

Working Paper on Health

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## How much funding is needed to avoid the condition of the Health System worsening?

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The health system needs more money each year just to maintain its current standards and services. The population increases, the population ages, new treatments become available and general costs rise, as do new technology, pharmaceutical and salary costs. If we want improvements in the health system or to address existing problems such as persistent deficits in District Health Boards (DHBs) and loss of some services, further increases in funding are required over and above these. The following estimates a baseline of what is needed in the Health vote<sup>1</sup> in the Budget on 20 May 2010 to maintain the status quo so that the public can judge whether increases in funding are sufficient to make real improvements in their health services, or whether services are likely to deteriorate.

## Assumptions

Our findings are based on a number of assumptions. Sensitivity to other assumptions is tested below. We assume a rise in the CPI of 2.4 percent in the year to June 2011 (the Budget period), which is consistent with both Treasury and NZIER consensus forecasts, and an average increase in wages and salaries, apart from doctors, of 2.0 percent, reflecting the recent national DHB settlement, much of which carries forward into the new Budget year. Salary increases for medical staff are assumed to be 4.25 percent. This compares to increases over the past year of 4.25 percent for senior medical officers. These labour cost increases are not based on any polling of the intentions of any parties; they are simply reasonable indicative values. Wages and salaries are assumed to be 70 percent of organisational costs of DHB expenditure, including 9 percent for medical staff, consistent with a District Health Boards New Zealand estimate and DHB accounts<sup>2</sup>. Population growth is a significant driver of health costs. We assume with Treasury that the population will increase by 1.2 percent during the year, but that in addition to that, the ageing of the population

<sup>&</sup>lt;sup>1</sup> Note that the "Health package" in the 2009 Budget included items in budget areas outside the actual Health vote itself. These are relatively small compared to the Health vote and are not part of this analysis.

<sup>&</sup>lt;sup>2</sup> E.g. <u>http://www.dhbnz.org.nz/Site/Future\_Workforce/HWIP/Default.aspx</u> and Summary DHB Sector Financial Reports at <u>http://www.moh.govt.nz/moh.nsf/indexmh/dhb-financialreport-0809</u>.

increases expenditure requirements by a further 0.6 to 0.7 percent<sup>3</sup>, giving a total increase due to demographic effects of 1.8 percent (for simplicity we refer to this as the "population increase" factor in the following). We use corresponding Statistics New Zealand estimates<sup>4</sup> for rates of increase in the number of births (1.5 percent, applied to National Maternity Services) and the child population (1-14 year olds – 0.3 percent, applied to National Child Health Services). Offsetting these increases in costs we assume, again with Treasury<sup>5</sup>, a 0.3 percent productivity increase. This reduces costs in all areas except international health organisations.

The restructuring of the Health system currently being planned has cost consequences. While the responsibility for some expenditure may change we assume that funds will be required for the same services and they will have the same cost drivers for this year, even if they appear on different lines of the 2010 Budget. We also assume that the restructuring will produce no net savings or costs in the 2010/11 financial year. This will be a time of change with consequent added costs which the government assumes will be absorbed into existing baselines. Cabinet papers on the changes imply that any savings will not appear until the implementation phase is complete<sup>6</sup>. It is not clear how long this implementation phase will take. We assume that savings will not significantly impact the 2010/11 financial year.

## Findings

In the 2009 Budget, the Health vote amounted to \$12,623 million for operational expenses, plus \$355 million for capital expenditure, a total of \$12,978 million.

Of that, \$217 million was for the operation of the Ministry of Health, and a further \$24 million was for "other" expenses such as New Zealand's membership of the World Health Organisation. We assume these will need an increase in funding as a result of inflation of 2.4 percent, and for all but the WHO membership, increased wage costs, taking them to \$221 million and \$24 million respectively.

The main part of the Health vote is \$9,699 million to fund District Health Boards (DHBs) and \$2,683 million to fund other health programmes such as provision of clinical training, vaccine programmes, public health and other national health services.

<sup>4</sup> Statistics New Zealand National Population Projections, December 2009, Series 4: Assuming medium fertility, medium mortality and long-run annual net migration of 5,000, interpolating for 2009/10 values.

<sup>5</sup> "Challenges and Choices: Modelling New Zealand's Long-term Fiscal Position", Matthew Bell, Gary Blick, Oscar Parkyn, Paul Rodway and Polly Vowles, Treasury Working Paper 10/01, January 2010, p.52.

<sup>6</sup> For example "The Government's response to the Ministerial Review Group's Report 'Meeting the Challenge'", 19 October 2009, states (p.5) "Estimated savings will be up to \$700m over the first five years after shared services are fully implemented. Experience with quality implementation of shared services overseas suggests that implementation takes around 3 years. This means that in the first year after full implementation, it is estimated there will be up to \$100m in savings and in the fifth year after full implementation up to \$180m." Available at http://www.beehive.govt.nz/sites/all/files/MRG%20Decision%20Q&As%2021%2010%2009.pdf.

<sup>&</sup>lt;sup>3</sup> Advice from the Ministry of Health.

Hospital funding is the responsibility of the DHBs, and a significant pressure on hospital costs is salaries of health professionals, especially medical staff (doctors), which are being driven up faster than the rest of the workforce by skill shortages in New Zealand and internationally. Wage and salary cost increases are based on the standard 2.0 percent for non-medical staff and 4.25 percent for medical staff. Other costs are assumed, in line with standard health funding formulas, to rise by CPI (2.4 percent). Services provided directly by DHBs make up only about half their funding however. The other half is used to fund a wide range of other services. We base our cost increases for these on labour costs increasing by 2.0 percent and other costs increasing at 2.4 percent.

On top of these cost increases we apply the 1.8 percent population increase noted above, a 0.8 percent allowance used by Treasury to indicate increase in demand due to the availability of new treatments<sup>7</sup>, and the productivity improvement to give a total of a 4.7 percent or \$454 million increase in costs for DHBs which needs to be met in the 2010 Budget to maintain the current level of services for each New Zealander. That would take their combined budget from \$9,699 million to \$10,153 million.

For health services other than the DHBs which are funded directly by the Ministry, we assume that in the main, labour costs will rise by 2.0 percent and other costs at the rate of CPI (2.4 percent) but that in most cases, the population increase (1.8 percent) will require a further increase in their funding. There are some exceptions but we estimate that the total vote for these services will still need to rise 3.6 percent or \$96 million to maintain service levels, taking it from \$2,683 million to \$2,780 million.

In total, the operational expenses portion of the Health vote will need to rise by 4.4 percent or \$555 million from \$12,623 million to \$13,178 million to maintain the current levels of service. That is 50.4 percent of the severely reduced \$1.1 billion operating allowance, the allowance for new spending, which the government has said it will allocate in the 2010 Budget. It is well above the 40 percent of the operating allowance (equivalent to \$440 million) which is assumed as the allocation for Health in Treasury forecasts such as the December Half-Yearly Economic and Fiscal Update. It would leave little room for funding improvements in health or other public services. If it is not funded, New Zealanders will face some combination of deterioration of services, inability to access new treatments and more or increased user charges.

Estimating capital needs is more difficult as the drivers for it are less direct. However if the \$355 million capital funded in the 2009 Budget increased at the rate of the Capital Goods Price Index, which we estimate to be 1.1 percent<sup>8</sup>, then a further \$4 million would need to be found in addition to the \$555 million above, taking the additional requirement to \$559 million. That would take capital funding to \$358 million (after rounding) and the total Health vote from \$12,978 million to \$13,536 million.

<sup>&</sup>lt;sup>7</sup> Called "non-demographically-driven growth". See "Challenges and Choices: Modelling New Zealand's Longterm Fiscal Position", Matthew Bell, Gary Blick, Oscar Parkyn, Paul Rodway and Polly Vowles, Treasury Working Paper 10/01, January 2010, p.52.

<sup>&</sup>lt;sup>8</sup> The Index rose 0.9 percent in the year to December 2009. We increase it in proportion to the expected increase in the CPI.

## Sensitivity to changes in assumptions

The results above are sensitive to varying degrees to the assumptions made.

If no allowance is made for increase in demand due to the availability of new treatments the increase in operational expenses required drops from \$555 million to \$472 million, or 43 percent of the operating allowance.

A change of 1 percentage point (down to 3.25 percent or up to 5.25 percent) in the increase in medical staff salaries makes only a \$9.2 million difference in the \$555 million increased requirements to between 50 percent and 51 percent of the operating allowance. A change in other salary increases by 1 percentage point (down to 1 percent or up to 3 percent) changes the increased requirements by \$81 million to between 43 percent and 58 percent of the operating allowance.

If other cost increases are 1 percentage point different (that is, CPI is as low as 1.4 percent or as high as 3.4 percent), the \$555 million additional requirement changes by \$39 million to between 47 percent and 54 percent of the operating allowance.

A 0.1 percentage point change in the population assumptions makes a \$13 million difference.

Without the 0.3 percent productivity improvement, the operational expenses would increase from \$555 million to \$595 million – well over half (54%) of the operating allowance. If the productivity increase was 0.5 percent, operational expenses would fall to \$529 million or 48 percent of the operational allowance.