

**Community Services Card Review
Analysis of Alternative Targeting Mechanisms**

Acknowledgements

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Executive Summary

This paper is intended to serve a summary of the issues considered by the Community Services Card reference group established by the Ministry of Health in August 2001. The group was convened by the Ministry because of several concerns about the existing method for targeting primary health care services. The group was tasked with reviewing the current programme and recommending possible alternative approaches, especially in light of the recently-approved Primary Health Care Strategy.

The group recognised that there are financial and non-financial barriers to accessing primary health care. The group decided to focus primarily on the financial access barriers while acknowledging that the non-financial access barriers must be addressed by other elements of the Primary Health Care Strategy. The populations affected by financial access barriers include:

- Those who have the CSC but still face financial barriers to care.
- Those whose family income is just over the CSC eligibility threshold.
- High users who do not get the High User Health card.
- Those eligible for the CSC but do not have one.
- Those who face various administrative barriers to obtaining the card.

The reference group considered three types of alternatives: 1) improving the current income targeting regime by lowering eligibility thresholds and raising subsidy levels/lowering part charges; 2) extending subsidies to all New Zealanders (though maintaining variations in subsidy levels by age), and, 3) targeting funding to certain high need primary health organisations (PHOs) so that they could offer low cost access for all enrolled persons while increasing the level of subsidy for those who retain a CSC card and are not enrolled in high need PHOs. The Ministry modelled the impact of each of these three approaches on total GMS and pharmaceutical costs, the public share of primary care costs, and the number of persons affected by public subsidies. To allow a comparison of the approaches, the options were modelled such that the total cost fit within \$250- \$300 million in new funding.

The reference group thought that the main disadvantage of the income targeting approach is that it would continue the current CSC system and its attendant problems. The main disadvantage of the second option, which entails a universal subsidy, is that the amount of the subsidy is not sufficient to lower patient part charges in a meaningful way. In other words, the money is spread thinly over many people.

The third approach, which includes elements of universality and income targeting, was favoured by the reference group because it targets high need communities and benefits many persons in need who do not benefit from the current system. The group also recommended improvements to the CSC and high user health card systems in recognition of the fact that these mechanisms will continue to exist for at least the medium term.

Finally, the group recommended that high need PHOs agree to limit part charges to no more than \$10 per consultation.

1.0 Purpose

The purpose of this paper is to describe and analyse several approaches to targeting subsidies for primary health care services that were reviewed by the Community Service Card reference group established by the Ministry of Health in August 2001. (See Appendix E for a list of reference group members.)

2.0 Background

The Community Services Card (CSC) was introduced in the early 1990s as a means of targeting health subsidies to individuals and families in need. Those receiving the card include beneficiaries from government financial assistance programmes, those who rely on superannuation as their sole means of support and those whose family income and family size meet certain criteria (currently \$39,000 for a family of four). Card holders and their dependants receive subsidies that pay for a portion of the costs of consultations with their general practitioners and carry lower part charges for pharmaceuticals.

Since 1997, all children under six have received a subsidy that is meant to cover the full cost of consultations with general practitioners and all of the part charge for pharmaceuticals. All children over six and under eighteen receive a subsidy for GP visits and pharmaceuticals; however, the subsidy amount is higher for those who are CSC holders or dependants of CSC holders. Persons who require 12 or more visits to their GP in a year also receive a subsidy regardless of their CSC status. Families who require 20 or more items prescribed in a year are eligible for reduced part charges for pharmaceuticals.

The Review of the CSC was initiated by the Minister of Health, Annette King, because of concerns about the ability of the current system to achieve fair access in an equitable manner. Some specific issues of concern include: the harsh cut-off point for eligibility, the incomplete uptake of the benefit among eligible persons, and the fact that many low-income workers and their families continue to face financial barriers to accessing primary care.

This excerpt from the terms of reference summarises the main charge of the CSC Review:

The working group will consider, consult, develop options and make recommendations on the use of the CSC to deliver primary health care subsidies. This will include consideration of:

- *The longer term objectives to be achieved in primary health care*
- *The benefits and disadvantages of the current system of primary health subsidies (including High Use Health Cards and Pharmaceutical Subsidy Cards)*
- *Options for targeting additional assistance to people on low income and/or with high health needs*
- *Financial implications of the options including synchronization with the primary health care funding path*
- *Transition and implementation issues and options for phasing in any changes.*

3.0 Scope of Review

This review is being conducted concurrently with the roll out of the Primary Health Care Strategy. The Strategy establishes a medium to long term vision for primary health care that includes improved access to care for those on low income, those with high health need, and those who are not being well served by the current system. The CSC Review will inform the planned implementation of the Strategy, particularly with regard to the amount of funds required to improve access for those in need.

The outcome of the CSC Review also will affect the design of the needs-based funding formula that will be used to allocate funds to primary health organisations. The current formula developed by the Ministry includes CSC and the New Zealand deprivation index (NZDep). If the CSC is eliminated or replaced, there may be a need to adjust the formula. In Section 8, there is more discussion of the population funding formula and the relationship with the means for individual or family targeting.

The CSC is a means of individual targeting to overcome financial barriers to care. This review focuses primarily on ways to improve the current targeting regime. Non-financial barriers to care such as cultural barriers and access in rural areas are identified as problems in the Primary Health Care Strategy document. Strategies to address these problems are being developed in the roll out of the Strategy.

4.0 Defining the CSC Problem

4.1 Financial Access

The populations who experience problems with the current CSC regime fall into four general categories:

- Those who have the CSC but still face financial barriers to care
- Those whose family income is just over the eligibility threshold
- High users who do not get the High User Health card
- Those eligible for the CSC but who do not have one.

Subsidy Insufficient - - According to a survey conducted by the Family Centre¹ in 1999, 56% of low income households had members who did not visit a doctor when they needed to in the previous year because of a shortage of money. Low income households participating in the survey are defined by household composition and disposable household income; for example, a household with 2 adults and 2 children with a household income no greater than \$26,000 is included. This is roughly 60% of the current CSC eligibility threshold - - \$39,000 for a family of four. Hence, those surveyed are somewhat poorer than the CSC population on average (but, it is not clear from the survey whether respondents held a CSC card).

¹ C. Waldegrave, P. King, S, Stuart, "The Monetary Constraints and Consumer Behaviour in New Zealand Low Income Households," The Family Centre Social Policy Research Unit, September 1999.

The most common illnesses that households could not afford to have treated were colds and flu (44%), headaches and migraines (32%), asthma (17%), and internal conditions (17%).

Approximately 720,000 New Zealanders fall below the disposable income/household size criteria for this survey. Hence, an estimated 400,000 New Zealanders experience financial access problems. This is equivalent to one quarter of the current cardholders/dependents. This is a conservative estimate, given that the actual population with cards is more than the 720,000 who fall within the Family Centre's income thresholds.

Just over the line - - The median gross income for a family of four is \$56,000 (source: Treasury). The CSC threshold is a gross income of \$39,000 for a family of four. Those with incomes between the CSC threshold and the median income (approximately 520,000) could experience financial barriers to care. However, it is difficult to state how many in this group face financial barriers.

According to the New Zealand Health Survey, 11.3% of those with family incomes between \$30,000 and \$50,000 per annum (or 60,000 people) had on at least one occasion felt they needed to see a GP in the last year but did not. Cost was cited as the major reason for not visiting. Other non-financial barriers were also noted.

High users - - Approximately 1% (40,000) of the New Zealand population has a high user health card (eligibility based on 12 GP visits in 12 months). According to the 1996/97 New Zealand Health Survey, between 5 and 6% of survey respondents (approximately 200,000 people) experienced 12 or more visits to the GP. Assuming that the survey respondents met other HUHC eligibility requirements, the high user card uptake may be as low as 20%.

Eligible for a CSC card but not a cardholder - - At present, approximately 1.48 million New Zealanders hold a CSC card or are dependants of cardholders. According to Treasury's TaxMod, 1.85 million persons are eligible for the card. Hence, approximately 21% (or more than 370,000 people) of the eligible population do not hold a card.

There are a number of other issues with the Community Services Card system:

- Cut off point - - A person who makes \$1 more than the threshold does not benefit from the current system.
- Indexation - - There is no automatic indexing of the GMS subsidy level or CSC eligibility threshold level to keep pace with inflation.
- Compliance costs - - Providers bear considerable compliance costs keeping up-to-date CSC information on their patients. This is particularly acute for capitated providers who must supply CSC information even when the patient does not present for services.

On average, patient fees comprise more than 60 percent of the cost of a general practice consultation (excluding pharmaceuticals and laboratory tests). This level is high in comparison to other OECD countries: a 1997 international review showed that in Canada, UK, Denmark, Greece, Turkey and Italy access is free; in Australia, Austria, Finland, Luxembourg, and Switzerland, charges are 10 percent or less; and, in Iceland and Norway, fees are about 30 percent. As noted above, the burden on private paying patients has a disproportionate impact on access to care for those on low incomes. In a Commonwealth Fund health policy survey (1998), New Zealanders reported a higher level of concerns about affordability than residents of most other countries.

4.2 Administration

There are other issues related to the administration of the programme. The Community Services Card Centre has grouped these issues into the following areas:

- Lack of awareness of the card and its benefits, especially among low income earners, Maori, and Pacific Island people;
- Low student uptake;
- Forms complicated to complete;
- Stigma attached to the card;
- Name of the card does not reflect its purpose;
- Doctors have difficulty finding out if a patient qualifies;
- High compliance costs for doctors
- Card eligibility finishes at undetermined points after work commences; and,
- Different definitions of income used for different types of clients.

Some of these problems could be addressed by including targeted outreach to areas of low uptake, automatic eligibility for additional population groups (e.g., students), and simplifying the forms and application process. Appendix D provides a description of some changes recommended by the CSC Centre, which administers the current card scheme.

5.0 Options for individual or family-based targeting

5.1 Income Targeting

One alternative approach is to use the existing Community Services Card structure but increase subsidy levels and population coverage. The current structure is based on age, family size, family income, and beneficiary status. Those receiving some type of subsidy are:

- children under age 18,
- beneficiaries and their dependants,
- families whose income fall below a certain threshold (\$39,000 for a family of four), and
- high users (12 or more GP visits for the same condition, 20 or more items prescribed per family).

Table 1 Current subsidy structure and population coverage

Age	CSC	HUHC	GMS Subsidy (paid to GPs)	Pharms Part Charge ² (paid by patients)	Population
Under 6	Yes	yes	\$32.50	\$0.00	1,678
	Yes	no	\$32.50	\$0.00	116,388
	No	yes	\$32.50	\$0.00	1,660
	No	no	\$32.50	\$0.00	220,597
6 - 17	Yes	yes	\$20.00	\$3.00	674
	Yes	no	\$20.00	\$3.00	231,543
	No	yes	\$20.00	\$3.00	741
	No	no	\$15.00	\$10.00	465,474
>=18	Yes	yes	\$15.00	\$3.00	20,578

² Individuals and families may also be eligible for a Prescription Subsidy Card (\$0 part charge) if they have 20 or more prescription items per year. According to Health Benefits, there are at least 220,000 PSC holders.

Yes	no	\$15.00	\$3.00	1,114,285
No	yes	\$15.00	\$3.00	13,339
No	no	\$0.00	\$15.00	1,662,043

One of the problems with the current system is that the value of the subsidy is so low relative to out-of-pocket cost to the patient that the CSC does not make a meaningful difference to access, particularly for low income adults with high health need. The current subsidy level for adults (\$15 per consultation), set in 1992, represents one third to two fifths of the average charge. The free under-six subsidy level, set at \$32.50 in 1997 and not adjusted since, no longer covers the full cost of a consultation. Many general practitioners now levy a part charge for consultations with children.

Raising the level of the subsidy should improve access for many of those who hold the CSC at present and may provide an incentive for those currently eligible but not holding a card (approximately 21% of the eligible population) to apply. Another change would be to raise the family size/family income threshold to allow coverage of more low to medium income earning families. The following table presents the thresholds based on \$39,000 income for a family of four (current), \$45,000, and \$50,000.

Table 2 Increasing Family Size/Income Thresholds

Thresholds	\$39k Fam of 4 (Current)	\$45k fam 4	\$ 50k fam 4
Single sharing	\$18,586	\$21,396	\$23,773
Single alone	\$19,689	\$22,666	\$25,184
2 People	\$29,398	\$33,843	\$37,603
3 People	\$34,243	\$39,421	\$43,801
4 People	\$39,089	\$45,000	\$50,000
5 People	\$43,935	\$50,578	\$56,198
6+People	\$48,782	\$56,158	\$62,398

Changing the income thresholds will expand the number of people eligible for the card. At current levels of CSC uptake, raising the level to \$45,000 for a family of four will potentially add 813,000 to the CSC system, which means that 67% of the population will be eligible for some type of GMS subsidy; currently 61% are eligible for a subsidy. Raising the level to \$50,000 would make 953,000 additional people eligible and will mean that 70% could draw a GMS subsidy.

5.2 Universal³

The current system offers some level of subsidy for all children under 18. Extending this universal approach to persons of all ages holds many attractions:

- Improves access for persons at the margin who do not qualify under the current targeting regime;
- Removes the administrative structure required to support a targeting system;
- Removes the “welfare” stigma that some associate with the CSC; and,
- Reduces financial barriers for all New Zealanders to receipt of first level health care.

On the other hand, a universal system will be more costly (unless one were to simply spread the current budget across all people). Some would argue that under a universal approach,

³ The term universal is used in this paper to mean the situation where all persons receive some level of subsidy, but not necessarily the same level of subsidy.

resources will shift to those less in need without making significant improvement in access for those getting the least from the current system.⁴ Nevertheless, universal funding should be considered among alternatives to the current targeting regime.

A universal approach does not mean that everyone person has the same GMS subsidy or pharmaceutical part charge. The current system is universal for children at \$32.50 GMS subsidy and \$0 pharmaceutical part charge. Extending this level of support to the entire population would be expensive. However, the subsidy levels could vary by age group: older children and young adults could have higher subsidy levels than older adults (but not higher than young children).

5.3 High Use

There is evidence that high use of the health care system is correlated with high health need. According to the 1996/97 New Zealand Health Survey, Maori, Pacific people, and those living in more deprived areas were more likely to experience six or more visits to a GP in a year. The Survey also found that those with high health need (self perception) visited the GP more often. In the absence of uniform diagnostic coding in the primary health care sector, high use of GP services may at least serve as a proxy for high health need.

High users certainly face significant financial barriers. For example, under the current system, an adult with CSC who requires ten visits to the GP in a year would pay \$250 for GP services and \$60 in pharmaceutical part charges (2 prescription items per consultation). An adult without CSC under the same circumstances would pay \$400 for GP services and \$300 in pharmaceutical part charges. (This assumes a \$40 consultation charge and no discounting by the GP.)

The High User Health Card would not benefit either person in the previous scenario because HUHC only applies when the person requires 12 or more GP visits in a year. In addition, the HUHC requires that the GP complete extensive paperwork on behalf of the patient. As noted in the previous section, approximately 1% of the population is covered by a high user health card.

An alternative approach would be to reduce the number of visits required for a high use card; eliminate the requirement that a GP initiate the eligibility process (e.g., letter from Health Benefits when the patient has reached the threshold); allow a card to be issued on a prospective basis for certain circumstances; and/or increase the high use subsidy level to a more substantial portion of the visit charge (e.g., \$30 per visit). This high use scheme could be rolled out while keeping the current targeting structure (except for the current HUHC) or it could be combined with a modest universal benefit for all persons.

5.4 Targeting by Disease State

Another approach to targeting is to focus on disease states. Certain illnesses require a greater intensity of primary care services and, therefore, are more costly to patients. Rather than

⁴ The evaluation of the free under six policy concluded that “the increase in use was mainly by children whose families did not hold Community Services Cards” (xii, Executive Summary). S. Dovey and M. Tilyard, “Evaluation of the Free Child Health Scheme,” A Report to the Health Funding Authority.

using high use as a proxy for high health need, this approach would rely on disease categories as reported by primary care practitioners.

This approach is difficult to model because of the lack of consistent coding of disease states by primary care practitioners in New Zealand. The database held by the Royal New Zealand College of General Practitioners does have measures for disease; however, they are quite broad (e.g., infectious diseases) and do not lend themselves to easy use in this exercise.

Moreover, the nature of coding in primary care may not be well suited to targeting. Many diagnoses are broad or not very revealing as opposed to diagnoses in specialty care where the disease state is more defined. Targeting by disease also requires that the government value one disease over another. Is diabetes more worthy of attention than depression? Funding for certain services (e.g., annual diabetes review and HbA1c testing) may be a more appropriate way of addressing disease specific issues. Also, coding by disease may encourage diagnosis of those targeted diseases.

Finally, targeting by disease would require consistent disease coding by general practitioners. In the long run, this may facilitate the introduction of standardised quality measures; however, there would be costs associated with this change.

5.5 Deprivation

The New Zealand Deprivation Index is a socioeconomic measure that indicates the level of deprivation of an area (meshblock) based on the characteristics of residents as reported in the Census. NZDep has been promoted as a more sensitive measure of deprivation than income because it includes a cluster of factors (including income) that have been shown to have a link with deprivation (e.g., living alone, lack of transportation).

The difficulty in using NZDep as a measure of an individual's or family's level of deprivation is that it was not designed for this purpose. Though it characterizes the level of deprivation of a meshblock (median of 90 people), NZDep does not reveal the status of each person living in a meshblock. Invariably, there will be people living in a decile 10 meshblock (most deprived) who actually are well off and vice versa.

Use of NZDep in a heterogeneous urban area would be particularly vexing. A medical centre may serve a dozen or more meshblocks, with a range of Dep scores. Such a centre would be forced to provide several different levels of subsidy to people who live in the same section of a city. It would appear unfair to the patients and pose administrative complexity for the medical centre.

6.0 Modeling Alternative Approaches

Based on the previous discussion, it appears that the most viable alternatives to the current system are:

- 1) An income targeted approach that involves broader population coverage, increased uptake, increased GMS subsidy levels, and lower part charges for pharmaceuticals;
- 2) A universal approach that entails varying subsidy and part charge levels by age group.
- 3) An approach that uses elements of income targeting and universality.

The following sections provide some modeling of these three different approaches. Because of the scope of this change, the options are modeled over a four-year period. The total cost of these options falls within the \$250 million to \$300 million range. As is evident, changing the assumptions underlying each model will change the total costs considerably. However, aiming at a similar target (in terms of total cost after four years) allows some basis for comparing the different approaches. One can think of each of these models as containing different alternatives (low, medium, or high) based on the level of subsidy proposed.

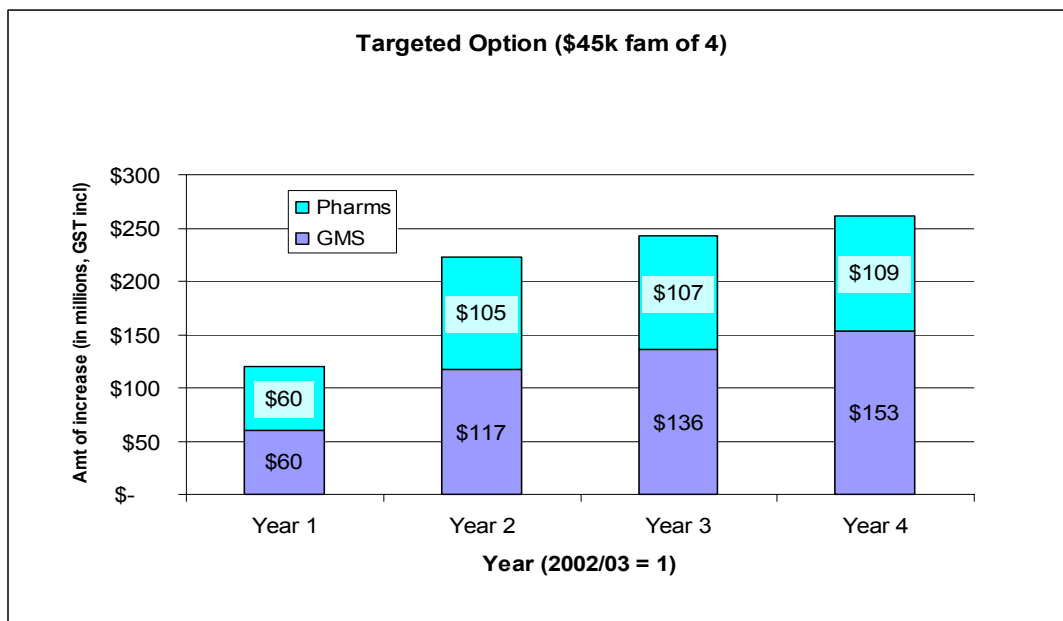
Each approach includes a high use card component. The assumption is that issuing of the HUHC could be made more automated such that the uptake rate will be 1.5% in the first year and 3% by the second year and thereafter. (The current level is 1%.)

6.1 Income targeted

Table 3 provides a breakdown of a revised income targeted approach. The CSC subsidy/part charge schedule is listed first.

Table 3 GMS Subsidy Levels and Pharms Part Charge Levels Under Expanded Income Targeting

Option	Current	Year 1	Year 2	Year 3	Year 4
GMS subsidy levels:					
-- under 6	32.5	32.5	32.5	32.5	32.5
-- children over 6 (CSC, nonCSC)	20, 15	25	25	25	25
-- 18 - 24	15, 0	20, 0	25	25	25
-- 25 - 44	15, 0	20, 0	20, 0	20, 0	25, 0
-- 45 - 64	15, 0	20, 0	20, 0	25, 0	25, 0
-- 65 and over	15, 0	20, 0	25	25	25
-- high use	32.5, 20, 15	25	25	25	25
Pharms part charge					
-- under 6	0	0	0	0	0
-- over 6 under 18	3, 10	0	0	0	0
-- 18 - 24	3, 15	3, 15	0	0	0
-- 25 - 44	3, 15	3, 15	3, 15	3, 15	3, 15
-- 45 - 64	3, 15	3, 15	3, 15	3, 15	3, 15
-- 65 and over	3, 15	3	3	3	3
-- high use	3	0	0	0	0
Percent Pop Subsidised	57%	65%	70%	70%	70%
Percent GMS Cost	38%	49%	58%	60%	62%



The characteristics of the income targeting approach are as follows:

- Subsidy levels do not decrease from the current situation.
- Some people (approximately one quarter of the population) will not receive a subsidy even after the fourth year.
- From year 1, the threshold for eligibility has been increased to include all persons whose family income is \$45,000 or lower (family of four). (The current level is \$39,000.)
- CSC card uptake, which is currently at 79%, is increased to 85% in year 1 and 90% for year 2 and thereafter. This is based on improved administration and the greater value of the card (in terms of subsidy).
- The GMS subsidy has been indexed at 1.5% per year, starting from year 2. All figures have been adjusted for population growth.

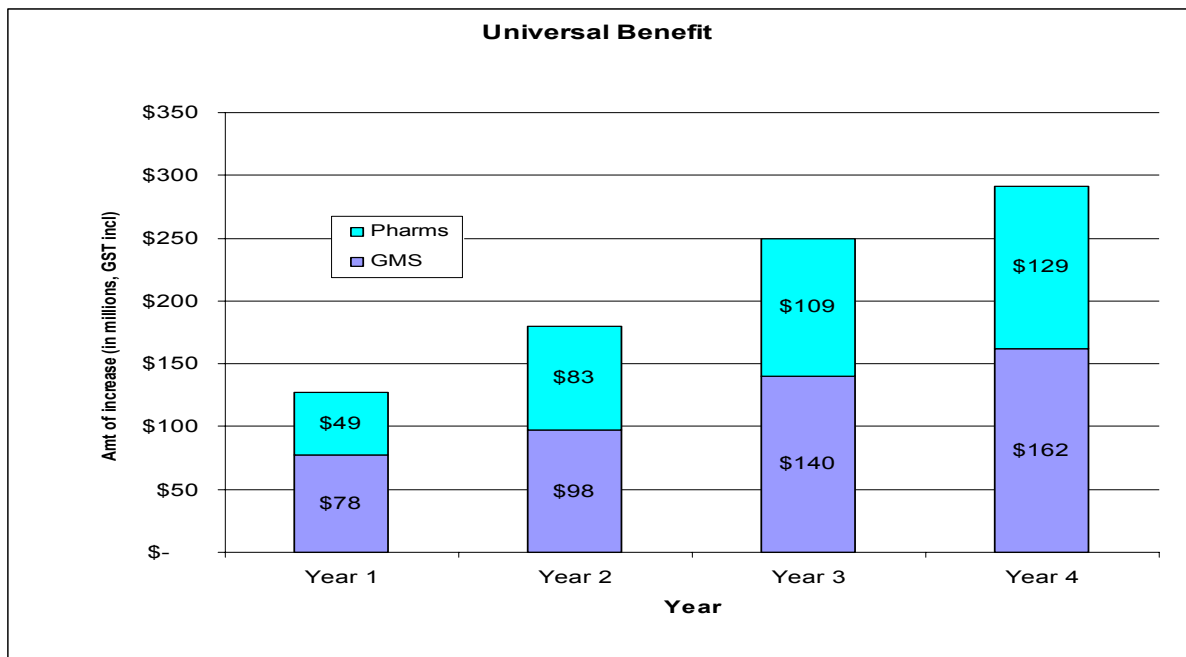
Appendices A and B provide details on the assumptions and methods used.

6.2 Universal

Table 4 provides a breakdown of a universal approach.

Table 4 GMS Subsidy Levels and Pharms Part Charge Levels Under Universal Scheme

Option	Current	Year 1	Year 2	Year 3	Year 4
GMS subsidy levels:					
-- under 6	32.5	32.5	32.5	32.5	32.5
-- children over 6 (CSC, nonCSC)	20, 15	20	20	20	20
-- 18 - 24	15, 0	20, 0	20	20	20
-- 25 - 44	15, 0	20, 0	20, 0	20, 0	20
-- 45 - 64	15, 0	20, 0	20, 0	20	20
-- 65 and over	15, 0	25	25	25	25
-- high use	32.5, 20, 15	25	25	25	25
Pharms part charge levels:					
-- under 6	0	0	0	0	0
-- children over 6	3, 10	0	0	0	0
-- 18 - 24	3, 15	3, 15	0	0	0
-- 25 - 44	3, 15	3, 15	3, 15	3, 15	3
-- 45 - 64	3, 15	3, 15	3, 15	3	3
-- 65 and over	3, 15	3	3	3	3
-- high use	3	3	3	3	3
Percent Population Subsidised	57%	59%	66%	82%	100%
Percent GMS Cost Subsidised	38%	48%	53%	59%	62%



The characteristics of the universal benefit are as follows:

- Subsidy levels do not decrease from the current situation.
- Everyone receives a subsidy by the fourth year.
- Persons are brought onto the programme by age group.
- The level of subsidy will vary by age group. Young children and high users receive the highest level of subsidy.
- The GMS subsidy has been indexed at 1.5% per year, starting from year 2. All figures have been adjusted for population growth.

Appendices A and B provide details on the assumptions and methods used.

6.3 Combined Approach

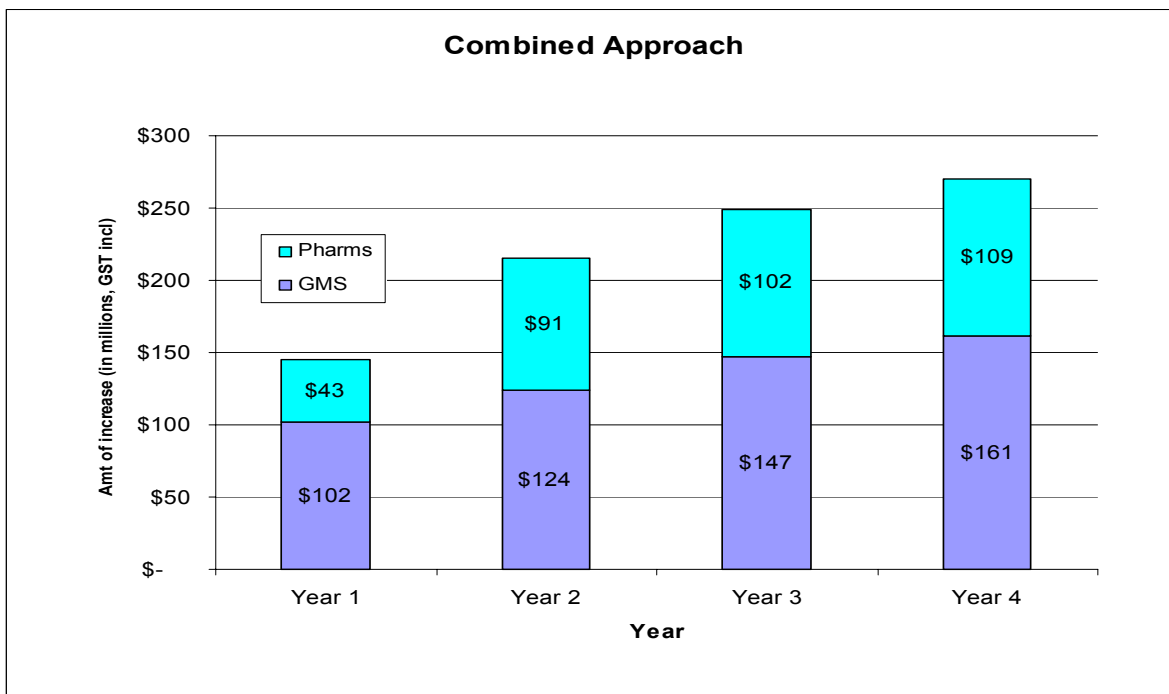
A third option would be to combine elements of the universal and income-targeted approaches. This “combined” approach would entail universal subsidies for certain high need persons and the continuation of an income-targeted approach for the remainder of the population. The high need group would include those enrolled with PHOs that have high need (e.g., 30% or greater of their population from deciles 9 and 10 or 30% or more of their enrolled population Maori and/or Pacific Island). District Health Boards and the Ministry of Health would restrict the number of PHOs entering the high need group based on their level of need. In the chart below, the number in the high need group in year 1 is 75,000; by year five, the high need population is 500,000.

The subsidy levels for the high need population would be \$35 GMS and \$0 pharms part charge for under six, \$30 GMS and \$0 part charge for all others. PHOs included in this scheme would be expected to have special relationships with local pharmacies whereby the PHO’s patients would be eligible for lower part charges. The precedent for this approach is

Hauora Hokianga (Far North), where residents of this special area do not pay part charges for pharmaceuticals.

The level of subsidy for the remaining population would also increase: \$35 GMS, \$0 pharms part charge for under sixes, \$25 GMS/\$3 pharms for all 6 – 24 and 65+, \$25 GMS/\$3 pharms for low-income 25 – 64 year olds, and \$25 for all high users. Hence, by the fourth year, primary care subsidies are universal for all persons under 25 and 65 and above. Seventy percent of the population is covered by a GMS subsidy by the fourth year and these subsidies cover approximately 55% of GMS costs.

As with the previous two models, it is assumed that improved administration of the CSC and HUHC programmes will result in higher uptake of those cards: up to 3% for HUHC and 90% for CSC. GMS subsidies have been indexed at the same rates as the previous two models. Unlike the income targeted approach described in Section 6.1, the combined approach does not entail raising the income threshold.



7.0 Options for Limiting Patient Part Charges

The options modeled in Section 6 are based on the premise that the government is shifting the cost of primary health care services from the individual or family to the taxpayers. However, the cost for the individual or family could remain high if the primary care providers raise their charges as the government raises its subsidies.⁵ There are several possible means for ensuring that provider charges do not negate the gains made from increased public investment.

⁵ This is a risk that may not eventuate. As noted below, most GPs did not charge patient part charges for “free” under six consultations when the subsidy was raised to \$32.50.

7.1 Market-based approach

At present, there are approximately 3200 full time equivalent general practitioners in New Zealand or 1 GP for every 1200 New Zealanders. While the GP to population ratio varies by region, the average number of GPs per head of population compares well with other OECD countries. In most areas, there is healthy competition between GPs for patients.

This competition should in theory keep the price of a consultation from rising dramatically even if there is an influx of government funds. The government could rely on this competition to keep the price down. In addition, as a trade-off to not regulating charges, the government could require that GPs provide information on their patient charges to the government and to patient (e.g., via a website). This could sharpen the competitive environment and promote transparency.

Relying on competition to control fees may not work in some situations. For example, where there are few GPs, the local providers may raise fees and not suffer a loss in patient numbers.

7.2 Social Contract

When the free under six policy was introduced, most GPs agreed to waive part charges for consultations with children in return for a substantial subsidy.⁶ At the time, the \$32.50 government subsidy was close to the full charge for a consultation - - between 85% to 95% depending on the area. The idea of a ‘social contract’ was particularly appealing because it involved care for children.

The government could make a similar appeal if it were to introduce increased subsidies for some or all of the population as described in Section 6. GPs could be asked to limit fees for certain groups or the entire population depending the option put forward.

Such a voluntary approach could work if the government were willing to index subsidies to inflation. The free under six policy has been undermined in many areas because the subsidy has not been adjusted for inflation.

7.3 Regulation

To ensure that private fees do not undermine the public investment, the government could choose to regulate maximum GP fees. Since markets differ across the country, this could mean that the government would set different maximum fees based on the practice location.

While possibly providing surety regarding the outcome, this approach has several drawbacks:

- GPs would resist its introduction;
- It would invite “fee” creep such that all GPs would charge the maximum even if they were not previously at that level; and,
- It could prove costly to administer and difficult to police.

⁶ The evaluation of the free child health scheme (S. Dovey and M. Tilyard, 1999) found that over 90% of GPs “have a policy of not charging for consultations during normal working hours, but some practices charge for after-hours consultations, home visits, and other extraordinary consultations” (xii, Executive Summary).

7.4 Two Tier System

A fourth approach would be to run two different sets of options simultaneously (low universal and high universal, for example). A provider would be able to offer the high option if he/she agreed to accept the government fee as payment in full. This is similar to the bulk payment system operating in Australia: providers receive a bulk payment from Medicare if they agree to forego charging patients; those who do not accept the bulk payment must charge the patient who then submits a claim to Medicare. The bulk payment providers receive the benefit of timely and predictable payments and fewer bad debts. Most providers participate in the bulk payment system; those who do not tend to practise in more well off areas.

The government could leave the choice of high or low option to the provider or it could choose where to apply the high option. For example, the government may want to apply the high option in areas where more deprived populations are concentrated. Providers then could be required to forego part charges in return for a higher fee scale. Alternatively, the government could apply the high option to providers whose enrolled populations are more deprived.

This approach to limiting part charges would be used with the combined approach described in Section 6.3. Those PHOs receiving subsidy payments based on the high universal option would charge only low part charges.

8.0 Population-based approaches

8.1 Relationship between population-based and individual/family-based targeting

The Primary Health Care Strategy states that primary health organisations (PHOs) will be funded to care for enrolled populations through a single needs-based funding formula. At present, approximately one third of GMS and practice nurse payments are made to primary care organisations on a per capita or bulk-funded arrangement. The majority of these capitation payments are made based on some type of formula that includes age, Community Services Card and High User Health Card (Midland and Central region formulas).

Under capitation arrangements, GPs continue to charge patients for every visit; hence the level of individual subsidy is still relevant. For this reason, there is interest among some providers that there be a close relationship between the individual subsidy regime and the funding formula.

Most members of the working party that helped to develop the current national funding formula expressed a preference for a population formula that included CSC and HUHC because of the linkage with the means used for individual targeting. However, a minority on the working party did not feel that a close linkage was required. They advocated a measure of provider discretion in the allocation of the individual benefit.

Before the CSC card, GPs offered lower charges to patients if they were beneficiaries based on the patient's word. In some organisations, classes of enrolled persons are offered individual discounts based on whether they are members of unions or local iwi or residents of

a special area. Such trust-based systems are easier to administer if the population served is more homogeneous; if the population has similar characteristics, it may be reasonable to treat everyone in the same way. In urban environments, where populations are more heterogeneous and dynamic, it is less easy to implement such systems.

A middle ground would be to develop a funding formula that includes several measures of need, some of which are tied to individual or family targeting. The current national formula fits this definition: the CSC and HUHC are both variables in the formula; however, the New Zealand deprivation index (NZDep) also is included. NZDep, which is an area measure based on a nine socio-economic factors found in the Census, is used as a weighting factor such that organisations serving more deprived communities receive slightly more funds than those serving less deprived communities even if the age/gender/CSC/HUHC profile of their respective populations is the same.

In this way, an organisation is able to pass along the patient subsidy more or less in accord with the funding formula; however, it will have additional funds available to assist with caring for more deprived patients.

8.2 Overview of current population-based funding activities

There is a variety of formulas in use at present: the formulas in the Midland and Central regions include age, CSC and HUHC; the Northern and Southern region rates are based largely on historical expenditures by the organisations. Because of these inconsistencies which are due to use of regional or historical data and different variables, the HFA launched an effort to develop a needs-based formula using national data.

As noted previously, the HFA modeled three different formulas. The following is a general overview of the formula types:

- *CSC/Dep model* - This allocates funds on the basis of age, sex, CSC, HUHC and NZDep96.
- *CSC model* - This is similar to the CSC/Dep model, but omits NZDep96.
- *Dep model* - This is similar to the CSC/Dep model, but omits CSC.

These models were tested using patient registers from nine primary care organisations. The group favoured the model that included CSC and Dep because: 1) they thought that deprivation was a more sensitive indicator of need that could reflect need for areas where CSC uptake is lower than expected; and, 2) there was interest in keeping CSC due to maintain a linkage with the means for individual targeting.

This formula has been used in limited circumstances to date. Where deprivation coding has not been sufficient, the formula with CSC alone has been used as a transition measure.

This formula is under review now because of the CSC Review and because of interest in including ethnicity in the formula. Our expectation is that a final formula will be determined at the completion of the CSC Review. This formula will be used to fund primary health organisations.

8.3 Deprivation Payment

Increasing the level of the individual subsidy will improve access; however, different people require different levels of service, even when one targets subsidies for income (a relatively crude measure of need). Individuals and families from more deprived communities take longer to treat; present to the GP with multiple problems (medical and social); and are more difficult to reach for preventive and routine care.⁷

The current national formula uses NZDep to target more funds to those serving more deprived populations and less funds to those serving less deprived populations. This is based on the situation where no new funds are available and budget neutrality is key. If more funds were available, one could use NZDep to target funds to those serving more deprived populations without taking funds from those serving less deprived populations.

In the UK, general practices receive an additional payment based on the deprivation level for the areas they serve. This approach could be adopted in New Zealand: PHOs could receive an additional payment based on the deprivation profiles of their enrollees. The expectation is that PHOs will develop plans for improving access that will be tailored to their local circumstances.

Programmes funded through the deprivation payment may include targeted outreach, community health workers, community education campaigns, and reduced fees programmes. If the fund were on the order of \$16 million or \$20 per person in deciles 9 and 10, the fund could support 1 community health worker (average cost of \$40,000 per annum) for 2000 enrolled people. The cost could be lowered if the government restricted the payment to those organisations with a high concentration of deprived persons (e.g., more than 1.5 times the national average - - 30% in deciles 9 and 10 combined).

The assumption is that the deprivation payment would be based on the number of enrolled persons in deciles 9 and 10. The payment could be incorporated into the overall capitation payment, and therefore integrated into the core formula.

8.4 Ethnicity Payment

Research evidence indicates that Maori and Pacific Islanders have higher rates of morbidity and mortality than Pakeha populations, even after controlling for age, gender, and deprivation level. The reasons for this disparity are not all known; however, researchers suspect that cultural and other non-financial barriers to care are part of the problem. An ethnicity payment could be made to help Maori and Pacific peoples overcome some of these barriers.

These funds could be allocated to PHOs based on their enrolled population of Maori and Pacific people through the national capitation formula. PHOs will be expected to show how they will use the payment for programmes such as community health workers, marae-based clinics, church-based outreach, translation, and other programmes that are designed to improve access.

⁷ See Dr Sue Crengle's paper for the National Health Committee "Maori Primary Care Services" for more discussion on the resource-intensive nature of primary care services for more deprived patients.

A fund of approximately \$16 million would allow payment of \$20 per Maori and Pacific Islander; \$9 million would allow \$20 per Maori and Pacific Islander in the lowest two deciles. These estimates are made based on the full cost of these proposals. The costs may not be this high if some Maori and Pacific Islanders do not enroll. Alternatively, the government could restrict the ethnicity payment to those organisations that have a high concentration of Maori and/or Pacific Islanders (e.g., above the national average of 21%).

9.0 Implementing the Primary Health Care Strategy

The Primary Health Care Strategy sets a medium to long term vision for primary health care services in New Zealand. The Strategy acknowledges that achieving the vision will require new investments in several key areas:

- PHO Development - - Primary Health Organisations (PHOs) are the primary vehicle for delivering services in the new environment. While many PHOs may evolve from existing organisations, some PHOs - - particularly those serving more deprived populations - - will need assistance in getting started. Funding should be made available to achieve this goal.
- Enrolment and Information Systems - - The Strategy calls for voluntary enrolment with PHOs. There will be costs to PHOs to undertake this enrolment. In addition, PHOs may be required to submit new information to DHBs (or their agents) with regard to the populations they manage.
- Health Promotion - - The Strategy calls for increased health promotion directed at enrolled individuals. As this is essentially a new service, new funding will be required.
- Enhanced Nursing Roles and Workforce Development - - The strategy describes the establishment of a primary health care nursing role in New Zealand. This may entail new training schemes and pilot projects to guide development in the sector.
- Rural premium - - Delivering primary health care services in rural areas is hampered by difficulties recruiting and retaining health professionals. Recruitment and retention programmes for rural areas will be established.

Funding for these strategies is being sought for the 2002/03 financial year and beyond. This funding will help to establish the new primary health care delivery system. However, this funding is separate from the funding required to improve access as described previously in this document.

10.0 Analysis and Discussion

10.1 Principles and evaluation criteria

The CSC Review Reference Group agreed to the following principles and evaluation criteria:

Principles of the CSC Review

- Timely and equitable access for all New Zealanders to a comprehensive range of health and disability services, regardless of ability to pay (*New Zealand Health Strategy*).

- That at least the same level of subsidy should be provided under any new scheme (ie people should not be worse off).
- That high users of health services are protected from high costs.
- That work of the CSC review will be compatible with the aims and direction of the New Zealand Health Strategy and the Primary Health Care Strategy and strategies for reducing health inequalities.

Criteria for evaluating the options

The criteria should reflect the aims and principles of the review and help to discriminate between options:

- To what extent does this option reduce the cost of primary health care for people who have a CSC but still do not access services due to cost; and for those who are currently not eligible.
- To what extent is this option likely to reduce costs barriers for Maori and Pacific people.
- To what extent will this option assist those on low incomes.
- To what extent are high users protected from high costs
- To what extent can take-up of assistance be maximized
- How easy is the regime/mechanism to implement
- Are compliance costs acceptable to the sector.

10.2 Analysis

Shifting from the current income targeting approach (or refining the approach) is not a simple or straightforward task:

- The problems with card uptake are related to the behaviour of card holders and potential card holders as much as administrative barriers or bureaucratic inefficiency. Increasing uptake for the 21% of eligibles without a card requires convincing the eligible population that the card is a meaningful benefit. At \$15 per consultation, the adult subsidy is less than 40% of the average charge.
- Eliminating income targeting altogether implies the adoption of a universal approach. Even at a low/modest subsidy level, this will require approximately \$300 million per annum. Paradoxically, much of this new investment will go toward the care of middle to high income New Zealanders⁸, not the low income and deprived populations that experience financial barriers to care.
- If more money is put into individual subsidies to improve access to primary care, there is concern that this subsidy is passed along to patients. This implies the need to limit doctor's ability to charge - - a lightning rod issue that could draw attention away from any potential benefits of a new system.

⁸ The evaluation of the free under six scheme tends to support this point, as noted previously.

- Increased individual subsidies may be wasted if the primary care delivery system is not focussed on improved outcomes, greater efficiency, and higher quality. The Primary Health Care Strategy adopted by Cabinet in December 2000 and broadly supported by the sector outlines a medium to long term vision for primary health care that includes population-focussed care, greater provision of health promotion and preventive services, enhanced roles for nurses, and better retention and recruitment of practitioners in rural areas. Funds to improve the primary care infrastructure should accompany funds to improve financial access for individuals.

These factors suggest the need for a comprehensive approach. Reforming CSC should be closely linked to the implementation of the Primary Health Care Strategy, population funding of primary care, and negotiating maximum co-payments with PHOs.

Yet, if the CSC is to be eliminated or replaced, there is a need to determine an approach to individual subsidies that addresses the problems with the current system. The following matrix is an attempt to analyse the three options presented in Section 6 against the problems with the current CSC system.

Table 5 How different options address key problem areas

Issue	Income targeting	Universal	Combined
1. 21% of eligible card holders do not have a card.	Higher subsidy levels should increase uptake.	The card is eliminated over time so low uptake disappears as an issue.	High need persons in certain areas do not need a card. Higher subsidy levels for the remainder should increase uptake.
2. Persons just above the line do not benefit.	Raising the income threshold for CSC eligibility will help those at the margin, but a cut-off will continue to exist.	Cut-off points are eliminated.	No cut-off for high need, but bulk of the population continues to face a cut off.
3. Subsidy insufficient.	Higher subsidy (e.g., two thirds increase for adults) should improve access for those on low incomes.	Modest increase in the subsidy may not improve access very much, particularly for those on low incomes.	High need persons in certain areas will receive a substantial benefit. Higher subsidy for the remainder should improve access for low income.
4. High users incur higher out-of-pocket costs	High subsidies for high users should improve access.	Modest subsidies for high users may increase access.	High users served by certain PHOs will benefit substantially.

Each of the three approaches has its advantages and disadvantages:

- The income targeting approach benefits many of the low income and high users but retains aspects of targeting that pose problems for other groups.
- The “low” universal approach spreads a modest benefit over all persons. An expensive “high” universal option would be required to achieve significant gains for low income and high users.

- The combined approach provides a substantial benefit for the very high need group, but problems with income targeting continue for the remainder of the population.

The nature of these options changes if they are placed in a longer time horizon. For example, the income targeting approach includes elements of universality: by the fourth year, the subsidies are universal for everyone under 25 and 65 and over. Over a longer period of time - perhaps six to eight years - this option could evolve to a universal approach whereby subsidies for everyone in the middle age groups are phased in. Similarly, the universal approach achieves a low universal subsidy after four years. At six or eight years, a high universal option could be chosen.

The combined approach could also be viewed as a path to a universal approach. Instead of using age as the phasing mechanism, high need communities receive the nod. Residents of high need communities (i.e., deprivation decile 9 and 10) have significantly higher morbidity and mortality. Focusing on these communities could make a difference in health gain for these needy populations.⁹ As more communities are brought into the high need option, the combined approach could evolve to a high universal approach for the country.

If a high universal option is the desired end point, each of these approaches could get there. The question then turns to the best path to get to the desired end point. The income targeting approach advantages persons on low income and high users in the first instance. The combined approach favours deprived communities. The universal approach targets by age group - starting with the old and the young and phasing in those of working age.

Predictably, certain issues will dog whatever transition path is chosen:

- The income targeting approach will continue to look and feel like the CSC system. Improvements to CSC administration and outreach should help with the negative perception.
- Advocates for the poor will complain that the universal approach does not do enough for the needy in the short term. Use of deprivation and ethnicity pools should help in this regard.
- The combined approach may be perceived as somewhat arbitrary because certain high need persons will qualify and others with identical characteristics will not. It also may create an incentive to enrol with high need PHOs outside of one's area. This could be mollified by a more rapid phasing in of needy communities to the high universal level.
- Phasing in any of these options will create confusion for patients and providers. If at all possible, the changes should be designed so that they minimise confusion and do not have the unintended consequence of turning people off from needed services.

11.0 Conclusions

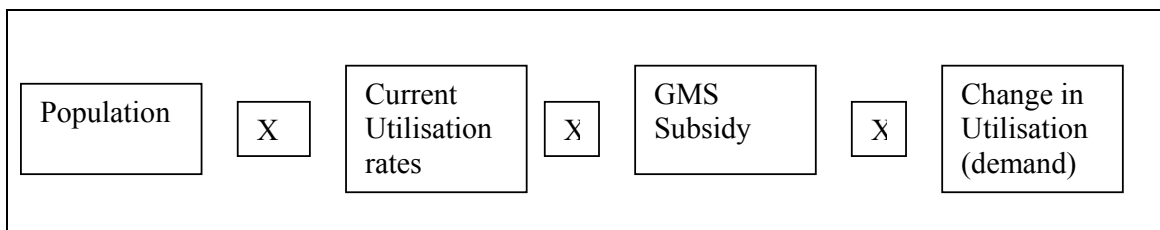
The reference group recommends the Government:

⁹ In its report, "Improving Health for New Zealanders by Investing in Primary Health Care" (December, 2000), the National Health Committee notes: "Given that the rate of both avoidable hospitalisations and avoidable deaths are two to three times higher among particular populations, e.g., Maori, ethnic minorities, people living in deprived neighbourhoods, there is considerable scope for PHC [primary health care] to reduce health inequalities" (p. 11).

- Increase the public share of primary care expenditures such that all New Zealanders receive low cost access to primary health care and reduce reliance on income targeting mechanisms such as the CSC. Given the magnitude of funding required for such a shift, it is recognised that this goal could require an eight to ten year period to achieve.
- Adopt the “combined” approach as the desired path to achieving this goal. This will target funds to PHOs serving high need populations so that they can offer low cost access. The reasons for choosing this transition path are: a) it targets the very needy in the short term; b) it is a community-based approach, which is consistent with the Primary Health Care Strategy.
- Increase the number of “high need” PHOs incrementally, starting with those with the greatest need.
- Fund the infrastructure required to implement the Primary Health Care Strategy so that the investment in individual subsidies achieves the maximum in health gain. This infrastructure includes the development of PHOs, services to overcome non-financial access barriers for needy populations (Maori, Pacific Island and the most deprived), assistance in the recruitment and retention of practitioners for rural communities, funding for population-based health promotion services, and enhanced roles for nurses as members of the primary health care team.
- Allocate most (if not all) of the individual subsidies through a need-based population funding formula to designated Primary Health Organisations.
- Ensure low part charges for those PHOs operating under the high need scheme.
- Regularly adjust payments for inflation.
- Improve administration of the CSC system such that there is higher uptake of the card among the eligible population. This includes outreach to Maori and Pacific Island people, establishing automatic eligibility for students, and investigating closer linkages with Inland Revenue to reduce or eliminate the need for an application process.
- Improve administration of the High Use Health Card system such that there is increased uptake among the eligible population. Improvements may include more automated processing such that the burden on the doctor to complete a lengthy application is minimised and establishing prospective eligibility for persons who meet certain criteria (e.g., terminal illness).

Appendix A Method for Estimating GMS Costs

The following schematic provides a general description of the process used to estimate GMS Costs:



Population

National population - - The source for the national population is Statistics New Zealand preliminary estimates for July 2001 based on the 2000 Census. The Estimates for future years are based on SNZ projections. The data was provided by age and gender according to the following categories: under 1, 1 – 4, 5, 6 – 14, 15 – 17, 18 – 24, 25 – 44, 45 – 64, and 65 and older.

Current CSC population - - The estimate of current Community Service Card holders and their dependants is based on data from Work and Income New Zealand. It reflects the population as at August 2001. The data was provided by age and gender; however, there were a number people for whom age and/or gender was not assigned. This unassigned population was assigned age and gender according to a method described in “Population-based Funding for Primary Care: Method and Results”, F. Sutton, September 2000, P1-4.

New CSC Population - - The targeted option maintains the CSC system; however, the income eligibility threshold is raised such that a family of four with a family income of \$45,000 or less qualifies for a card. The estimate of the potentially eligible population under the higher threshold scenario is based on the TaxMod modeling system developed by Treasury. TaxMod uses the Household Expenditure Survey to estimate populations eligible for benefit programmes.

CSC Uptake Rates - - Due to improved administration of the CSC system, it is assumed that card uptake will increase from the current level (79%) to 85% in year 1 and 90% in year 2 and thereafter. The estimates of uptake were made based on a comparing the current card holder and dependant population with estimates from TaxMod. This technique is used to model the targeted option.

HUHC population - - The current High User Health Card population estimate was provided by Health Benefits, Ltd. It is based on the HUHC population as at July 2001. In year 1, it is assumed that card uptake will increase from the current level (1%) to 1.5% of the total population. In year 2, card uptake will increase to 3%. These increases are based on a more automated HUHC card issuance system.

New Zealand population by Age, Gender, CSC, and HUHC

Age	Gender	No HUHC CSC	HUHC CSC	No HUHC No CSC	HUHC No CSC	Total
00	F	8,359	23	18,241	32	26,655
00	M	8,588	29	19,322	44	27,984
01-04	F	39,632	717	69,229	657	110,235
01-04	M	41,065	848	73,579	854	116,346
5	F	9,077	28	19,460	33	28,598
5	M	9,666	32	20,765	40	30,504
6-14	F	81,693	255	176,397	297	258,642
6-14	M	86,997	288	186,609	362	274,256
15-17	F	36,191	101	44,049	59	80,400
15-17	M	26,661	30	58,419	23	85,134
18-24	F	84,445	236	94,652	137	179,470
18-24	M	62,209	70	126,442	55	188,776
25-44	F	222,145	1,541	358,478	1,616	583,780
25-44	M	161,521	641	387,504	554	550,220
45-64	F	137,513	2,921	283,590	3,916	427,940
45-64	M	105,729	1,622	312,604	2,395	422,350
65-74	F	93,273	2,469	31,626	1,172	128,540
65-74	M	79,158	1,923	38,083	1,126	120,290
75-84	F	75,363	3,422	14,087	1,088	93,960
75-84	M	50,191	2,307	11,795	847	65,140
85+	F	30,553	2,418	1,397	232	34,600
85+	M	12,185	1,009	1,785	201	15,180
Total		1,462,216	22,930	2,348,114	15,740	3,849,000

Utilisation Rates

Subsidised populations - - Claims data submitted to Health Benefits is grouped by card holding status¹⁰ and three broad age bands. Hence, to obtain rates by the age and gender categories described previously, one must obtain additional data. Utilisation rates for subsidised populations¹¹ by age, gender, and cardholding status were obtained in 2000 by Sutton as part of the development of the primary care capitation formula. The sample included more than 300,000 people who had experienced more than 800,000 consultations. The sampling methods and results are described in the above referenced work (Appendix S1). These results were used in this modeling exercise.

Non-subsidised population - - Utilisation rates for non-subsidised populations (A3) were obtained originally from “The community services card and utilisation of general practice services,” B. Gribben, New Zealand Medical Journal, 1996 109 p103-5. Sutton scaled this data to the age/gender categories used in the capitation project. This scaling is described in the above referenced document (Appendix S2). Utilisation rates for non-subsidised persons

¹⁰ Information on non-subsidised patient is generally not received.

¹¹ CSC holders and dependants, children under 18, and High User Health Card holders.

are applied to persons who become newly subsidised under the assumption that their current utilisation rates reflect in part their underlying need for GP services. Demand factors, described below, are applied to estimate the effect of alleviating financial barriers for the non-subsidised group.

ACC Adjustment - - From 1 July 1999, all consultations for ACC are processed by ACC and not HBL. This resulted in approximately 7 – 8% drop in consultation for subsidised patients. Data from ACC (March 1998 through April 1999) was used to estimate ACC consultations. These consultation were removed from the 1998/99 consultations described previously.

Adjustment to 2001/02 Budget - - The rates are adjusted to scale the consultations rates to the 2001/02 GMS budget.

GP Utilisation Rates by Age, Gender, CSC, and HUHC

Age	Gender	No HUHC CSC	HUHC CSC	No HUHC No CSC	HUHC No CSC
00	F	12.39	11.10	10.78	11.10
00	M	13.10	11.10	11.86	11.10
01-04	F	8.77	11.10	8.75	11.10
01-04	M	9.27	11.10	9.25	11.10
5	F	4.23	11.10	2.92	11.10
5	M	3.96	11.10	2.78	11.10
6-14	F	3.73	11.10	2.31	11.10
6-14	M	3.48	11.10	2.21	11.10
15-17	F	4.20	11.10	3.57	11.10
15-17	M	1.99	11.10	1.92	11.10
18-24	F	4.24	11.10	2.20	11.10
18-24	M	2.00	11.10	1.57	11.10
25-44	F	4.67	11.10	1.91	11.10
25-44	M	2.53	11.10	1.54	11.10
45-64	F	5.57	11.10	3.19	11.10
45-64	M	4.19	11.10	2.50	11.10
65-74	F	6.77	11.10	4.09	11.10
65-74	M	5.99	11.10	3.30	11.10
75-84	F	8.57	11.10	3.88	11.10
75-84	M	7.99	11.10	4.74	11.10
85+	F	8.98	11.10	3.88	11.10
85+	M	8.82	11.10	4.74	11.10

The consultation rates for HUHC are based on the national average for all HUHC card holders. The rate is less than the required 12 visits per year. This may be due to delays in receiving the card or a drop in consultations after receiving the card. Note also that the rates for HUHC are the same for all age and gender categories. This is because the claims data by age and gender was not plausible.

Changes to Utilisation

There are several possible approaches to estimating changes to utilisation (demand) for GP services based on increased subsidies.

In 1993, Des O’Dea and his colleagues analysed GMS data from the early 1990s.¹² They concluded that there was a price elasticity of $-.15$; in other words, a 10 percent increase in user charges would lead to a 1.5 percent decrease in utilisation of GP services. The authors believe that this result is symmetrical - a 10 percent reduction in user charges would result in a 1.5 percent increase in utilisation. There was insufficient data to produce price elasticity figures for specific sub-populations.

In this paper, we have modelled reductions to part charges ranging from 20% to 62.5%. Using the Des O’Dea paper, this would mean increased GP utilisation from 3% to 9.4%.

The most thorough investigation of primary care demand elasticity was undertaken by the Rand Corporation (US) in the 1970’s and 1980’s. Though this information is dated, it is often cited in analyses of demand. The following is an excerpt from the Rand Study¹³.

Plan Type	Annual Visits	Change
Free	4.55	36.64%
25% part charge	3.33	9.90%
50% part charge	3.03	10.99%
95% part charge	2.73	n/a

Other overseas studies have produced price elasticity figures between $-.11$ and $-.20$. The New Zealand results cited above fall within this range.

Another approach would be to assume that those whose part charge is lowered will experience the same utilisation patterns as those who already have lowered part charges. This approach would result in a much higher level of utilisation based on lowering part charges (or a more elastic demand than the studies noted above). For example, adults with a CSC card and no high user card receive 20.9 dispensings and 5.1 GP visits per year; whereas, those with no CSC and no high user card receive 5.7 dispensings per year and 2.3 GP visits per year.

This approach ignores the fact that CSC holders probably have higher health need than non-CSC holders. It also overlooks the fact that CSC holders are probably more sensitive to price changes than non-CSC holders.

¹² Odea DJ, Szeto K, Dovey S, Tilyard M, “The effect of changes in user charges on visits to New Zealand GPs,” 1993.

¹³ Newhouse J P et al, Free for All?: Lessons from the Rand Health Insurance Experiment, Harvard University Press, 1993, Table 3.2, p. 41.

The following shows the demand factors used in this modeling based on the size of the change in part charge levels. This assumes that the average consultation charge is \$40.

GMS Category	Part Charge (old)	Part Charge (new)	Part Charge % Decrease	Demand Factor
J1	20	15	25%	2.50%
J3 (year 1)	25	20	20%	2.50%
J3 (year 2)	20	15	25%	2.50%
JZ	20	15	25%	2.50%
A1 (year 1)	25	20	20%	2.50%
A1 (year 2)	20	15	25%	2.50%
A3	40	20	50%	7.50%
A3	40	15	62.5%	10.00%
AZ	25	15	40%	5.00%

These demand factors are generally consistent with the NZ-based research cited previously and the other international studies.

If the demand factor is not used, the GMS cost estimates would be \$15.1 million lower by year 4 in the targeted (a reduction of 10%) and \$12.2 million lower under the universal model (or 8% lower).

Indexing

The intention is that fees will be indexed to the Consumer Price Index or some other type of indexing measure. For the purposes of this modeling, it is assumed that the index rate is 1.5% per year. This results in a \$16 million increase in costs by year 4. This index rate is also applied to total GP costs to determine GMS subsidies as a percent of GP costs (Tables 3 and 4).

Appendix B Method for Estimating Pharmaceutical Costs

The following is a description of the methods used to estimate increased pharmaceutical costs in the CSC Review modeling. Appendix A (Method for Estimating GMS Costs) includes descriptions of the population and increased demand. These same assumptions and data are used for pharmaceutical costs, so those sections are not repeated here. This method was developed jointly by Pharmac and the Ministry of Health.

Utilisation Rates

A query on the Pharmhouse was conducted for the 2000/01 financial year. The information obtained included drug costs, pharmacy fee costs, patient co-payments, dispensed items, and prescription items. This data was organised by GMS Category (Y, J, A) and combined with the population data (described in Appendix A) to arrive at utilisation rates (prescription items per head and dispensed items per head) and costs per item and prescription. These rates were organised by age (Y, J, A) and by subsidy type (CSC, Non-CSC, and HUHC categories).

Both options modeled (targeted and universal) entail phasing in of increased subsidies (and lower part charges) by four adult age categories, whereas data from the Pharmhouse includes only 1 adult age category (18 and above). To adjust for this, data from IMS (a medical statistics company) was used to apportion the adult data (from Pharmhouse) by the four adult categories. The IMS data is based on a survey of a representative sample of GPs performed on a quarterly basis. The IMS data is described in detail in the "Population-based Funding for Primary Care: Method and Results," F. Sutton, September 2000, Appendix S3.

Increased Throughput

At present, prescription items where the gross cost (drug cost plus dispensing fee) are below \$15 are not covered for non-subsidised patients. Once these patients become eligible for lower part charges (either \$3 or \$0) these items will be included in the system. The result is an increase in throughput of items and prescriptions.

To estimate the amount of the increased throughput, it was assumed that the proportion of low cost drugs (under \$15) for subsidised persons (A1, for example) would be the same for non-subsidised persons in the same age category (A3).¹⁴ The data from the Pharmhouse query was organised by drug cost and GMS category. The following is an example of the methodology using the adult population:

Definitions

Cheap = items where gross cost \leq \$15.

B1 = All items where the cost $>$ \$15 and all items for PSC.

B2 = All processed "cheap" items.

$N = B1 / (1 - \text{heap}\%)$

X = Missing items

¹⁴ This method was developed by Frances Sutton and is described in the aforementioned capitation paper (Appendix S3).

Prescription Items

<i>A1</i>		<i>A3</i>	
Cheap	6,217,740	B1	3,336,335
Total	12,687,687	B2	1,549,251
cheap %	49.0%	X	1,657,029
		N	6,542,615
		% X	25.3%

Dispensed Items

<i>A1</i>		<i>A3</i>	
Cheap	11,501,770	B1	6,147,730
Total	24,650,331	B2	3,214,986
cheap %	46.7%	X	2,162,772
		N	11,525,48
		% X	18.8%

Appendix C Method for Estimating the Combined Approach

High Need Population

The combined approach described in Section 6.3 entails a universal approach for persons who are enrolled with PHOs serving high concentrations of deprived or Maori/Pacific Island peoples. Whereas modeling the income targeted and universal approaches was based on the New Zealand population as a whole, this approach required that the population be divided into two groups: high need - - defined as those meeting the deprivation/ethnicity thresholds; and the remainder or mainstream - - those that do not meet the high need definition. The thresholds are: 30% or more of the enrolled population residing in decile 9 and 10 meshblocks or 20% or more of the enrolled population being Maori and/or Pacific Island.

The age/gender/CSC/and high user characteristics of the high need population were based on a sample (65,000) of members of the Health Care Aotearoa network. These centres would each meet one or both of the threshold criteria. It is likely that this sample would include populations that demonstrate the highest need; in other words, those PHOs with populations just over the threshold will have different characteristics than the sample used. The effect of using this sample may be to overestimate the cost of the high need sub-population.

The following table provides a breakdown of the high need sample population:

		CSC No HUHC	CSC HUHC	No CSC No HUHC	No CSC HUHC
00	F	250	0	134	0
00	M	287	0	158	0
01-04	F	1,718	0	543	0
01-04	M	1,795	0	586	0
5	F	443	0	158	0
5	M	462	0	168	0
6-14	F	3963	25	1426	4
6-14	M	4133	31	1506	7
15-17	F	1140	6	672	2
15-17	M	867	3	682	1
18-24	F	2,661	14	1,568	4
18-24	M	2,024	6	1,592	2
25-44	F	7,293	113	4,797	23
25-44	M	5,386	52	5,635	14
45-64	F	2,665	104	2,128	33
45-64	M	2,624	94	2,458	29
65+	F	936	48	253	2
65+	M	947	48	297	3
					65,023

Compared with the overall population, this high need group has 60% CSC uptake (50% higher than the overall population), only 4% 65 and over (compared to 12% for the overall population), and 10.2% under six (compared to 8.8% for the overall population).

The overall number included in the high need group is 75,000 in year 1, 150,000 in year 2, 300,000 in year 3 and 500,000 in year 4. By the way this model is designed, the Ministry and/or DHBs control the number of people in the high need category; hence, the number can rise or fall based on policy preferences and the available budget.

Decile 9 and 10 populations are concentrated. Those census area units (average population of 2000 or so) with 30% or more decile 9 and 10 populations (national average 20%) represented 70% of the area units with any decile 9 or 10 population. Overall, area units that meet the threshold have 943,000 residents (1996 Census), of which 546,000 are decile 9 or 10 residents. Assuming that most persons seek care at practices within their area unit and practices within deprived communities had the capacity to handle all residents (two heroic assumptions), the programme could grow to almost 1 million people (using the deprivation criterion alone).

Utilisation Rates

Utilisation rates for the high need population are based on the same rates as the overall population by age/gender/CSC and high user categories. There is some evidence that utilisation rates among this group may actually be lower than the rest of the population.¹⁵ This is somewhat unexpected given the likelihood that persons with low socio-economic profiles have overall poorer health status. The higher utilisation rates were used because I could not match utilisation rates for the HCA group by the age/gender/CSC and high user categories defined above. The effect of this may be to overestimate the cost of caring for this group.

The same assumptions regarding demand, indexing, increased throughput of pharmaceuticals described in appendices A and B were applied to the combined approach.

¹⁵ Crampton, P., Dowell, A., Woodward, A. and Salmond, C. (2000), 'Utilisation rates in capitated primary care centres serving low income populations', *New Zealand Medical Journal*, 113, 436-438.

Appendix D Possible improvements to CSC Administration

Information provided by the CSC Centre.

Problem with CSC	Strategies to improve effectiveness of the Card
<ul style="list-style-type: none"> Some people may not be aware of the card e.g. Low income earners Maori, Pacific people, Other ethnic groups 	<ul style="list-style-type: none"> Information campaign to ensure that all who should get the card do get it Focus on # Urban/Rural disadvantaged areas # Maori, PI and ethnic communities # Link to low income employers # Doctors
<ul style="list-style-type: none"> Low student up take 	<ul style="list-style-type: none"> Automate issue of cards to students who get Student Allowance
<ul style="list-style-type: none"> CSC has a stigma attached to it. The current name doesn't reflect the purpose 	<ul style="list-style-type: none"> Rename the card to "Health Assistance Card"
<ul style="list-style-type: none"> Forms complicated to complete 	<ul style="list-style-type: none"> Review forms to make sure easier to complete ensure that staff are briefed to assist
<ul style="list-style-type: none"> Doctors have difficulty finding out if patient qualifies 	<ul style="list-style-type: none"> Put the NHI number on the card easier for Client Dr to provided evidence of qualification
<ul style="list-style-type: none"> Doctors face high compliance costs in applying for the subsidy and problems where people go to different Dr (Emergency/Out of town) 	<ul style="list-style-type: none"> Electronic "real time" updating of Doctors' patient registers via Internet
<ul style="list-style-type: none"> Sudden death abatement –disincentive for people moving into work and low to moderate income e.g.NZ Super 	<ul style="list-style-type: none"> Introduce group two card (abated group) again as a means of assisting those returning to work and those on low to moderate income, NZ Superannuation
<ul style="list-style-type: none"> Card finishes at inderterminant periods after work commences (1 week to 6 months) 	<ul style="list-style-type: none"> Making work pay information /full entitlement strategy will include CSC information Allow all to get the card up to six months after starting Work and Income (abatement) Mail out campaign to all ex-MSD clients who have had benefit cancelled (excluding benefits cancelled due to death or left NZ) inviting them to make application for CSC
<ul style="list-style-type: none"> Different definitions of income used for different types of clients 	<ul style="list-style-type: none"> Introduce more options for access to higher user health cards—sliding scale related to different conditions
<ul style="list-style-type: none"> Non-resident parents may get entitlement to the card (through Family Support entitlement) 	<ul style="list-style-type: none"> Exclude non residents in regulations

Appendix E Membership of the CSC Reference Group

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