Researched Medicines Industry Association of New Zealand Incorporated

Submission to the High Cost Medicines Panel

October 2009

The Researched Medicines Industry Association of New Zealand (RMI) is the professional and trade organisation representing companies engaged in the research, development, manufacture and marketing of prescription medicines.

We are grateful to have had the opportunity of meeting with the High Cost Medicines Panel. We congratulate you on the open and constructive approach you have brought to this difficult task.

We applaud the Minister's initiative in establishing the High Cost Medicines Panel with the brief to try and find an equitable and workable way to fund the increasing numbers of high cost medicines. It is an excellent opportunity to review the funding of all medicines so a transparent and uniform approach can be adopted.

Recommendations:

General

In response to the Government's review of policy in relation to access to High Cost Medicines, the RMI recommends the following:

1. There is no justification or need to treat the funding of High Cost Medicines differently to other medicines.

2. Rather, in order to ensure that New Zealand has robust and fair access and funding policies for High Cost Medicines, revisions need to be made to the existing framework for assessing and purchasing pharmaceuticals generally, in order to make it suitable and effective for ALL medicines.

3. Accordingly, the current framework for assessing and purchasing pharmaceuticals needs to be revised in at least the following ways:
    a. The annual pharmaceutical budget needs to include explicit provision for additional investment in pharmaceuticals;
    b. The amount budgeted for new investments (or the Pharmaceutical Budget if point (a) is not accepted) should reflect the health needs of the New Zealand population. Specifically, it should permit PHARMAC to provide access to some or all new technologies that do not exceed an explicit threshold for cost-effectiveness, treat conditions for which there is an unmet need, and those which may reduce or delay the need for other health interventions.

4. Other changes to the system which would improve the transparency, fairness and robustness of the process for all pharmaceuticals are:

    a. Assessment of the cost-effectiveness of pharmaceuticals needs to take place after commercial negotiations have reached their conclusion (i.e. on the basis of the best possible price).
    b. Assessment and prioritization of pharmaceuticals in terms of clinical need and benefit needs to be undertaken by a body that is separate and independent of the procurement agency (PHARMAC).

c. PHARMAC should be required to complete its decision-making process for all pharmaceutical applications and consult on all proposals, regardless of whether it recommends to accept or decline an application.
d. PHARMAC should not be allowed to fund new medicines via therapeutic cross deals that involve the extraction of savings from a currently funded product (unless that product is sold by the company supplying the new medicine).
e. PHARMAC should not be allowed to fund unregistered medicines (other than "orphan" treatments that have previously been registered in NZ and/or for which the value of the market is small). Nor should they be allowed to fund unregistered uses for medicines where there is another medicine registered for that indication or that medicine is registered for use in that indication in a different way (e.g. a different dose regimen).

Implementation Strategy

The RMI considers that it would be possible to give effect to these recommendations and, thereby, improve assessment and procurement processes for all pharmaceuticals, by adopting a set of short, medium and long-term strategies which form the basis of our more detailed recommendations:

In the short term:

5. Revisions to the pharmaceutical assessment and procurement processes for all pharmaceuticals could be trialed via a pilot study for High Cost Medicines which involves:
    a. Establishment of a discrete, ring-fenced amount of money for High Cost Medicines (simulating the ultimate goal of a sub-budget within the Pharmaceutical Budget for new investments). This budget should ideally be based on an estimate of how much funding would be required to fund all treatments meeting a specified cost-effectiveness threshold (as well as unmet need etc) rather than "available cash." At very least, it should not come out of the existing Pharmaceutical Budget at the expense of lower cost new investments.
    b. Clinical review (of need and benefit) to be undertaken by a clinical advisory board that is separate and independent of PHARMAC and whose decision criteria exclude "budgetary impact" and "cost-effectiveness."
    c. Establishment of a competitive process in which all pharmaceutical treatments recommended for funding under (b) would compete annually for a share of the budget defined under (a).
    d. Consultation on, and PHARMAC Board Decisions for all proposals to fund or not fund pharmaceuticals assessed under (b).
    e. Public disclosure of the rationale used in prioritizing the investments made under (c) including a ranking of all treatments (even any that could not be funded under the budget) according to PHARMAC's Decision Criteria (e.g. need, number of patients treated, cost-effectiveness and budgetary impact).

In the medium term:

6. Government could extend this pilot study to all pharmaceuticals (i.e. establish a needs-based, sub-budget within the Pharmaceutical Budget for new investments, disassociate PTAC from PHARMAC, and (c)-(d) above).

In the longer term:

7. The Government should create a single assessment process and budget for both hospital and community pharmaceuticals to reduce inequities and remove perverse barriers to funding (such as hospital-based usage of drugs which would benefit patients in the community). This work has been commenced for cancer drugs and could be extended to all drugs on a class by class basis.

8. Equivalent assessment and decision-criteria based procurement processes should be put in place for all health interventions.

Context

The current budget setting and prioritization processes are flawed in the following ways:

- Those involved in the budget setting process from a District Health Board (DHB) perspective are motivated by containing pharmaceutical spending so that the money can be used elsewhere in the health sector (i.e. there is an inherent disincentive to increase spending on pharmaceuticals). This has lead to a culture and practice of blocking access to new medicines as a means of ensuring that the cost of pharmaceutical treatments remain within budget rather than an securing maximum benefit from pharmaceutical treatment within that funding.

- Hospitals are being left to decide which pharmaceuticals they fund and which they do not, which is creating significant inequity of access (e.g. rituximab, TNF alpha inhibitors (pre-funding decision) etc).

- The current separation of the hospital and community pharmaceutical budgets is contributing to access/equity issues and, in some cases, increasing fiscal pressure on the hospitals (see above examples).

- There is no channel through which the need for pharmaceuticals can be communicated from hospitals or other agencies to PHARMAC which sometimes results in hospitals (see above examples) and other agencies such as ACC and/or WINZ providing significant funding for pharmaceuticals at sub-optimal prices (e.g. Alimta, Tramadol, EpiPen).

- PHARMAC can and frequently does fund low priority/poorly cost-effective products via cross deals over more worthy investments.

There are also flaws in the pharmaceutical assessment process:

- Pharmaceuticals are scrutinized to a level well beyond that applied to other health interventions. This, combined with the fixed budget, means that pharmaceutical

spending is disproportionately constrained and controlled relative to that for other healthcare.
- PTAC is expected to base it recommendations on incorrect cost and cost-effectiveness data.
- PHARMAC may control what applications PTAC assesses and the information PTAC is allowed to base it assessments on.
- PHARMAC may (and frequently does) ignore PTAC's advice.
- PHARMAC does not disclose its funding priorities.
- PHARMAC no longer completes its decision-making processes for most applications (i.e. assessment now ends at PTAC's assessment for more than half of all applications submitted, no consultation is ever undertaken and no Board decision made).

Furthermore, PHARMAC has modified its processes over time (without consultation) such that, despite the fact that PHARMAC claims to use nine different decision criteria, there is now an overwhelming emphasis on cost-effectiveness.

This incremental change is evident from changes to the flow chart of PHARMAC's processes that have been presented in PHARMAC's Annual Review over time.

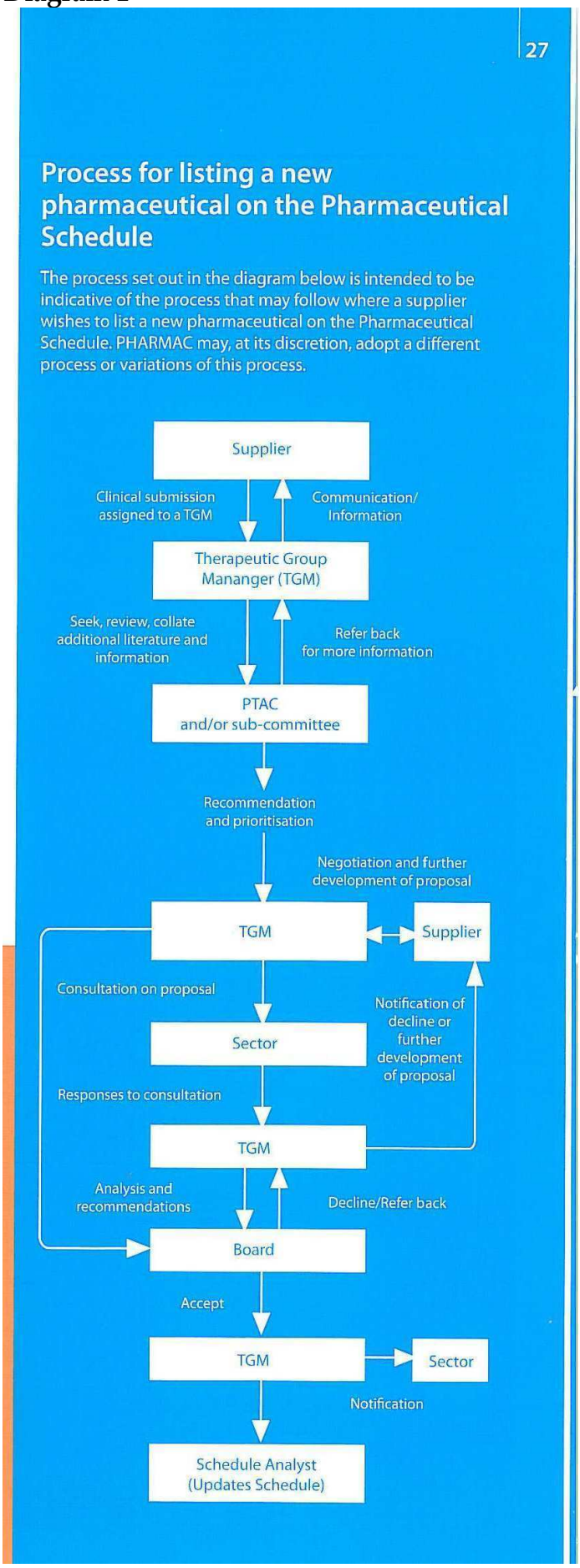
The flow chart presented in the 2006/07 Annual Review (which is the same as that presented in all previous Annual Reviews containing this diagram) shows that, in the past, PTAC did not routinely consider cost utility analysis (CUA) in its assessment of pharmaceutical applications. In fact, even PHARMAC's subsequent "analysis and recommendations" did not necessarily include a CUA. Furthermore, the process included consultation on recommendations to decline applications.

The process presented in the 2007/08 Annual Review, and other PHARMAC publications from around this time, show that PHARMAC now presents a preliminary CUA to PTAC at the start of the process and conducts further, more detailed economic assessments on those pharmaceuticals which PTAC recommends for funding. Negative recommendations are no longer consulted on nor apparently are they presented to the PHARMAC Board.

Diagram 1

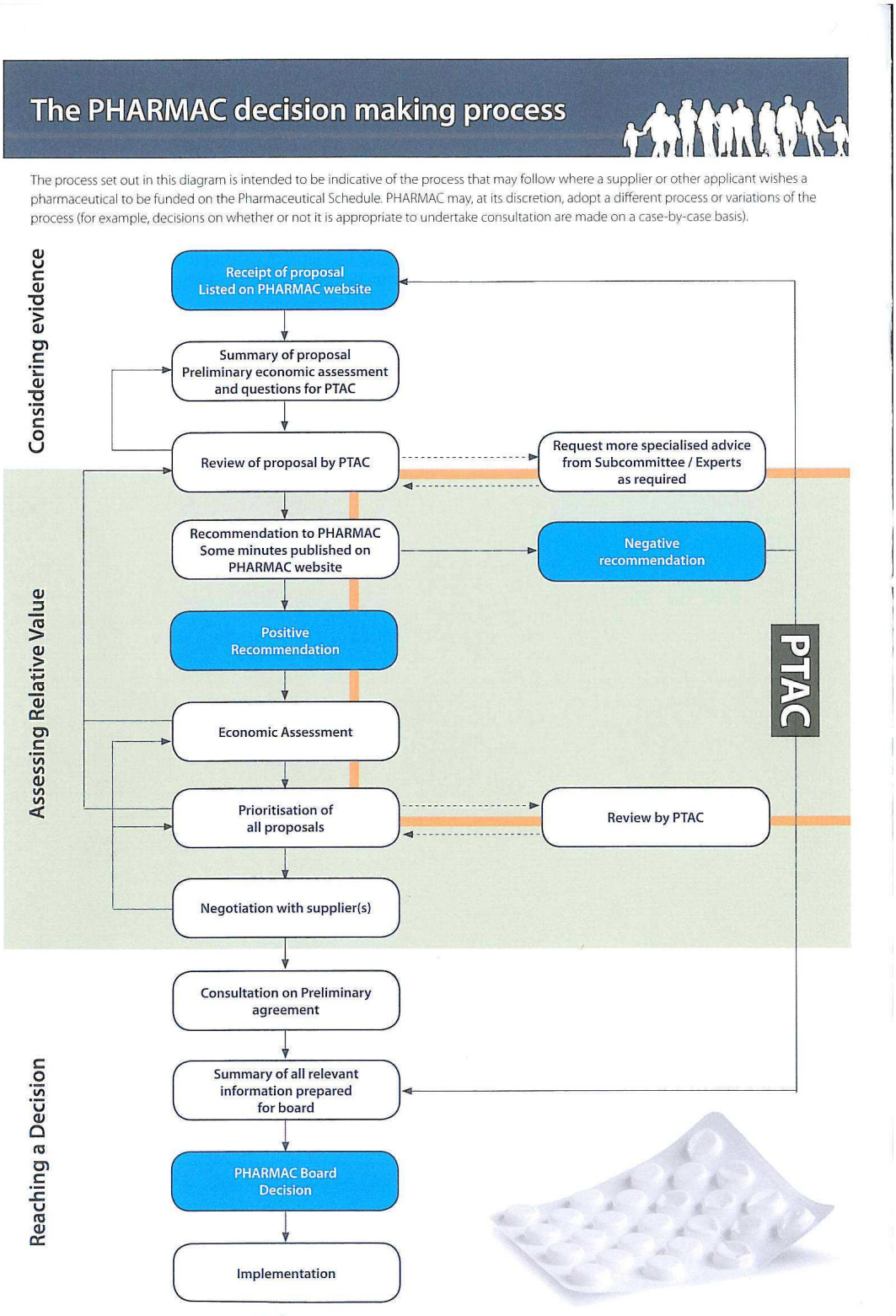
Process for listing a new pharmaceutical on the Pharmaceutical Schedule

The process set out in the diagram below is intended to be indicative of the process that may follow where a supplier wishes to list a new pharmaceutical on the Pharmaceutical Schedule. PHARMAC may, at its discretion, adopt a different process or variations of this process.



Reference: PHARMAC Annual Review 2007

Diagram 2



Reference: PHARMAC Annual Review 2008

Discussion of recommendations:

1. No separate budget or process for High Cost Medicines

If High Cost Medicines are treated differently to other pharmaceuticals (whether in terms of a being funded under a separate budget, subject to higher threshold for cost-effectiveness, or given special consideration in terms of the weighting of various decision criteria) this would inevitably lead to a reduction in the funding available to PHARMAC and/or the DHBs to fund other products. Those patients who might benefit from such High Cost Medicines would do so at the expense of a whole raft of patients, unknown, unrepresented and undistinguished by any particular condition.

Furthermore, it is generally acknowledged that it is almost impossible, and will become increasingly difficult, to define what constitutes a "High Cost Medicine." If the definition was focused on the cost of treatment per patient or per QALY, then it is likely that most, if not all cancer treatments would have to be treated as High Cost Medicines in future. Most molecules being developed for other conditions via biotech research would also fall under this category. It is equally difficult to define High Cost Medicines in a way that appropriately deals with pharmaceuticals whose overall cost is high because they treat a large population and those that treat rare conditions.

In any case, the RMI submits that the current system does not place High Cost Medicines at a disadvantage.

While PHARMAC frequently claims that its system is intended to favor treatments which benefit large numbers of patients over High Cost Medicines that benefit a few, its purchasing and spending patterns suggest otherwise.

If we examine what PHARMAC has funded in the last three years (see Appendix 1), it would appear that PHARMAC has an unwritten policy of delaying access to even moderately priced pharmaceuticals which would benefit relatively large numbers of patients until they can be listed at almost no net cost or under a deal that provides net savings (e.g. macrogol 3350, ziprasidone, exemestane, atomoxetine, aripiprazole, amisulpride, clopidogrel, pravastatin, bicalutamide, ropinerole, finasteride etc). In other words, it has provided access to the majority of recent "new" pharmaceutical treatments at no net cost to the pharmaceutical budget.

Furthermore, pharmaceuticals which benefit only a few patients (e.g. levetiracetam, entecavir, abacavir with lamivudine, dasatinib, tenofovir, emtricitabine, enfuvirtide, atazanavir) are frequently funded ahead of others which would benefit large numbers of patients (e.g. montelukast, tramadol, raloxifene, rosuvastatin).

According to data provided in PHARMAC's 2006/07 and 2007/08 Annual Reviews, less than 10% of investments made by PHARMAC in the past two years have benefited a population of greater than 5,000 patients. Two thirds of the investments have benefited patient groups of less than 1,000. Interestingly, in the context of this review, half of the investments PHARMAC has made in the last two years have been for products expected to treat patient populations of 200 or less.

It would therefore seem that among the most disadvantaged pharmaceuticals in the current system are those which have a moderate price tag and/or cost per QALY but which benefit large numbers of people making the overall budgetary impact high.

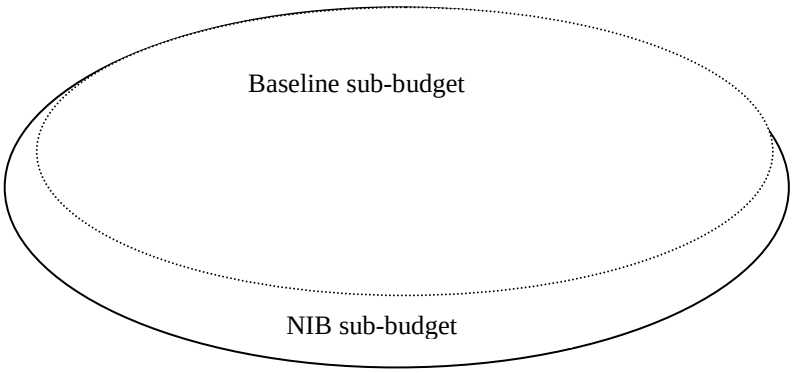
The RMI suggests that, what is needed is a model which ensures that spending is fairly prioritized for ALL pharmaceuticals.

2. Separate budget for new investments

PHARMAC can currently only provide access to new medicines and/or wider access to funded medicines when underlying volume growth and the mix of old and new pharmaceuticals does not cause expenditure to exceed the fixed budget and can be reliably forecast. Historically, there have been times when these factors have prevented PHARMAC from funding any new medicines in a given year. At best, they can force PHARMAC to delay making new investments until part-way through the year, when the fiscal picture relative to forecast is more clear (i.e. when they have more certainty that they will have money to invest).

Looking forward, it is clear from the small number of significant markets which still remain under patent protection, that PHARMAC's capacity to generate savings from within the current spend and use these savings to fund new medicines is diminishing and this approach is not sustainable in the medium to long term.

In view of the current and future pressures on the Pharmaceutical Budget in relation to those medicines already listed on the Pharmaceutical Schedule, the RMI recommends that in future, there should be a ring-fenced amount of money within the Pharmaceutical Budget which is set aside purely for new investments. This amount should ideally be set on the basis of need, and be publically disclosed. Pharmaceuticals already listed on the Pharmaceutical Schedule would need to be funded from the remainder of the budget with no provision to use any of the ring-fenced funding on demand driven expenditure. However, any off-sets or savings from the "base-line" budget that result from funding new medicines should be carried across to the new investment budget (NIB). There should also be provision to overrun the 'base-line sub-budget' and, ideally, to carry any under spend (within either sub-budget) over into the next year.



The RMI acknowledges that New Zealand may never be sufficient to fund every pharmaceutical for which a funding application is made or even all of those recommended by PTAC. However, there have been more new molecules listed on the Pharmaceutical Schedule in the 12 months since National was elected to Government with a commitment of additional funding for pharmaceuticals, than were funded in the previous 26 months[1]. It is therefore clear that access to pharmaceuticals can be dramatically improved when PHARMAC has fiscal certainty around whether it can invest in new pharmaceutical technology and how much it has to spend.

Establishment of a publicly disclosed annual sub-budget for new investments would remove the demand-driven uncertainty associated with the current, single budget.

3. Needs-based approach to budget setting

Those involved in the budget setting process from a DHB perspective are motivated by containing pharmaceutical spending so that the money can be used elsewhere in the health sector. The result has been a chronic under funding of pharmaceuticals that has lead to a widening gap between new pharmaceutical technologies that have been made available in New Zealand compared with Australia (and probably other countries).

In 2009, the RMI commissioned a report (attached) to update the results of a previous comparative analysis on access by patients to medicines in Australia and Australia. The original analysis was conducted by a senior health economist, Michael Wonder, from Novartis Pharmaceuticals Pty, Australia. That report looked at access between 1 May 2000 and 30 June 2006 and found that an additional 58 innovative new prescription-only medicines were funded in Australia during that period.

The updated analysis showed that between 1 July 2006 and 30 June 2009, PHARMAC has funded 9 of those 58 pharmaceuticals. However, a further 35 innovative new prescription-only medicines that are not funded in New Zealand had been funded in Australia in those same three years. This means that the gap between New Zealand and Australia in terms of access to innovative medicines grew over the last 3 years to stand at 84 medicines at the end of June 2009.

The range of medicines that were only reimbursed in Australia within the last 3 years encompasses most of the major therapeutic areas.

- In New Zealand, there is still no access to medicines for the treatment of Alzheimer's Disease.
- Similarly patients with Pulmonary Artery Hypertension (PAH) have been unable to access treatment via the Pharmaceutical Schedule - although PHARMAC has subsequently listed these treatments.
- There was also no access to:
    - 8 new medicines for cancer;
    - 2 new medicines for each of the following areas:

[1] The rate of investment in new pharmaceuticals has been 12 per year since National came to office compared with around 5 per year in the two years before that time.

    - Blood and blood forming;
    - HIVAIDS;
    - Diabetes;
    - Hepatitis B;
    - Renal disease;
    - Mental health disorders; and
    - Osteoporosis.
- Further products are not funded in the areas of epilepsy, rheumatoid arthritis, multiple sclerosis, thyroid problems, ophthalmology, infection, smoking cessation and pain.

The study also showed that, during the last three years, Australia has widened access to significantly more pharmaceuticals that were already funded in both countries.

The effect of these gaps is that, despite significant additional investment in health over recent years, patients in New Zealand are often being denied the pharmaceutical treatment of choice for their conditions. Prescribers are being forced to prescribe outside of international clinical guidelines for a range of conditions (e.g. advanced renal cell carcinoma, acute coronary syndrome (ACS), malignant pleural mesothelioma caused by exposure to asbestos etc).

In many cases, other agencies are funding pharmaceuticals which are not funded by PHARMAC:

- Tramadol – an application for funding one of the world's most widely prescribed pain relievers, tramadol, pre-dates PHARMAC's published list of applications received which starts in July 2002. It remains unfunded. However, there is a large ($3.3 million) private market of which, over $1 million annually is funded by the ACC.

- Pemetrexed (Alimta) – ACC also funds pemetrexed which is used to treat Malignant pleural mesothelioma caused by exposure to asbestos. This was considered by PTAC in August 2006 and recommended for decline.

- Adrenaline auto injectors (EpiPen) – The original application for EpiPen also predates PHARMAC's published list of applications received. It is likely that many families fund this life-saving device themselves using a Child Disability Allowance from WINZ. ACC now recognizes anaphylaxis is a personal injury and will also reimburse patients for the costs of replacing an EpiPen used in an anaphylactic event. Meanwhile, PHARMAC refuses to fund the device claiming that the needs of these patients are already being met with a standard needle and vial system.

In other cases, DHB Hospitals are funding the treatments because they are cost-effective to them.

The concerns of clinicians about the lack of access to pharmaceuticals has been highlighted in a series of articles published in the New Zealand Medical Journal. While some of these concerns are now historical, the articles (attached) highlight the delays that are commonly

faced in trying to access new medicines in this country and the concerns of clinicians about the limitations that this places on their ability to care for their patients – especially compared with the treatments available to their overseas counterparts.

These issues highlight the need for a more considered approach to setting the Pharmaceutical Budget – one that it based on the needs of the wider sector and the relative benefits of pharmaceuticals rather than an arbitrary and token annual increment.

Medicines New Zealand and PHARMAC's Forum 2007 both promised that PHARMAC and DHBs would work together to develop a more principles-based approach to budget setting for pharmaceuticals. They also undertook to investigate the pros and cons of separating baseline from new medicine funding as part of the budget setting process. However, if progress has been made in either regard, it is not apparent.

4. Explicit cost-effectiveness threshold

Despite the emphasis that PHARMAC now places on its cost-utility analysis, it refuses to set an explicit threshold for cost-effectiveness above which pharmaceuticals should be funded and seldom discloses the specific results of its analyses.

This position probably, in part, reflects that fact that PHARMAC's constrained fiscal position does not permit it to set such a threshold. Indeed, it has stated in its draft Guidelines for Funding Applications that "given the binding nature of this [fixed budget] constraint, and all other things being equal, what is and is not considered "cost-effective" will vary with the amount of funding available"

However, the RMI submits that the establishment of such a threshold would help to inform the promised "principles-based" approach to budget setting for pharmaceuticals.

In the UK, NICE uses a threshold to define the fiscal point at which something will be funded because the improvements to health offered to patients are expected to exceed the health that is inevitably forgone elsewhere in the NHS as a consequence of any associated costs, within a fixed budget. The fact that the threshold it applies is a positive number means, by definition, that NICE is prepared to invest additional funding in these benefits (which is not an assumption that can necessarily be applied to PHARMAC). However, in essence, by setting a threshold, NICE has established the limits of the opportunity cost under which it is prepared to invest in pharmaceuticals.

PHARMAC could not take this approach, even if it was prepared to set a cost-effectiveness threshold, as long as they are essentially forced to assess the opportunity cost in terms of pharmaceutical spending only (due to the fixed budget) and give priority to underlying spending (by virtue of a single budget for baseline and new investments). Clearly, the Pharmaceutical Budget needs to be set at a level which includes provision to invest in those pharmaceuticals that are deemed to be cost-effective.

However, it is likely that the other reason PHARMAC does not support the adoption of an explicit cost-effectiveness threshold is because it fears that such disclosure would

determine the minimum price pharmaceutical companies would offer in order to have their products funded.

There are few examples of where PHARMAC has disclosed the cost per QALY of any pharmaceutical it has funded. Even companies seeking information about PHARMAC's view of the cost-effectiveness of their own products (i.e. where there could be no commercial sensitivity around confidential rebates etc) under the Official Information Act frequently find this information redacted in the information released. PHARMAC apparently believes that by preventing companies from knowing the cost per QALY of products in which they have been prepared to invest, they will enhance the leverage they have to purchase pharmaceuticals at the lowest possible price.

An alternative approach is to use an explicit cost-effectiveness threshold as a guide within the budget setting process rather than a guarantee of funding. That is, PHARMAC and the DHBs could base the NIB sub-budget on an estimate of the costs of funding pharmaceuticals which are considered likely to meet a particular cost-effectiveness threshold, but run a competitive process for access to a fixed sub- budget that may be smaller than required. The RMI suggests that this approach would enhance the transparency of PHARMAC's prioritisation process for all stakeholders whilst ensuring PHARMAC retains some commercial leverage.

5. Separate, independent PTAC/assessment of clinical need and benefits

The RMI submits that there are essentially two[2] problems with the current relationship between PHARMAC and PTAC:

A. PHARMAC may control what PTAC assesses and the information PTAC is allowed to base it assessments on; and
B. PHARMAC may also (and frequently does) ignore PTAC's advice.

PHARMAC control

Under PTAC's current guidelines, PHARMAC's Medical Director may influence whether an application is permitted to be reviewed by PTAC or one of its sub-committees, and the order in which it is reviewed. The RMI asserts that there have been examples where referral between PTAC and one of its sub-committees has been an obvious strategy to delay progression of the application.

Furthermore, there have been examples of where PHARMAC staff have restricted the information PTAC could take into account in its assessment (e.g. Herceptin). The RMI has no particular objection to PHARMAC staff supplementing the information provided by suppliers with their applications as a means of ensuring against bias. However, if PTAC is to be regarded as an independent body, it must have the right to review all and any material it sees fit.

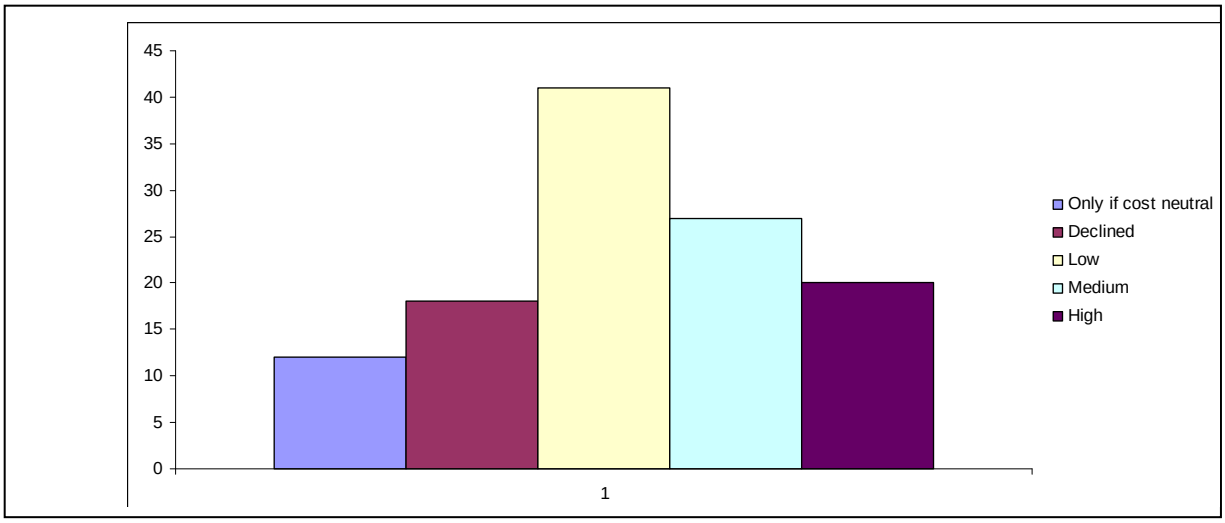
[2] NOTE TO RMI BOARD ONLY - A third potential issue discussed at the meeting with the HCM Review Committee was the appointment process but I have not included this since this concern does not seem to be universally held by all members and, given that the appointments are supposed to be Ministerial, it may be hard to prove PHARMAC's influence or demonstrate how change might improve the outcomes.

PHARMAC's autonomy

Many of the investments PHARMAC has made over the last three years at least[3] had not been given a high priority by PTAC. Meanwhile, there are about 30 applications to which PTAC has assigned a medium to high priority for funding that have not been progressed.

The time to process those applications which have been successful also illustrates how PTAC's assessment of priority, which is based on the same decision criteria as those used by PHARMAC, has little bearing on the urgency associated with funding.

Months from PTAC recommendation to listing for new listings since July 2006



A further issue with the current PTAC model is that the committee is permitted to take account the budgetary impact and cost-effectiveness of a product when making its recommendations regarding whether or not it should be funded. However, price negotiations seldom take place before PTAC considers an application. The final price at which a pharmaceutical is listed on the Pharmaceutical Schedule is usually significantly less than the original price provided in the application. Therefore the information on which PTAC base their assessment is often inaccurate. Pre-mature consideration of the fiscal impact of funded particular drugs must therefore distort PTAC's ability to prioritize decisions and could potentially render their recommendations invalid.

In considering how these concerns might be addressed, the RMI has presented a number of options, with a preference for complete separation of PTAC from PHARMAC and of the assessment and prioritization of pharmaceuticals in terms of clinical need and benefit from procurement.

Option 1:

The RMI considers that PTAC should ideally be:

[3] PHARMAC has published insufficient data on investments made prior to this date to make a reliable assessment of these.

- administered by a separate agency (e.g. DHBs or Ministry of Health);
- permitted only to assess pharmaceuticals in terms of clinical need and benefits (including critical appraisal of the evidence); and
- required to review each application in the context of other pharmaceuticals that have been assessed and are awaiting funding, and prioritise accordingly.

Option 2:
However, if separation of PTAC from PHARMAC is not considered possible or optimal, then at very least:

- PHARMAC staff must be removed from any position of influence over what applications PTAC may consider and/or what data PTAC may use in their assessments; and
- PTAC should be required to prioritize potential new investments exclusively in terms of need (i.e. that unmet and the ability to meet) and evidence. This could be achieved by removing of PTAC's ability to include budgetary impact and cost-effectiveness in its decision criteria. PTAC could rate applications in terms of the degree of need, QALYs gained and quality of evidence.

Option 3:
It is noted that PHARMAC has frequently defended the need for PTAC to include cost and cost-effectiveness in its deliberations. However, under the current system, PTAC recommendations are based on incomplete or invalid information regarding cost-effectiveness and budgetary impact. Therefore, if PTAC's ability to include budgetary impact and cost-effectiveness in its decision criteria is to be maintained (under Option 1 or 2 above) then its assessment of each application would need to be iterative so that the assessment of cost-effectiveness occurred after commercial negotiations and thus reflected the correct financial analysis.

Option 4:
A fourth option is to permit pharmaceutical companies and stakeholders to actively participate in the assessment process by presenting evidence and arguments in support of the application and responding, in person, to the committee's concerns. This approach is taken (to some degree) in other countries such as the UK and the USA. However, it is likely to be more resource intensive and would not necessarily address the issues associated with the timing of cost and cost-effectiveness assessments.

Separation of PTAC from PHARMAC and/or prioritization of potential new investments exclusively in terms of need, benefit and evidence before consideration of the fiscal impacts would better focus PHARMAC on priorities from a stakeholder perspective. It would also remove the potential for PTAC to influence the outcome of the assessment process based on incorrect pricing information.

6. Robust prioritization - no cross deals

PHARMAC purchasing patterns are frequently opportunistic rather than priority-based. Often, the primary motivation for PHARMAC to progress an application is to obtain the benefits offered by the supplier via another aspect of the deal. In retail, a shopper taking this approach is impulsively attracted to sale items and bonus offers rather than purchasing what is on his or her shopping list.

More than half of the new investments PHARMAC has made in the last three years have been pharmaceuticals which have come off patent, have been at or near patent expiry and/or are less expensive than other currently funded agents in their class (thus are expected to provide savings) and/or have been listed via cross deals which provided overall savings.

It is accepted that, even in a system where need, clinical benefit, cost-effectiveness, and budgetary impact were properly taken into account, value judgments might still favor pharmaceuticals with a low budgetary impact and/or cost per QALY and those which treat large numbers of patients rather than a few. However, under the current system, PHARMAC can (and apparently does) progress applications without explicitly considering the trade-off it is making in terms of other potential investments. Even if does consider this implicitly, the fact that it progresses applications as the commercial opportunity arises means that it can never truly compare the justification for one investment at the best possible price with that for another at its best price.

The RMI recommends two options to address this issue:

Option 1:

Removing PHARMAC's ability to utilize savings derived via the application of reference pricing in another therapeutic category and from another supplier to fund new medicines would go some way to ensure that access was not granted to some pharmaceuticals ahead of others for which there is arguably a greater need.

In addition, the RMI considers that PHARMAC should use a competitive process in which the costs and benefits of all potential new investments are compared to ensure that PHARMAC takes explicit account of the trade-offs it makes when it funds one pharmaceutical over another.

This could be achieved by an annual Request for Proposals (RFP) in which pharmaceuticals whose applications have been positively recommended by PTAC (potentially subject to a priority rating threshold where funding was very limited) would bid for some or all of the specified annual funding allocation for new investments.

Establishment of a competitive process for new investments would ensure that there is an equal opportunity for all new investments to be approved in any given year rather than the current "first come first served" approach. Consistent with PHARMAC's strategies to ensure a competitive market, suppliers would be forced to offer their absolute best prices in order to maximize their potential to secure some of the available funding. Furthermore,

this process would ensure that PHARMAC prioritizes its spending on the basis of the best possible price for all applications and takes specific and accurate account of the trade-offs.

In the interests of transparency, the RMI considers that PHARMAC should then publish information about how funding was prioritized in any given year (including ranking of all potential new investments considered in the RFP in terms of its Decision Criteria - need (as assessed by PTAC), net budgetary impact, cost per QALY and the number of patients that will benefit according to the best proposal offered).

Publication of information about how funding was prioritized in any given year would provide the public with some much desired insights into why some products are funded and others are not. Use of rankings rather than specific figures would preserve pricing confidentially.

It is acknowledged that the potential downside of this approach (from Government's perspective) is that it would highlight any budget inadequacies. However, the RMI suggests that New Zealanders now accept that access to pharmaceuticals is rationed in this country. Therefore, they are already well aware that the budget is too small to fund everything. The only difference between the current approach and what is proposed is that stakeholders would be given some explanation.

Option 2:

If option 1 is not acceptable, then at very least, PHARMAC should:

- abolish its use of cross deals; and
- be required to makes decisions on all applications (as it used to) within a defined timeframe (180 days from PTAC recommendation). This would serve to increase transparency around what is not funded thus highlighting the trade-off PHARMAC is already making via its non-decisions.

In conjunction with this approach, PHARMAC would need to urgently implement improvements in the information available on PHARMAC's website about the existence and status funding applications and the accessibility of that information promised in *Medicines New Zealand* and Forum 2007.

The current list of applications PHARMAC has received is incomplete and not indexed in any way. There are no published PTAC minutes for around half of the applications received. There is currently no search engine available to find or link applications and minutes. There is no published information on the status of applications or when they were funded if they ever were. Without this, PHARMAC's system lacks any transparency.

7. Single assessment process for both hospital and community pharmaceuticals

When PHARMAC assumed responsibility for the procurement of some hospital pharmaceuticals, DHB Hospitals were left to determine for themselves, which pharmaceutical treatments they would provide access to. The decision to leave DHB Hospitals this autonomy may have been political or perhaps reflected a view that

differences in the services offered by hospitals would make it difficult to set national policy on access to pharmaceuticals in hospitals. Instead, PHARMAC undertook to provide non-binding guidance to hospitals in the form of CUA. However, at the same time, it assumed full responsibility for determining which pharmaceutical cancer treatments (PCTs) would be funded in hospitals and began the process of transferring the budget for PCTs to the community pharmaceutical budget.

This approach has lead to inequity of access between different DHB Hospitals on a range of treatments including PCTs. TNF alpha inhibitors were just one of many classes of pharmaceuticals which, until recently, had not been listed on the Pharmaceutical Schedule and which, by default, were being funded by some but not all DHB Hospitals. This meant that patients in one area of New Zealand had access to a very different range of treatments than those in another.

There is also inadequate provision within the current pharmaceutical assessment processes for hospital and community treatments to allocate funding to the most cost-effective treatment regardless of the route of administration.

One reason why DHB Hospitals end up paying for pharmaceuticals that are not listed on the Pharmaceutical Schedule is because there is no single decision-making process for non-oncology treatments that require hospital administration. DHB hospitals may fund these treatments according to the recommendations of their individual Drug and Therapeutic s Advisory Committees, provided there is funding available within the individual DHB budget. This results in inequity of access due to different financial pressures on DHB budgets. It also limits PHARMAC's ability to assess the value of community administered treatments for the same condition. Consequently, PHARMAC is likely to decline or defer an application for a hospital administered drug whilst potentially funding a more expensive treatment for the same condition that can be used in the community without hospital intervention.

The RMI submits that the time has come to create a single assessment process and budget for both hospital and community pharmaceuticals to reduce inequities and remove perverse barriers to funding (such as hospital-based usage of drugs which would benefit patients in the community). This work has been commenced for cancer drugs and could be extended to all drugs on a class by class basis.

8. Establish equivalent assessment and decision-criteria based procurement processes for all health interventions.

Clearly, a fundamental issue for Government in improving access to pharmaceuticals is the fact that increased investment would be required, probably at the expense of other health interventions.

Recent Government reports have already highlighted the potential for savings to be derived from other parts of the health sector via the use of national procurement systems akin to the PHARMAC model for pharmaceuticals. The RMI is generally supportive of any approach which reduces wastage in other parts of the health sector and frees up resources for more cost-effective interventions. However, the Government needs to be mindful of the potentially negative long-term commercial and clinical consequences of such an approach to spending in other areas of health – the effect of which can be seen in the pharmaceutical industry.

In order to avoid future wastage and sub-optimal investments in non-pharmaceutical interventions, such investments would also need to be assessed and scrutinized to a similar degree as pharmaceuticals have been since PHARMAC's inception.

The RMI also suggests that a better way of freeing up funding for future investment in pharmaceuticals would be to review the universal co-payment level of $3 per prescription which was implemented gradually between April 2004 and July 2007. This policy has resulted in Government paying for a greater proportion of relatively low-value items for working New Zealanders.

The irony of the situation is that prices for these products have fallen over this time anyway. Therefore, had Government introduced a policy of not allowing pharmacists to charge patients up to the co-payment level regardless of the value of a prescription instead of implementing the universal co-payment level policy, those patients who have benefited from the latter would still have been paying less than the previous co-payment level of $10-$15 for many commonly used pharmaceuticals.

According to PHARMAC's annual review, 2006/07 saw the largest increase in subsidised prescriptions for a decade (11.8%). It notes that the biggest contributing factor was the final stage of the Governments access policy roll-out for people aged between 45 and 64.

22% of the growth was attributed to volumes growth, 45% to the access policies and only 1% to new investments.

Meanwhile, pharmaceutical expenditure increased just 6% indicating that pharmaceutical suppliers funded much of the increased volume (from any source) from their own profits and did not enjoy any net benefit from investment in new medicines.

The RMI notes that the co-payment level is now less than the amount paid to pharmacists to dispense the medicine. The price that patients pay is around the price of staple food items such as a loaf of bread or 500g of butter or 2L of milk. New Zealanders may pay

more for a bag of sweets at a service station than they do for their essential medicines. Is this the value that the Government wishes New Zealanders to associated with medicines?

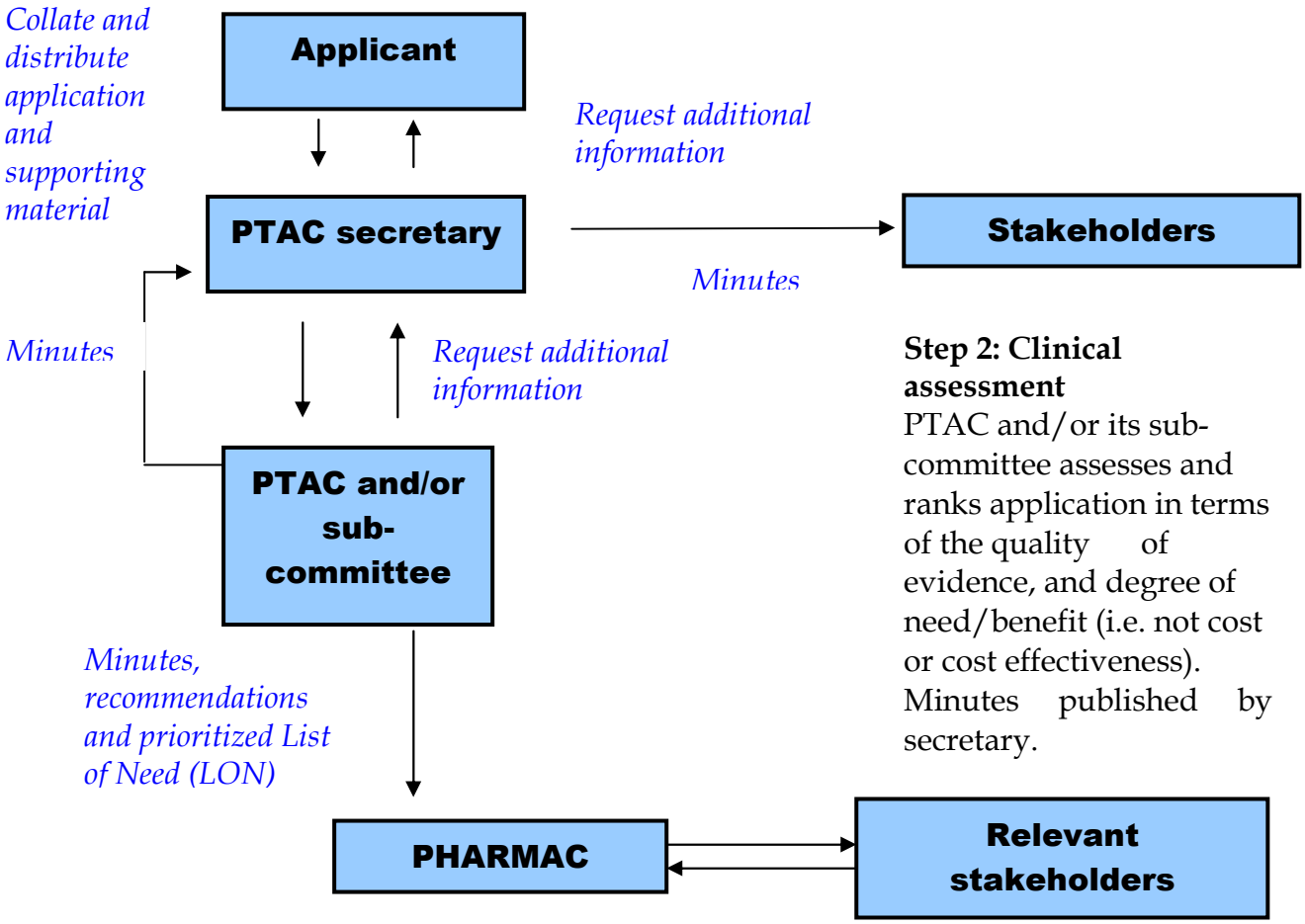
The RMI considers that a higher co-payment level (as adopted in some other countries such as the Denmark) would better reflect the value of subsidised medicines and free up funding to enable PHARMAC to invest in new, innovative medicines which provided advanced treatment not just basic care.

Proposed revised system:

Step 1: Submit application to PTAC secretary
PTAC secretary:

- is not employed by PHARMAC
- does not remove any material from application
- may supplement application with literature searches and any such material requested by PTAC

Chair of PTAC determines whether application is considered first by a sub-committee.
No covering paper is required. PTAC/sub-committee will address a standard set of questions.

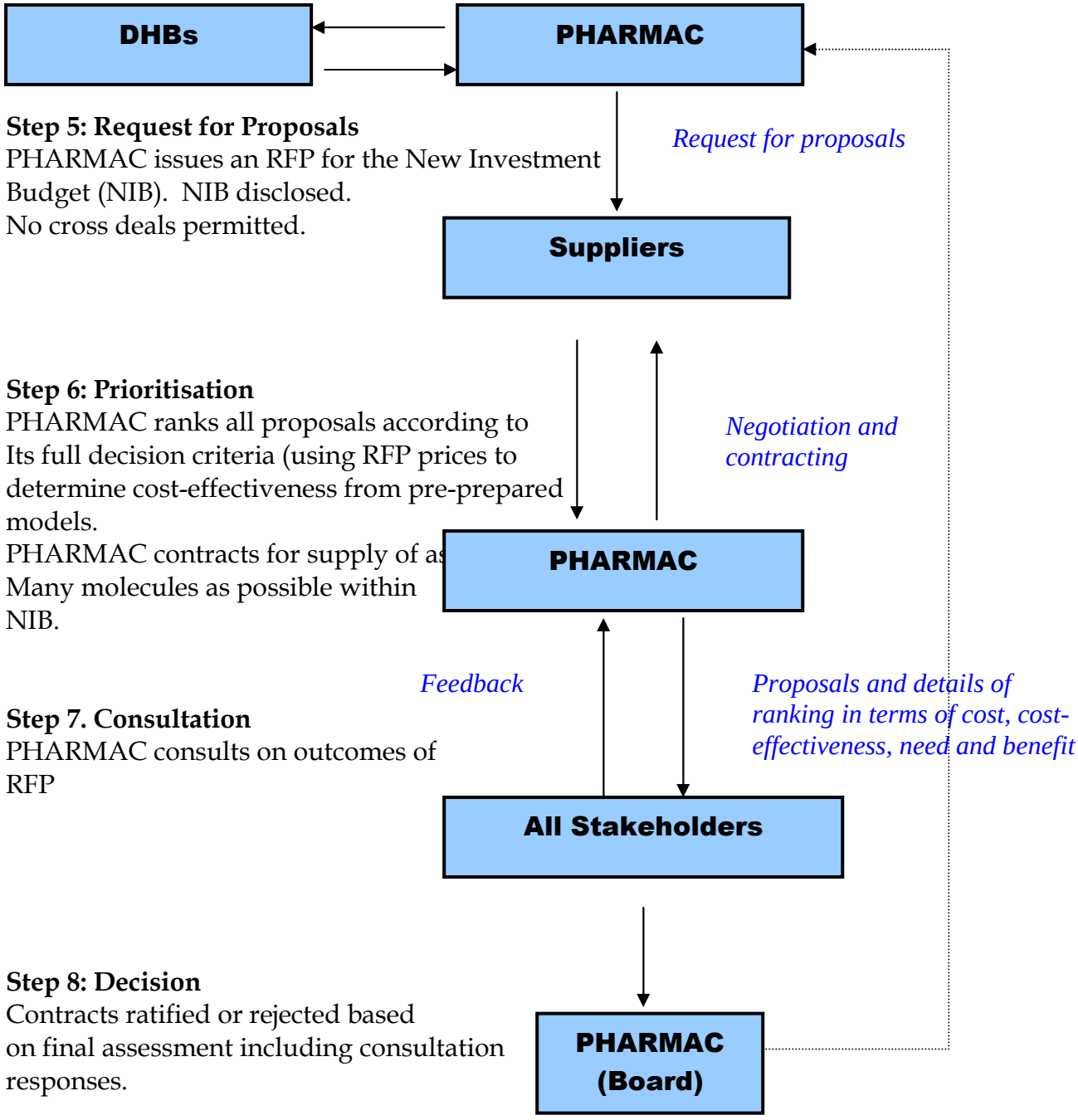


Step 2: Clinical assessment
PTAC and/or its sub-committee assesses and ranks application in terms of the quality of evidence, and degree of need/benefit (i.e. not cost or cost effectiveness). Minutes published by secretary.

Step 3: Development of Economic Model
PHARMAC develops model assumptions in consultation with relevant stakeholders

Step 4: Budget Setting

PHARMAC and DHBs negotiate annual pharmaceutical budget with New Investment Sub-budget based on LON, cost-effectiveness threshold and best estimate of cost and cost per QALY.



Step 5: Request for Proposals

PHARMAC issues an RFP for the New Investment Budget (NIB). NIB disclosed.
No cross deals permitted.

Step 6: Prioritisation

PHARMAC ranks all proposals according to Its full decision criteria (using RFP prices to determine cost-effectiveness from pre-prepared models.
PHARMAC contracts for supply of as Many molecules as possible within NIB.

Step 7. Consultation

PHARMAC consults on outcomes of RFP

Step 8: Decision

Contracts ratified or rejected based on final assessment including consultation responses.

Step 10. Implementation and Review

Pharmaceuticals listed and outcomes reviewed after 12 Months and 24 months

Working example of proposed revised system:

Step 2: Clinical Assessment

In any 12 month period, PTAC may recommend up to around 30 new investments. However, for the purposes of keeping simple this example of how the revised process would work, we will work with just 10.

Let us assume that PTAC has assessed the 10 potential new investments as follows:

Pharma-ceutical	Use	Need	Quality of Evidence	Benefit	Number of patients
A	Mental Health	Moderate	Good	Moderate	700
B	Cancer	High	Acceptable	Small	70
C	Cardiovascular	Moderate	Excellent	Moderate	7,000
D	Skin condition	Low	Good	Small	3,000
E	Arthritis	High	Good	Moderate	2,000
F	Asthma	Moderate	Good	High	10,000
G	Migraine	Low	Good	Moderate	800
H	Organ Transplant	Moderate	Excellent	Small	100
I	Genetic disorder	Very High	Good	Moderate	20
J	Infection	High	Excellent	High	1,000

This has resulted in PTAC recommending the following order of priority:

Priority for listing	Pharmaceutical	Use
1	J	Infection
2	F	Asthma
3=	C	Cardiovascular
3=	E	Arthritis
4	I	Genetic disorder
5=	A	Mental Health
5=	H	Organ Transplant
6=	D	Skin condition
6=	G	Migraine
7	B	Cancer

Step 3 Development of Economic Model

From PHARMAC's economic models, it determines the benefit of each potential new investment in terms of QALY gains per patient and for the entire population that would be eligible for treatment, as follows:

Pharmaceutical	**Use**	**QALY gain per patient**	**Total QALYs gained from investment**
J	Infection	0.40	400
F	Asthma	0.60	6,000
C	Cardiovascular	0.50	3,500
E	Arthritis	0.70	1,400
I	Genetic disorder	0.60	12
A	Mental Health	0.30	210
H	Organ Transplant	0.30	30
D	Skin condition	0.10	300
G	Migraine	0.30	240
B	Cancer	0.30	21

It also determines that there would be cost off-sets in terms of existing pharmaceuticals not used or used less as a result of the funding of each potential new investment.

Pharmaceutical	**Use**	**Pharmaceutical Offsets**	**Net cost per patient**	**Net cost to NIB**
J	Infection	$20	$680	$680,000
F	Asthma	$240	$360	$3,600,000
C	Cardiovascular	$50	$1,950	$13,650,000
E	Arthritis	$150	$9,850	$19,700,000
I	Genetic disorder	$0	$90,000	$1,800,000
A	Mental Health	$700	$2,300	$1,610,000
H	Organ Transplant	$1,000	$5,000	$500,000
D	Skin condition	$20	$280	$840,000
G	Migraine	$70	$580	$464,000
B	Cancer	$200	$49,800	$3,486,000

In practice, other offsets, which would reduce the final cost-effectiveness ratio would also be identified. However, for the purposes of keeping this example simple, we have assumed there are none. In any case, the pharmaceutical cost offsets would need to be quantified separately so that they could be deducted from the impact the investment would have on the NIB (i.e. it is assumed that any savings from the pharmaceutical budget

for currently funded products would be added to the NIB if that particular pharmaceutical was funded).

Step 4: Budget Setting

Based on list prices less pharmaceutical offsets, PHARMAC estimates that the full List of Need (LON) would cost around $46 million per year to fund. However, it is estimated that, even with significant discounts, Drugs B and I are likely to exceed a cost-effectiveness ratio threshold of $50,000 per QALY. Therefore, it bids for $41 million and is given a budget (NIB) of $38 million.

Step 5: RFP

The RFP yields discounts off the list prices for all potential investments such that, even though the cost effectiveness ratio of Drugs B and I still do not fall under the threshold, PHARMAC could potentially purchase them within the NIB of $38 million.

Pharmaceutical	**Use**	**RFP Discount**	**Net impact**	**Cost per QALY**	**Cumulative cost of investments**
F	Asthma	0.33	$2,412,000	$402	
G	Migraine	0.4	$278,400	$1,160	$2,690,400
J	Infection	0.25	$510,000	$1,275	$3,200,400
D	Skin condition	0.15	$714,000	$2,380	$3,914,400
C	Cardiovascular	0.2	$10,920,000	$3,120	$14,834,400
A	Mental Health	0.2	$1,288,000	$6,133	$16,122,400
H	Organ Transplant	0.4	$300,000	$10,000	$16,422,400
E	Arthritis	0.2	$15,760,000	$11,257	$32,182,400
B	Cancer	0.3	$2,440,200	$116,200	$34,622,600
I	Genetic disorder	0.1	$1,620,000	$135,000	$36,242,600

Step 6:Prioritisation

PHARMAC then ranks all the potential new investments according to its Decision Criteria. It decides to contract for Drug I, even though it is not considered cost-effective, on the grounds that there is a very high need (i.e. no other treatment options for these patients) and the cost to the Pharmaceutical Budget is not excessive.

Pharmaceutical	**Use**	**Need**	**Number of patients**	**Benefit**	**Net $ impact**	**Cost per QALY**	**Sum of rankings**
J	Infection	2	2	1	1	2	8
F	Asthma	3	1	1	2	1	8
G	Migraine	4	2	2	1	2	11
C	Cardiovascula	3	1	2	3	2	11

	r						
D	Skin condition	4	2	3	1	2	12
A	Mental Health	3	2	2	2	3	12
E	Arthritis	2	2	2	3	3	12
H	Organ Transplant	3	3	3	1	3	13
I	Genetic disorder	1	3	2	2	5	13
B	Cancer	2	3	3	2	5	15

Step 7: Consultation

PHARMAC consults with stakeholders on proposal to fund 9 out of 10 pharmaceuticals recommended by PTAC in this funding cycle and to decline the application to fund Drug B. The table above is made publically available during consultation as is the fact that Drug B exceeds the cost-effective ratio but could be funded within the NIB.

Step 8: Decision

The Board considers all of PTAC's advice, PHARMAC's analysis and responses to consultation. It notes that stakeholders have provided evidence that international guidance has recently recommended against using the current treatment for the cancer which Drug B treats, on the grounds of safety making Drug B the only treatment option for this condition. On the basis of increased need as well as a net cost which is not excessive and can be afforded within the NIB, the PHARMAC Board recommends that PHARMAC accept the proposal from the supplier of Drug B and approves all 10 pharmaceuticals for funding.

Discussion:

In this example, it is convenient that all 10 pharmaceuticals could be funded within NIB. However, had prices not been discounted sufficiently, PHARMAC would have to have declined some of the applications. It might have applied to the DHB for funding for these products the following year or declined those not considered cost-effective. Equally, it might have rejected some more cost-effective treatments in favor of one that exceeded the cost-effectiveness threshold. What the RMI is trying to illustrate is that, within this system in which there would be some certainty around ability to fund new medicines and greater transparency around prioritization, there is still room for value judgments and still considerable commercial leverage.

Cynics might suggest that this process was susceptible by manipulation in that list prices could be inflated to ensure that the NIB was large enough to fund all new medicines without excessive discounting via the RFP. The RMI would reject this idea. A comparison of international prices (which PHARMAC already requires) would ensure against this. Furthermore, the cost-effectiveness threshold and competitive nature of the process would make this an inadvisable strategy.

Given the NIB would need to be derived from within VoteHealth, it probably needs to be said that any pharmaceutical with a cost-effectiveness over threshold would ideally be compared with other potential investments in health sector. However the use of a threshold enables a valuable assumption to be made - that if a pharmaceutical investment falls under the threshold it is already, by definition, as good as or better value for money than any other health intervention the money could be spent on.

Finally, it has to be noted that this process, while manageable within the number of new investments likely to be recommended in any one year, would be initially difficult to implement given the current backlog of applications. Consideration would need to be given to a staged implementation

Appendix 1 – Investment Decisions Made by PHARMAC in the last three years
Source: PHARMAC's Annual Reviews (2007 and 2008) and Updates (2009 and 2010)

Reported YE 30 June	Type of investment	Investment
2007	New	Fluticasone with salmeterol
2007	Access widening	Carvedilol
2007	Access widening	Goserelin
2007	New	Abacavir with lamivudine
2007	Access widening	Paclitexel
2007	Access widening	Budesonide with eformoterol
2007	New	Alendronate with cholecalciferol
2007	New	Candesartan Tab 32mg
2007	Access widening	Growth Hormone for Prader Willi
2007	New	Insulin glargine
2007	New	Tenofovir
2007	New	Emtricitabine
2007	Access widening	Lamotrigine
2007	Access widening	Pioglitazone
2007	Access widening	Bupivacaine
2007	Access widening	Oxypentifylline
2007	Access widening	Insulin aspart, lispro and isophane animal
2007	Access widening	Cyclizine
2007	Access widening	Midazolam
2007	New	Enfuvirtide
2007	New	Atazanavir
2007	New	Nevirapine oral liquid
2007	New	Clopidogrel
2007	New	Pravastatin
2007	New	Ferrous fumarate with folic acid
2008	Cancer	Trastuzumab
2008	New	Macrogol 3350
2008	Access widening	Ondansetron
2008	Cancer	Paclitaxel
2008	New	Ziprasidone
2008	New	Exemestane
2008	Cancer	Oxaliplatin
2008	Access widening	Capecitabine
2008	Access widening	Tiotropium bromide
2008	Access widening	Benzathine penicillin
2008	Access widening	Losartan
2008	Access widening	Rizatriptan wafers
2008	Access widening	Various SA removals
2008	Cancer	Docetaxel
2008	Cancer	Vinorelbine

2008	New	Sirolimus
2008	New	Condoms
2009	New	Finasteride
2009	Access widening	Vigabatrin
2009	New	Levetiracetam
2009	New	Entecavir
2009	Access widening	Topiramate
2009	New	Atomoxetine
2009	New	Dasatinib
2009	New	Imiquimod
2009	Access widening	Anastrazole
2009	New	Methylphenidate (Concerta)
2009	New	Aripiprazole
2009	New	Insulin lispro with lispro protamine
2009	New	Amisulpride
2009	Access widening	Isotretinoin
2009	New	Bicalutamide
2009	New	Ropinerole
2010	New	Sildenadfil
2010	New	Bosentan
2010	New	Iloprost
2010	Access widening	Pioglitazone