



PHARMAC responds to Richard Milne on discounting health benefits and costs

Associate Professor Richard Milne's recent viewpoint article (<http://www.nzma.org.nz/journal/118-1214/1443/>)¹ on the use of discount rates gives a good summary of the situation in New Zealand of what is an important if technical issue.

PHARMAC has consulted in the past with the public on what discount rate to use; in June 1998 it consulted with a range of suppliers and clinician groups about how to account for both costs and benefits when reviewing drug subsidies, which included which discount rate to use (after which PHARMAC decided on 10%). PHARMAC continues to review the discount rate it uses each year, and will be consulting widely again within the next twelve months.

PHARMAC has historically used a discount rate loosely tied to that used by the New Zealand health sector for evaluating capital investments—referred to as the capital charge.² As of 1 July this year, the capital charge in the health sector was reduced to 8% . PHARMAC has, likewise, adjusted its discount rate from the previous 10.0%³ down to 8.0%. While many may view this as a move in the right direction, others may see it as neither enough nor for the right reasons.

So, what are the issues? Richard Milne compares New Zealand's discount rate with that of other health sectors internationally—which seem to use rates closer to 5% rather than 10% . However, the results of this comparison depend on which sectors you compare. An alternative, and arguably more appropriate approach, is to compare PHARMAC's rate with other public sector bodies within New Zealand, which gives a different picture.

In New Zealand we understand there are currently two public sector agencies that rely heavily on cost benefit analysis to guide their decision making (others tend to use it on an *ad hoc* basis). These agencies are PHARMAC and Land Transport New Zealand (the amalgamation of Transfund and the Land Transport Safety Authority (LTSA) in late 2004). Both agencies use discount rates nearer 10% (rather than 3 or 5%); Land Transport NZ uses 10.0%,⁴ as originally required by the NZ Treasury for public sector infrastructure investment and following a review in 1998.⁵

Being consistent with health sectors internationally means potentially being inconsistent with other government sector bodies in New Zealand. We think it reasonable to analyse all public sector investments in health and safety (Vote Health, ACC, Land Transport NZ road safety, OSH, etc) using a similar rate, and do not see why investments in pharmaceuticals should be considered a special case.

Good synopses around other issues can be found in the report of the Washington Panel (the 'Gold report')^{6,7} and a NZ Treasury working paper,⁸ both cited by Richard Milne. They separately argue for the riskless cost-of-capital to government as a proxy for social preference rates, which is currently 4 to 6% in the New Zealand context.

The 3% rate suggested for both the United States and in turn the World Health Organisation arose from the 'Gold report', which argued for the riskless cost of capital proxy—which for the previous decade for the US economy happened to average 3% . New Zealand's economy now is very different from that of United Kingdom and the US in past years; it makes little sense for New Zealand to blindly use the rates used by the UK and the US.

Further, basing the discount rate used on the riskless cost of capital suggests that the opportunity cost of capital provides a reasonable proxy for societal time preferences. This may not be true. In addition, the appropriate rate may not be found through analysis of rates actually used (implicitly) but rather by surveying what rates society wishes be used. There are many examples of health related behaviour suggesting that New Zealanders actually have a very high preference for health now at the expense of health in the future. But we acknowledge that when investing for the future there may be good justification for using lower rates—but where discrimination is inevitable regardless of the rate set.⁹

In reality, cost effectiveness, which relies on discounting, is but one of PHARMAC's eight formal decision criteria;¹⁰ total costs, need, and other factors are also important.¹¹ As Richard Milne indicates, there is no Treasury requirement for PHARMAC or indeed the rest of the health sector or any other sector to use any particular discount rate.¹² We agree with him that it is time to reconsider discounting, and his implied calls for a sector-wide approach to rate setting.

More fundamentally however, we call for greater use of cost effectiveness analyses to help inform funding decisions within the New Zealand health sector, and indeed other public sectors. We believe—as does Richard Milne—that all health sector decisions need to better incorporate issues of relative capacity to benefit, opportunity cost and relative value-for-money. Indeed, the systematic use of economic analysis as part of decision-making in the health sector—which will include greater understanding and use of discounting—should broaden the debate about discount rates.

It is up to the sector as a whole to decide on the discount rate.¹² Richard Milne has usefully signposted and added to this debate.

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References and Endnotes:

1. Milne R. Valuing prevention: discounting health benefits and costs in New Zealand. *N Z Med J.* 2005;118(1214). URL: <http://www.nzma.org.nz/journal/118-1214/1443/>
2. The ‘capital charge’ is used by the New Zealand health sector (CHEs, RHAs, the HFA, and DHBs) for evaluating capital investments. At one point in PHARMAC’s history the sector was using a capital charge of 11.3%, and PHARMAC used this rate in its analyses also. However, for most of the last 10 years the rate has fluctuated around 10%. Rather than alter the rate annually in response to relatively small changes, PHARMAC has used a rate of 10.0% for the last 6 years.
3. PHARMAC. A prescription for pharmacoeconomic analysis (version 1); 1999. Available online. URL: <http://www.pharmac.govt.nz/pdf/pfpa.pdf> Accessed July 2005.
4. Transfund New Zealand. Project Evaluation Manual (PFM 2), Amendment No. 8, October 2004. <http://www.ltsa.govt.nz/man.html#prog> Section 3.2.4 Discount Rate
5. Ian Melsom, Manager Assessment and Forecasting, Land Transport New Zealand, personal communication (emails 5 and 8 July 2005). In the early 1970's the Treasury stipulated a requirement that a 10% discount rate be used in all public sector analysis. In 1998, when it was still new, Transfund undertook a fundamental review of all aspects of the project evaluation procedures—including the discount rate. An external report concluded that the discount rate should be somewhere between 9% and 15% depending on the risk associated with infrastructure investment (or more specifically, depending on the asset Beta used in the capital asset pricing model—this Beta being a reflection of the risk involved in the investment). Noting that its existing 10% discount rate was within the range suggested in that review and that transport infrastructure is generally less risky than many other types of investment, Transfund concluded there was insufficient reason to change the rate from 10% . That said, the discount rate is a live issue for Land Transport New Zealand, as the 10% rate is considered high compared with overseas transport agencies and does significantly impact on which projects Land Transport NZ invests in.
6. Weinstein MC, Siegel JE, Gold MR, et al. Recommendations of the panel on cost-effectiveness in health and medicine. *JAMA.* 1996;276:1253–8.
7. Gold M, Siegel J, Russell L, Weinstein M. Cost effectiveness in health and medicine. New York, Oxford: Oxford University Press; 1996
8. Young L. Determining the discount rate for Government projects: NZ Government; NZ Treasury Working Paper 02/21; 2002. Available online. URL: <http://www.treasury.govt.nz/workingpapers/2002/twp02-21.pdf> Accessed July 2005.
9. A key constraint is how much money there is – discounting can rearrange priorities but doesn’t free up new money. No matter what discount rate is used, when budgets are constrained there will be groups that miss out. This makes it inappropriate, in our view, to argue a discount rate on the basis of who gains and who misses out, or on the a priori belief that “prevention is always better than cure” (<http://www.nzma.org.nz/journal/118-1214/1443/>). Advantaging children could mean disadvantaging the elderly, and whether or not prevention is better than cure depends on just exactly what has to be given up in the short term (i.e. it depends on people’s time preferences).
10. PHARMAC. Operating policies and procedures of the Pharmaceutical Management Agency (“PHARMAC”), 2nd edition; January 2001. Available online. URL: <http://www.pharmac.govt.nz/pdf/opps.pdf> Accessed July 2005.
11. Metcalfe S, Dougherty S, Brougham M, Moodie P. PHARMAC measures savings elsewhere to the health sector. *N Z Med J.* 2003;116(1170). URL: <http://www.nzma.org.nz/journal/116-1170/362/>
12. Iain Cossar, Manager, Health Section, NZ Treasury, August 2004, personal communication with Richard Milne, cited in presentation by Richard Milne ‘Economic Evaluation of

Meningococcal Vaccination' at Wellington School of Medicine, November 2004. "Treasury does not set an edict for departments regarding the use of a particular discount rate. Departments generally either use the capital charge rate (accepted "unwritten" practice) or approach us [NZ Treasury] to recommend a rate. Generally Treasury use 10% real [inflation adjusted] for economic cost benefit analysis unless there is a sector specific rate. There is no such agreed rate in the health sector—possibly because we see this type of analysis all too rarely (in Health and elsewhere)."