZ European	158	63.5%
Maori	14	5.6%
Pacific Is.	3	1.2%
Chinese	40	16.1%
Indian	6	2.4%
Other	28	11.2%

the survey sample as they did not use student health services throughout the year preceding the survey. Massey University Ethics Committee approval was sought and obtained. An information sheet and letter was circulated with each survey mailing. The Massey University Printery was employed to print and mail the survey. Overseas addresses were excluded from the survey leaving a sample size of 425 students. Four survey mailings were sent out, by Massey printery staff, over a period of 12 weeks. A response rate of 59.6% (253 students) was achieved. Survey fatigue was high, and further survey mailings were cancelled in the interest of student goodwill. The survey data were entered into Excel and analysed using the analytic programme EpiInfo 3.3.2.

Results

Gender, age and ethnicity of the respondents were similar to Massey registry data suggesting a representative sample of Massey students (Tables 1 and 2). A New Zealand visa was held by 88.0% (220) of respondents with 12.0% (30) reporting no New Zealand residency or visa. Year round residency of Palmerston North

was recorded by 64.4% (163) of respondents; with 35.6% (90) recording that they were resident outside Palmerston North at least part of the year.

Multiple service utilisation was analysed: 58.5% (148) respondents reported that they had attended a general practice or primary care or after hours doctor outside their university student health practice in the previous 12 months; 41.5% (105) reported no multiple service use. Multiple service use was reported 'during semester' by 50.0% respondents; 'between semesters' by 27.1%; or 'year round' by 22.9% respondents.

Multiple service utilisation (i.e. with non-student-service primary care providers) was quantified (Table 3). Of a total of 253 respondents, 40.3% (102) reported no multiple service use; 19.0% (48) reported one consultation with a primary care service provider outside their student health service in the previous year; 17.4% (44) two consultations p.a.; 9.5% (24) three consultations p.a.; 3.6% (9) four consultations p.a.; 3.2% (8) five consultations p.a.; 7.2% (18) six consultations or more p.a.

From the above data, calculation of an average multiple services' con-

sultation rate of 1.68 consultations per student respondent per annum was made, (95% CI=1.6–1.8). This compares with a surveyed Massey student health services' consultation rate of 1.87 (95% CI=1.75–2.0) consultations per annum per student.

The practice of regular and concurrent use of multiple services was indicated by 20.2% (51 of 253) respondents (See Table 4). Respondents were asked:

Do you use your student health service, plus another general practice/primary care service, regularly and concurrently?

Yes, regularly and concurrently —
No, no regular contact with multiple services —

Analysis of particular primary care service utilisation was made. A summary of findings is shown in Table 5. Patterns of multiple primary health service use by student health populations are evident from this table. Percentages reflect total frequencies of various service utilisation as reported by respondents and they will total greater than 100%.

Discussion

A survey response rate of 59.6% involving four survey mailings over 12 weeks is disappointing, but understandable in the context of contemporary survey fatigue. Gender, age, and ethnicity profiles of the respondent sample (Tables 1 and 2) are comparable with registry and medical centre data and support the view that

Table 3. Multiple service utilisation

M.S. consult p.a.	Number	Per cent
0	102	40.3%
1	48	19.0%
2	44	17.4%
3	24	9.5%
4	9	3.6%
5	8	3.2%
6 or greater	18	7.2%

NB: M.S. Consult p.a. = Number of multiple service consultations per annum.

Table 4. Regular, concurrent multiple service utilisation

Regular, concurrent, M.S. utilisation?	Number	Percent
No	202	79.8%
Yes	51	20.2%
Total	253	100.0%

a representative sample has been achieved. However reported utilisation rates of Massey student health services by respondents were high compared to previous management data. This would suggest that high service users have tended to be over-represented in the survey.

Multiple primary health service utilisation is significant and is occurring at a number of levels and involves a range of alternative providers. The calculation of an average multiple service utilisation rate of 1.68 (95% CI=1.6–1.8) consultations per student per annum is useful in the context of accounting for

and managing multiple service use in a student health services setting. It is high when compared to the average annual respondent consultation rate for Massey University medical centre of 1.87 consultations per student per annum.

The results provide quite detailed analysis of multiple service use – enumerating absolute frequencies of multiple service utilisation, as well as parameters such as seasonal variation of use of alternative services and the frequencies of utilisation of particular services. The results confirm the experience of student health clinics that student mobility (a natural and appropriate consequence of student stage-of-life) with consequent multiple primary health service use are high. They define and enumerate the challenge to manage risk (clawback) to student health services in the new capitated PHO environment.

The practice of regular, concurrent, multiple service use was reported by 51 (20.2%) respondents. This attitude can possibly be expected to change with the adoption of practice (PHO) enrolment by students in 2006. On the other hand over 40% (41.5%, 105 respondents) reported no multiple primary health care service use.

Table 5. Alternative service utilisation analysis

Provider type	Frequency N. students using	Per cent
Host S.H. service	132	52.4%
Designated A/H	60	23.7%
Family GP	93	36.8%
Other GP	40	15.8%
A&M clinic	37	14.6%
Hospital ED	36	14.2%

NB: Abbreviations: S.H. = 'student health'; A/H = 'after hours service'; A&M = 'accident and medical clinic'; ED = 'hospital emergency department'

Direct generalisation of the results of this survey to mainstream general practice situations would not be accurate. However these results do indicate that multiple service use issues may also be impacting on general practice.

Capitation funding has the intention of redirecting funding more effectively to populations of need with associated emphasis on community oriented primary health care.^{1,2} Capitation is a prospective payment and shifts risk management to the provider.^{1,2,3,7} For the primary health care provider a disadvantage of capitation funding is such risk management and accounting for the reality of multiple service utilisation. Perhaps this is no more evident than in the student health services' setting.

Conclusion

Multiple primary health care service utilisation by Massey University students has occurred at a high rate in the year 2004–5. A calculation of 1.68 external consultations per student per annum can be made (95% CI=1.6–1.8). This compares with a surveyed student health services' consultation rate of 1.87 (1.75–2.00) per student per annum.

Generalisation of survey data to mainstream general practice can only be made by inference and with due caution. Survey results might indicate that multiple service use is a significant feature of primary health care.

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Competing interests

None declared.

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