# Impact of tertiary and quaternary service funding processes on medication selection in the SA essential drugs programme

Health care provision of tertiary and quaternary services in South Africa is still largely driven by historical precedent and a 'catch up' philosophy: in the past, new technologies and medications from developed world countries were lobbied for and adopted as soon as they were considered affordable, or on occasion, where it seemed politically expedient to do so. This has resulted in a piecemeal system of entrenched services in centres of excellence, which drive costs and new advances, but seldom foster equity goals.

National and provincial health departments have scarce resources limited by finite budgets, but competing demands are infinite. To ensure efficient and equitable resource allocation in healthcare, it is desirable that the health benefit of an intervention is greater than its opportunity cost. The opportunity cost measures the lost opportunity to do something else with funds once they have been allocated to a particular intervention, medication, or programme. It is rational for a society seeking just and equitable use of its finite resources to emphasize funding of interventions that maximise health gains for each increment in expenditure. On the other hand, an individual patient in a collectively funded system acts rationally by seeking an expensive treatment that produces a benefit (even if small) because the cost falls almost entirely on others.

The same can be said of clinicians who seek the best for their patients, because the opportunity cost, in terms of fewer resources for others, falls almost entirely on other clinicians' patients. A corollary of this is that if an individual or a clinician-lobbyist were prepared to forego such an intervention for the good of society, it should be with the reasonable expectation that the liberated resource would in fact be put to a better use, and not squandered or returned unspent to a central fund.

From the perspective of national formulary decision making, lack of a clear mechanism for determining society's wishes regarding alternative choices in health care renders problematic the process of rational selection based on efficacy, safety, and cost-effectiveness.

The key anomalies concern scope and depth: should a particular programme or technology using expensive medication be supported at all, and if so, to what level of resource use should it be supported bearing in mind the concept of diminishing returns? (Equal steps in extra expenditure produce incrementally smaller health care gains.)

Specific examples concern the extent to which South Africa funds oncological, haematological, transplant, tertiary psychiatric and neonatal services in the face of competing and potentially more cost-effective uses of scarce health resources.

Another component of the debate is the concept that resource allocation decisions are multi-dimensional and not driven purely by economic and equity considerations. Other potential decision variables include teaching and academic functions ('we need this medication/equipment so that the registrars will gain experience with its use'), assumptions around the provision of an interconnected basic basket of tertiary services (an expectation that there should be no missing components), health worker satisfaction and expectations ('how can we provide a proper service if we don't have X?') and historical precedent ('we've always done it.') A further variable of political importance concerns the 'rule of rescue' – the concept that society may desire expenditure on specific interventions that may not be particularly cost-effective but have considerable emotional appeal to many segments of society (e.g. cancer treatment for children.)

A parallel dilemma concerns unequal access to heath resources between provinces. A province without a centre of excellence providing a support basis for a particular programme may either be given per capita funding which it is unable to spend because of lack of expertise and infrastructure, or may choose to spend it on a less cost-effective option simply because it has the capacity to do so. Provincial autonomy within health care decision making was traditionally supported because of disparities between disease profiles and between health care capacities in different provinces. With easier travel any disease can now occur anywhere, and province-specific dispensations now appear anomalous. For instance, a larger number of malaria patients in KwaZulu-Natal does not mean that patients with the same disease can not travel within hours to another province, where they arguably deserve the same medication availability.

Where a resource is limited (e.g. liver transplantation skills) then such resources should arguably be considered national rather than provincial assets, and expenditure on them should be centrally budgeted and not at the whim of provincial departments with competing needs.

National formulary decision making at this level impacts on programme sufficiency: on the one hand, poor or excessively frugal allocative decisions about medications can lead to

constraint or even crippling of a programme, whereas too lenient provision can boost a programme's resource use beyond what is appropriate. Similarly, policy decisions about programme viability and appropriateness in the absence of clear information about cost-effectiveness, particularly of medication, can skew the balance in medication allocative efficiency – 'the programme exists, therefore we have to provide the medication for it…'

**Potential strategies**

There is a clear need to scrutinise health care funding balance at a tertiary/quaternary level rather than continuing with the year to year 'more of the same' financial allocative formula if inequities in health care provision at this level are to be addressed. In the face of clearly defined budgets to fund this sector, there are a number of possible strategies:

1. Status quo. This is the least arduous for policy makers. Inter-provincial and inter-programme vagaries in allocative efficiency are ignored. There is little disruption to the current system. However, long term sustainability is unclear, because units will continue to advocate for progressively less affordable medications and technologies. There would be little need for a tertiary/quaternary medication review process, other than to provide advice on therapeutic equivalence of already adopted strategies. This strategy does not assist with allocative decision making and cannot lead to a more rational or cost-effective medication usage system in the absence of ability to juggle resources between programmes.
2. Ring-fenced budgets. A decision is made that the country can afford to spend a certain proportion of its heath care budget on particular programmes, and regardless of differential cost-effectiveness, these will be funded to a capped limit. The main issue then is deciding the scale of allocation: if it is left too coarse – e.g. 'oncology' then there is still room for major disputes, such as distribution of funds to programmes for cervical cancer prevention versus disseminated ovarian cancer treatment. If confined to tertiary services, the problem is potentially soluble, but still faces issues of equity regarding variable between-province capacities.
3. Cost-effectiveness cap. Although appealing, this could have serious ramifications for some aspects of tertiary/quaternary care that are clearly less cost-effective than others. A second drawback is the lack of local cost-effectiveness information, and a lack of capacity to do cost-effectiveness analyses.
4. Development of a mutli-dimensional tool incorporating societally determined variables considered important in decision making, coupled with clear guidelines on both programme budget sizes and suggested cost-effectiveness thresholds within those budgets. Such a process would need to be politically sanctioned, would require clear communication of the implications of different weightings for the variables, would need an ongoing and encompassing consultative process, and might need to be adjusted over time as societal wishes changed.

**Conclusions**

The current lack of clarity regarding South Africa's tertiary/quaternary public service health care goals renders formulary decision making problematic. Specifically, two major encumbrances to a functioning tertiary/quaternary medication review process are, on the one hand, lack of clarity about societal wishes (as reflected by political policy setting) regarding desirability and affordability of individual tertiary programmes, and on the other hand the ability of provinces to over-ride national EDL committee decisions, resulting in inequitable availability of health care even between provinces with similar capacities. A number of ways of dealing with these problems exist. Having understood that health care interventions and programmes are not all equally cost-effective, budget caps per programme can be set, with the aim of maximising resource utilisation according to a societally satisfactory set of variables which may include issues other than pure cost-effectiveness. Alternative strategies involve less top-down policy setting and easier preservation of the status quo, but jeopardise attempts at equity and foster distribution of resources to those with loudest voices rather than greatest need.

**Dr AG Parrish**

Department of Internal Medicine, Cecilia Makiwane Hospital, East London Hospital Complex, East London & Member of the National Essential Drug List, Tertiaty/Quaternary level Committee