Finding a better balance between pharmaceutical supply and demand – a medicinal issue

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Do we need a more clinically realistic pharmaceutical management strategy?

Managing pharmaceutical expenditure in New Zealand, as in other countries, has focused on two key strategies. The national *supply* (availability) of free medicines is controlled largely by medicines subsidisation through various funding mechanisms, negotiated with pharmaceutical manufacturers, by the Pharmaceutical Management Agency (PHARMAC).

The effectiveness of PHARMAC's controversial *supply-side* strategies to lower the overall price paid for subsidised medicines has been widely acknowledged. Without these strategies PHARMAC estimates[1] that the subsidised drug bill for 2000 would have increased from $651 million to $992 million. In 2001, the growth in pharmaceutical expenditure was again held at around 2%, again reflecting aggressive supply-side strategies, without which growth would have been 9%. The health gains have not been so readily quantifiable.

Despite this aggressive price containment, prescribed drug volumes have consistently increased in the last five years, along with increasing prescription of more expensive medicines. The combined effect is an increasing overall pharmaceutical expenditure.[1] Not surprisingly, PHARMAC is turning its attention to the consumer *demand* for medicines and the *pressure to prescribe* is coming under increasing scrutiny. Several demand-side initiatives have already been trialed by PHARMAC.

Bosanquet[2] has encapsulated the concern shared by many for the potentially deleterious effects of unbridled supply-side management – 'we should be suspicious of any crude single solution overriding local clinical judgment.' He points to the shifting focus of drug therapy in NZ, with increasing scope for improved health outcomes through better targeting (appropriate prescribing), communication with patients and monitoring of results. Add to this New Zealand's 'turned off' pharmaceutical industry, and need for a more balanced perspective in managing pharmaceutical expenditure is all too clear.

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Over the last decade it has become abundantly clear that PHARMAC's supply-side strategies, such as the brand switching of cardiovascular medicines, can readily dominate and adversely influence desirable demand-side outcomes such as prescribing quality. As yet there is still no over-arching national medicines policy in New Zealand to ensure an appropriate balance of these initiatives and to ensure effectively targeted funding streams.

Like others involved in medicines utilisation issues in New Zealand, I share the view that PHARMAC, as a purchasing agency, should not be initiating and managing demand-side strategies. These are practice-based clinical strategies, the responsibility for which sits squarely with hospitals, professional colleges and the primary care organisations. This editorial questions PHARMAC's increasing involvement in the management of the demand for medicines, and highlights the need for a *clinically realistic balance* between the management of medicines supply and demand. By *clinically realistic* I am implying a national awareness of clinical besides fiscal priorities and a willingness to entrust *demand* management of medicines to prescribers.

National purchasing of hospital medicines

A good example of the need for better balance is PHARMAC's recent proposal for nationwide purchasing of hospital pharmaceuticals. The aim is to reduce pharmaceutical prices paid by hospitals by establishing a national hospital purchasing frame-

work, with DHB collaboration. Some have argued that the effect of this scheme will be to constrain medicines choice nationally – in the same way that a nationally restricted drugs list might do. The demise of the latter in the United Kingdom is a clear reminder of the limitations of such strategies. There are undoubtedly significant savings to be made in hospital pharmaceutical expenditure, but the crucial issue is the scope of the scheme – will it affect all hospital medicines, or just the top 25 or so most costly ones, which account for more than 85% of the total medicines cost? It may indeed be wise to limit the scheme to the high cost items, including some cancer medicines for which there are perceived issues around access. This would allow reasonable savings to accrue and it would avoid the otherwise inevitable disruption of hospital prescribing quality schemes, including preferred medicines lists, which would follow from 'all medicines' implementation. In the latter scenario, quality would tend to be centralised rather than devolved to the 'coal face' where it really counts – the prescriber/patient relationship and the therapeutic outcome.

Brand substitution and supply-side interference with prescribing quality

There is widespread concern and some evidence to suggest potentially significant health loss from some of PHARMAC's reference pricing and sole supply arrangements.[3,4] One example, the ACE-inhibitor reference pricing initiative, stands out. In this case, Quinapril, and to a lesser extent Cilazapril were substituted for other ACE-inhibitors in more than 85% of previously treated hypertensive patients. At the time, the therapeutic implications and health impact of this unique national initiative were unknown.

An evaluation of the brand switch, commissioned by PHARMAC, has been recently released.[4] The evaluation was based on a retrospective case study of the acceptability, sustainability and economic impact of the switch in 345 adult patients. A disturbing finding was that 30% of the patients did not sustain the initial switch and 11% of those patients with previously stable blood pressure remained uncontrolled six months after the switch. It is unlikely that brand substitution will occur again in New Zealand on such a massive scale, but its health impact will continue to be debated for a long time. Why did we allow it to proceed, when there were sound therapeutic principles for questioning its validity? When the decision was taken to proceed, did we as clinicians collaborate effectively with PHARMAC to ensure patient safety? Other findings from the evaluation would suggest we did not.

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Inappropriate prescribing

If we are to address the balance between demand and supply-side strategies we must also determine what constitutes 'inappropriate' prescribing, especially in the New Zealand environment. Inappropriate prescribing is easy to find in the normal practice setting but difficult to define as a basis for intervention. Nonetheless, we need to monitor these perceived aberrations according to agreed definitions and use targeted strategies to promote behavioural change towards improvement.[5]

Variation in prescribing behaviour is innate and sensible in clinical practice, but when it results in cost increases without health gain, the variation is inappropriate. The mistake made by some commentators is to assume that prescribing variation is inherently costly and therefore inefficient. There is little evidence to justify this belief.[5] The definition of prescribing 'outliers' and the drivers of variability is important in demand-side medicines management. Increasingly, the primary care sector is developing the capacity to monitor prescribing variability, although there is not a lot of consensus as to how this should be done.

There is a widespread belief that improved technology ('system orientation') will reduce *medication error*. This is only partly true and is dependent on the extent of the systematisation. Even with computerised prescribing, screen alerts and other devices are only an adjunct to a sound understanding of the basic principles of medicines choice. Peer review and the consensus process around the development of practice guidelines and medicines lists, is invaluable in building this understanding.

Demand-side prescribing quality programmes – PreMeC and BPAC

In New Zealand the two nationally funded prescribing quality assurance centres, PreMeC and BPAC, compete independently for limited funding. Both are under PHARMAC review, but in neither case has their full quality assurance potential been realised. Better collaboration between the two organisations with respect to their specialised outputs, coupled with committed longer term funding, could achieve so much more. PHARMAC funds both organisations and requires demonstration of their effectiveness as a reasonable prerequisite for continued funding. But how are these organisations to demonstrate their effectiveness in our highly unstable pharmaceutical management environment? The continually sole supply arrangements and reference pricing initiated by PHARMAC interfere with even quite simple interventional studies and trend analyses. Despite these local difficulties, there is considerable local evidence to support the effectiveness of PreMeC's interventions from collaborative research with the Wellington Drug Utilisation Research Unit. Neither PHARMAC nor the Ministry of Health have the skills or the

knowledge to replace these widely respected quality assurance centres. With appropriate funding the sophisticated outputs of both organisations can provide the basis from which to expand pharmaceutical demand-side management into primary care organisations.

Prioritisation of pharmaceutical expenditure

It is something of a paradox that in New Zealand's rationed health care environment we still lack the appropriate scale of collaboration between medical professionals and the fund managers for effective prioritisation of pharmaceutical expenditure. Cancer medicines have traditionally been the domain of the cancer specialists and PHARMAC has no experience in this field, yet nowhere is the issue of prioritisation more keenly felt at present than in the minefield of cancer medicines rationing.[6,7] It is becoming increasingly apparent that economic constraints are limiting patient access to long awaited new cancer pharmaceuticals – the expensive medicines get put on a waiting list.

In the UK the National Institute of Clinical Excellence (NICE) conducts appraisals of new drugs on behalf of the UK National Health Service and recommends which should be made available to patients.[8] Interestingly enough NICE's priority setting is based on evidence of clinical outcomes, but when expertly presented such recommendations are difficult to circumvent on purely fiscal grounds. PHARMAC's medical advisory group PTAC does sterling work in this area but there are fundamental disagreements between the medical practitioners on PTAC and PHARMAC's therapeutic portfolio managers. There is no easy answer. Medical practitioners need to understand their patients' requirements, but similarly PHARMAC will need to compromise on some of its fiscal objectives if we are to develop a clinically realistic balance in medicines management.

A national medicines policy

Government has been singularly silent in the development of a comprehensive national strategy to manage pharmaceutical demand. We have much to learn from Australia where a national medicines policy has been established including a national prescribing service (NPS), with explicit clinical input to drive a comprehensive demand-side strategy. The strategies include several interventions first pioneered in New Zealand by PreMeC and include individualised feedback on routine prescribing analyses and responses to nationally distributed case studies. Savings of around $25 million per year arise from NPS expenditure of a little over $5 million annually, the latter being a fraction of the total Australian subsidised drug expenditure of $4 billion. The Australians have managed to steal a significant march on New Zealand in the drive towards better prescribing, despite having a less structured primary care sector. The Australian Government has also realised the value of consumer participation and unlike the New Zealand Government has allocated $A14.6 million in the short-term, to promote consumer participation and demand-side strategies. The NZ Government on the other hand has a pragmatic and arguably short-sighted view in its continued reliance on a national purchasing agency to provide both supply and demand pharmaceutical management.

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Conclusion

There are key issues which we as prescribers must resolve if we are to implement effective demand-side strategies for the New Zealand environment. We have learned much from our two small prescribing quality assurance centres PreMeC and BPAC. We have an effective supply-side manager and purchase agency for pharmaceuticals. We have the makings of a democratic political mechanism for priority setting. We also have one of the highest standards of primary health care of any developed country. Yet we have no national drug policy and we have an imbalance between supply and demand-side pharmaceutical management which is costly and antagonistic. To some extent Government must carry some of the responsibility for this inertia – or is it exhaustion? Government must create an environment conducive to implementation of effective demand-side strategies, possibly through closer collaboration with those responsible for the Australian model. Similarly, primary care organisations must work more closely with PHARMAC to ensure that we can develop and sustain a *clinically realistic* medicines management strategy for the future.

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