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Does community-governed non-profit primary care improve access to services? Cross-sectional survey of practice characteristics

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Abstract

This study aimed to compare community-governed non-profit and for-profit primary care practices in New Zealand to test two hypotheses: 1) that non-profits have reduced financial and cultural barriers to access; and 2) non-profits do not differ from for-profit practices in terms of equipment, services, service planning and quality management. Data were obtained from a nationally representative cross-sectional survey of general practitioners in New Zealand. Practices were categorised according to their ownership status: private community-governed non-profit or private for-profit. Community-governed non-profits charged lower patient fees per visit and employed more Maori and Pacific Island staff. Non-profits provided a different range of services, and were less likely to have specific items of equipment. Non-profits were more likely to have written policies on quality management, complaints and critical events, and to carry out locality service planning and community needs assessments. The study supports the hypothesis that community-governed non-profits have reduced financial and cultural barriers to access compared with their for-profit counterparts. They also provide a different range of services, are more likely to have a population-orientation to service planning, and are more likely to have quality-management policies. The findings of this study support the shift to non-profit community governance that is occurring in New Zealand and elsewhere.

Introduction

Ownership

Ownership confers governance responsibility (ultimate control) for an organisation, and accountability for its actions. Primary care organisations can be classed as 1) government owned and operated, or 2) privately owned and operated, with the latter being divided into those responsible to a community-governance board versus those not responsible to such a board. Community-governance seeks to ensure that an organisation is in the control of the users, constituents or clients of the organisation (1). This paper uses survey data to compare the structural characteristics of private for-profit and private community-governed non-profit primary care practices in New Zealand. Non-profits in this study met at least two of these three criteria: 1) they had a community board of governance, 2) there was no equity ownership by general practitioners (GPs) or others associated with the organisation, and 3) there was no profit distribution to GPs or others associated with the organisation.

While there has been considerable research comparing for-profit and non-profit hospitals (2, 3), there is comparatively little research comparing for-profit and non-profit primary care. Ownership is important not only in New Zealand, but also in the US where non-profit community health centres have been important

sources of care for low-income and uninsured people since the late 1960s (4), and in the UK where there is growing diversity of ownership arrangements (5-8) and increasing emphasis on community involvement in governance in the newly formed primary care trusts (9). Non-profit bodies are now involved in NHS partnerships, particularly in the area of housing for NHS clients—but it is probably only a matter of time before they expand their involvement to include core clinical services (6).

The New Zealand health policy context

At the time of the 2001 Census New Zealand had a population of about 3.37 million people, approximately 14% of whom belonged to the indigenous ethnic group, Maori, and 5% to various Pacific Islands ethnic groups (10). New Zealand's history of colonization, along with more recent economic and social policy reforms, has resulted in Maori and Pacific Islands populations being consistently over-represented in socioeconomically deprived neighborhoods and experiencing comparatively poor health status (10).

New Zealand, in common with most countries, has a pattern of ownership in the primary care system that results from social, political and economic influences operating over past decades (11). Traditionally GPs in New Zealand have adopted a self-employed, for-profit small business model. Since the early 1940s New

Zealand's primary care policy has been characterized by a sharing of control between government and GPs. This has been largely due to the fact that GPs have retained their independence in the private sector (as in the UK and the US) and, in contrast to the UK, successive governments have supported their right to charge co-payments, thereby positioning government as subsidizer rather than total funder of primary care. Successive governments attempted to ensure access to primary medical care services for low-income families by manipulating the primary care subsidy scheme and through (largely failed) attempts to limit the amount charged by GPs (12).

In 1993 a conservative government introduced contracting into the health sector, that brought with it, for the first time, an opportunity for the government to exert more influence over issues such as the distribution of GPs and the on-going quest to increase control over demand-driven expenditure using funding mechanisms such as capitation and budget-holding (13). The reforms of the 1990s prompted the development of a diverse range of primary care arrangements, including the grouping of GPs into independent practitioner associations (IPAs). IPAs provide single negotiating bodies for contracting purposes as well as co-ordination of innovations in service provision (14). Currently about 40% of total primary care expenditure is from private sources, and about 60% from public sources (15). At the time of this study the principal tool to reduce financial barriers to access for

primary care services was a benefit card which entitled holders to increased levels of means tested government subsidies for doctor consultations and prescription items. Since this study was carried out a new set of primary care reforms has been embarked upon (16).

New Zealand has considerable experience with private for-profit primary care, and growing experience with private non-profit primary care (17, 18), but there is less experience with government owned primary care. While not claiming a direct ownership stake, government has invested heavily in other facets of New Zealand's primary care infrastructure over the years. For example, over the past ten years most IPAs and many non-profit primary care organisations have benefited from substantial capital investment by government.

Non-profit primary care in New Zealand

Community-governed non-profit primary care organisations started having a significant presence in the late 1980s in response to increasing demands for more affordable, culturally appropriate primary care services (19). The first non-profit trade union health centres were set up in 1987, and a diverse range of non-profit primary care organisations emerged during the early and mid 1990s, most notably Maori initiatives. There are no recent data on the total amounts of government funding going to different types of practice. At the time of this study all practices

were free to determine their level of patient co-payments for consultations. Government funding of primary care practices was determined within a complex contracting framework. Some Maori and community-governed practices received government assistance for their establishment, as did the independent practitioner associations to which most for-profit practices belonged (20). The operational funds for all practices were negotiated largely within a framework that did not distinguish between non-profit and for-profit status. Funding of programmes outside of standard medical consultation work was allocated through a modified form of tendering. Most community-governed practices did not participate in referred services budget-holding programmes which, in their early years (1990s), delivered significant new funding to practices for service development (21, p.70, 22).

Explaining the role of non-profits

A range of partly complementary and partly competing theories seek to explain the role and scope of private non-profit activities in different countries (23-28). Theories suggest that non-profit organisations predictably fulfil a range of social functions that may be of great use to policy makers and communities. In particular, they have a role catering for the diverse needs of minority populations not catered for by the government and for-profit sectors.

Non-profits are able to respond to the needs of minority community interests, for example minority ethnic groups, because their governance boards are more able to closely represent minority groups compared with their for-profit business counterparts, whose governance boards are likely to reflect the interests of the proprietary owners or share holders. From a theoretical standpoint this responsiveness to minority needs may reflect a basic motivation arising from the failure of government and for-profits to serve minority populations (24), but it may also reflect the interdependency of government and the non-profit sector insofar as the non-profit sector, unlike government, is unconstrained by the needs of the 'median voter' (23). The capacity of non-profits to independently represent the interests of minorities assumes great importance in New Zealand, where the indigenous population, Maori, have striven to establish primary care services tailored to meet their needs, and have used the non-profit form as a vehicle for increasing self-determination (19).

Hypotheses

This study tests the hypotheses that community-governed non-profits, compared with for-profits:

1. have reduced financial and cultural barriers to access (eg, lower patient charges/co-payments and greater ethnic diversity amongst their staff);

2. do not differ in terms of equipment, services, management, population orientation and quality.

Methods

The National Primary Medical Care Survey (NatMedCa), carried out over 2001/2002, was a nationally representative, multistage, probability sample of general practitioners and patient visits. The primary purpose of the survey was to collect data on the content of patient visits. A practice questionnaire was completed by each GP enrolled in the study, and a nurse questionnaire was completed by one nurse associated with each participating GP. The practice questionnaire variables were organised conceptually using Starfield's framework for primary care systems (29, p.26). The GP respondents consisted of 262 GPs (equating to 192 practices). The overall response rate for the practice and practitioner questionnaires was 76.6% (72.1% for the for-profits and 95.5% for the non-profits).

In order to obtain a nationally representative sample: 1) geographic locations were sampled, and 2) GPs were sampled from locations, stratified by organisation type (independent; independent practitioner association; capitated; community-governed non-profit) and rural/urban (metropolis & cities; towns and rural areas).

Practice weights were calculated to take account of different sampling probabilities, so that the sample is nationally representative, and approximately unbiased estimates of proportions, means, and measures of association between ownership status and organisational characteristics could be calculated (30).

Practices in the study were categorised according to their ownership status—private for-profit and community-governed private non-profit (criteria listed in the introduction). Data analyses were carried out using the Sudaan statistical package (31), which accounts for both the sample weighting and complex survey design (32). Comparing for-profit and non-profit categorical variables a chi-square test was used, with p-values computed from the Wald chi-square using denominator degrees of freedom equal to the number of sampling units minus the number of strata. For continuous variables, t-tests and associated p-values were used.

Propensity scores—used to match practices in the two groups based on sociodemographic characteristics of patients seen in the sampling period—were calculated in order to carry out a further set of comparisons restricted to for-profit and non-profit practices that were broadly comparable in terms of socioeconomic and ethnicity characteristics of their patients (% Maori, % Pacific Island, % living in deprived areas, % with a benefit card). Propensity scores, calculated using stepwise logistic regression, provide a scalar summary of the covariate

information for an individual record, and represent the probability of being non-profit conditional on the practice's covariate values (33).

Results

The data presented here describe the organisational characteristics for a national sample of New Zealand practices. A total of 26 community-governed non-profit practices and 166 for-profit practices were represented in the study. The non-profit practices included 14 that were Maori-owned. Nationally, about 3% of GPs work in community-governed non-profit practices.

Patient charges and mean visit interval

There were marked differences related to financial accessibility (Table 1). Non-profit primary care practices had lower patient charges than their for-profit counterparts for all age groups, and waived fees for a higher proportion of patients. The mean visit interval was similar (14.9 minutes in for-profits vs 15.3 minutes in non-profits; $p=0.08$).

—Table 1 about here—

Staffing

Non-profits employed more doctors than for-profits (on average 2.6 and 2.1 full-time-equivalent (FTE) doctors respectively; $p=0.004$). Non-profits employed, on average, more Maori staff (4.3 vs 0.2; $p<0.001$) and more Pacific Island staff (1.2 vs 0.1; $p<0.001$). Non-profits employed about 1.9 times the number of FTE nurses (2.8 vs 1.5; $p<0.001$), more FTE community workers (1.4 vs 0.01; $p<0.001$) and nearly 7 times the number of FTE midwives (0.8 vs 0.1; $p<0.001$). Non-profits employed more FTE managers (0.9 vs 0.4) and administration staff (1.0 vs 0.2) on average than for-profits (for both: $p<0.001$), and similar numbers of reception staff (1.6 vs 1.5; $p=0.070$).

GPs employed in non-profits were younger (43.3 years vs 45.1; $p=0.037$), had fewer total years in general practice (11.5 vs 15.6 years; $p<0.001$), were more likely to be female (57.4% vs 37.6%; $p=0.002$), more likely to be Maori (6.6% vs 0.8%; $p<0.001$) or Pacific Island (1.6% vs 0%; $p<0.001$), and were more likely to be salaried compared with GPs in for-profit practices (82.0% vs 8.1%; $p<0.001$). GPs in non-profits saw an average of 78 daytime patients per week, compared with for-profit GPs who saw average of 103 ($p<0.001$) (not adjusted for hours worked).

Nurses employed in non-profits were more likely to be Maori (18.8% vs 2.8%; $p < 0.001$) or Pacific Island (14.6% vs 0.4%; $p < 0.001$), than those employed in for-profits.

Range of services, management and quality, information systems

There were important and significant differences between non-profit and for-profit practices in terms of their type and range of services (Table 2), service planning, and quality-management policies (Table 3). For the 11 services where there were significant differences in their availability, 8 were more commonly provided in non-profits including, for example, group health promotion, community worker services and maternity care (Table 2). In terms of their service planning, non-profits were more likely to carry out community needs assessment, locality service planning and intersectoral case-management (Table 3). Non-profits were more likely to have a range of written policies related to quality management (Table 3).

There were no significant differences between non-profit and for-profit practices in the use of computer age-sex registers (100% vs 95.8; $p = 0.097$), computerised patient records (76.0% vs 70.8%; $p = 0.3$), or computer-based recall systems (100% vs 96.6%; $p = 0.104$), but non-profits were more likely to have computerised disease registers (100% vs 79.8%; $p = 0.002$).

—Table 2-3 about here—

On-site facilities and equipment

For-profits were more likely to have various items of equipment on-site, including: cautery machine (53.2% vs 36.0%), proctoscope (88.2% vs 40.0%), and liquid nitrogen (97.1% vs 72%) (for all $p \leq 0.05$), but there were no significant differences for x-ray facilities, defibrillator, autoclave, ECG machine, and intubation equipment. Non-profits were more likely to have baby scales (92.0% vs 57.7%; $p=0.001$).

Financing

The majority of non-profits (84%) received government payments via a capitation mechanism, compared with 25.9% of for-profit practices ($p < 0.001$); for-profit practices were far more likely to receive government payments via a fee-for-service mechanism (75.1% vs 28.0%; $p < 0.001$). For-profits were more likely than non-profits to participate in budget-holding for pharmaceuticals (18.2% vs 8.0%; $p=0.042$) and for laboratory investigations (14.2% vs 0%; $p=0.008$).

Governance

All the non-profit practices in the study had a separate board of governance (compared with 7.4% ($p < 0.001$) of for-profits) and the majority of these (77.3%) had patient representation on the board (vs 2.6% of for-profits which had a board of governance; $p < 0.001$).

Effects of: 1) patient sociodemographic characteristics, 2) funding mechanisms, and 3) practice size

In order to take account of potential confounding caused by 1) patient sociodemographic characteristics, 2) different funding mechanisms, and 3) practice size, comparisons were carried out that were 1) restricted to practices serving similar low-income and non-European populations (restriction carried out using propensity scores), 2) restricted to practices that were capitation funded, and 3) restricted to for-profits that employed more than one GP. In terms of the study's first hypothesis, in the case of each restriction most of the key differences related to access remained statistically significant, including differences in patient charges and ethnicity of staff (as did most differences related to quality and population orientation). For example, Table 4 compares patient charges for practices serving similar low-income and non-European populations. This suggests that the non-profits are not merely adapting to the needs of the patient population, or the incentives associated with capitation funding. Community-

governance confers other benefits in terms of accessibility and other structural features conducive to accessible and population-oriented primary care.

Discussion

Principal findings

The hypothesis that community-governed non-profits had reduced financial and cultural barriers to access compared with their for-profit counterparts was confirmed: non-profits charged considerably lower patient fees and employed considerably more Maori and Pacific Island staff. The second hypothesis, however, was not supported: unexpected differences were observed related to services, service planning, and quality management. For example, non-profits were more likely to provide community worker and group health promotion services, and to carry out community needs assessments and locality service planning; they were also more likely to have baby scales (presumably reflecting, in part, their younger patient population). For-profits were more likely to provide sports medicine and emergency/accident call-out services. They were also more likely to have specific items of equipment, such as cautery machines and proctoscopes, despite being on average smaller practices with fewer full-time equivalent doctors. Non-profits performed better in terms of written policies on

quality management: for example, they were more likely to have written policies on complaints, critical events and quality management. The greater percentage of non-profits with these 'process' quality indicators may reflect the larger staff that was available to them (a separate related study has examined staffing issues in more detail (34)). In general these quality measures were not a requirement of their funding contracts.

The results of this study are consistent with theoretical predictions related to the social role of the non-profit sector in catering for the diverse needs of minority populations not catered for by the government and for-profit sectors. The results are also consistent with findings from a related study that found that, compared with for-profits, community-governed non-profits served a younger, largely non-European population, nearly three quarters of whom had a means tested benefit card (community services card), 10.5% of whom were not fluent in English, and the majority of whom lived in the 20% of areas ranked as the most deprived by the NZDep2001 index of socioeconomic deprivation (35). The result that non-profits have lower patient fees and employ higher numbers of Maori and Pacific Island staff reinforces the findings of previous research which noted that the governance boards of non-profits supported a range of strategies aimed at reducing financial and cultural barriers to access for their target low-income, Maori, and Pacific Island patient populations (17, 19). One such strategy is to

locate practices in medically under-served areas with high health needs and high proportions of Maori and Pacific Island residents.

While differences between non-profits and for-profits are likely to be associated with their ownership and governance arrangements, it is hard to separate out the dual influences of 1) non-profit community-governance and 2) the different financial incentives facing GPs in the two types of practice. Non-profits were defined partly on the basis of having no equity ownership by GPs and no profit distribution to GPs, hence it is likely that financial incentives had some influence on, for example, employment of staff, range of services provided and on-site equipment. It is also likely, given the lower patient charges in non-profits and their higher proportion of charges reduced or waived, that financial surpluses in non-profits were lower than in for-profits. More research comparing financing, profits and GP incomes is required to further elucidate this issue.

Limitations of study

Bias may have been introduced due to the overall GP response rate of 76.6% (72.1% for the for-profits and 95.5% for the non-profits). Non-responders tended to be male and reported greater than average patient loads. If the busiest GPs differed in some systematic way in their characteristics or activities, this may bias the results. The magnitude and direction of such bias is unknown. The magnitude

of many of the observed differences reduces the chance of spurious conclusions being drawn.

Conclusions

Few observational studies have directly compared characteristics of community-governed non-profit primary care practices with their for-profit counterparts (36). This study provides evidence that ownership and governance have an important influence on access to primary care. Community-governed non-profits in this study also provided a different range of services, were more likely to have a population-orientation to their service planning, and to have written quality-management policies. Explanations for these differences are likely to include a clear mission amongst the community-governed non-profits to serve the needs of vulnerable population groups, and a more managerialist management culture, as opposed to a predominantly health professional management culture. The study provides no insights into the total amount of government funds going to different types of practice, and further research will be required to determine the efficiency of the different ownership models analysed here. The findings of this study support the shift to non-profit community governance that is occurring in New Zealand and elsewhere.

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Table 1: Patient charges

	For- profit	Non- profit	P value
Mean visit interval (mins)	14.9	15.3	0.08
Patient charges/co-payments per visit (mean \$)			
Child < 6 yrs CSC *	\$0.72	\$0.0	0.026
Child < 6 yrs HUHC *	\$0.60	\$0.0	0.035
Child < 6 yrs no card *	\$0.98	\$0.0	0.021
Child > 6 yrs CSC *	\$13.71	\$1.29	<0.001
Child > 6 yrs HUHC *	\$13.34	\$1.04	<0.001
Child > 6 yrs no card *	\$19.09	\$2.54	<0.001
Adult CSC *	\$22.89	\$7.73	<0.001
Adult HUHC *	\$22.29	\$6.40	<0.001
Adult no card	\$38.28	\$18.69	<0.001
% patient charges reduced	16.5	61.9	<0.001
% patient charges waived	6.8	38.5	<0.001

*The CSC (community services card) and HUHC (high use health card)

are benefit cards that entitle the user to higher levels of government

payment thus reducing the amount of patient co-payment;

the CSC is means tested and indicates low-income

Table 2: Services available—% practices

	For-profit	Non-profit	P value
Group health promotion	25.5	76.0	<0.001
Community worker services	4.3	72.0	<0.001
Dental health services	0.7	44.0	<0.001
Mental health services	61.6	80.0	0.007
Antenatal care	65.3	80.0	0.028
Intrapartum care	21.6	52.0	<0.001
Postpartum care	46.7	64.0	0.025
Complementary / alternative services	38.4	50.0	0.043
Sports medicine	37.9	12.0	0.002
Emergency/accident call out	50.2	28.0	0.003
Dedicated older persons care	38.4	28.0	0.053
Home visits	93.2	88.0	0.116
Minor surgery	92.9	88.0	0.087
Independent nursing consultations	75.4	83.3	0.077
Diabetes screening	83.8	88.0	0.247
Occupational medicine	26.2	24.0	0.612
Dedicated adolescent medicine	18.9	20.0	0.742
Cervical screening	98.9	100.0	0.340
Formal counselling services	29.0	36.0	0.143

Table 3: Service planning and quality management—% practices

	For- profit	Non- profit	P value
Service planning			
Formal community needs assessment	20.1	40.9	0.002
Locality service planning	17.1	40.9	0.001
Inter-sectoral case Management	11.2	54.6	<0.001
Quality management			
Written policy on complaints	59.4	88.0	<0.001
Written policy on critical events	30.5	68.0	<0.001
Written policy on staff training	30.8	56.0	0.001
Written policy for quality management	28.9	75.0	<0.001
Formal peer review process	66.5	79.2	0.027
Use evidence protocols or guidelines	80.5	79.2	0.731

Table 4: Patient charges for practices serving similar low-income and non-European populations *

	For-profit	Non-profit	P value
Patient charges/co-payments per visit (mean \$)			
Child < 6 yrs CSC *	\$0.0	\$0.0	
Child < 6 yrs HUHC *	\$0.0	\$0.0	
Child < 6 yrs no card *	\$0.0	\$0.0	
Child > 6 yrs CSC *	\$7.13	\$1.17	0.006
Child > 6 yrs HUHC *	\$6.70	\$0.83	0.010
Child > 6 yrs no card *	\$13.11	\$2.56	0.001
Adult CSC *	\$18.41	\$8.64	<0.001
Adult HUHC *	\$17.38	\$6.86	<0.001
Adult no card	\$33.81	\$19.64	<0.001
% patient charges reduced	19.0	60.3	<0.001
% patient charges waived	8.0	39.4	<0.001

*For this comparison for-profits n = 21 and non-profits n = 20

† The CSC (community services card) and HUHC (high use health card) are benefit cards that entitle the user to higher levels of government payment thus reducing the amount of patient co-payment; the CSC is means tested and indicates low-income