

## Evidence-Based Decision Making: Using Submission Guidelines to Inform Formulary Approvals

Aslam H. Anis, PhD

Phrases such as “evidence-based decision making” and “technology assessment” are increasingly becoming the language of choice among healthcare decision-makers and practitioners alike. Although the jargon has permeated the profession quite readily, implementation tends to be slower and often meets skeptical resistance.<sup>1</sup> A typical example of this phenomena is the recent developments in the arena of evaluation and prescribing guidelines for prescription pharmaceuticals. Accordingly, pharmaceutical manufacturers are required to submit detailed studies profiling various aspects of their new drugs to drug insurance plans for them to evaluate before granting reimbursement eligibility status. This approach, based on assessing new pharmaceutical innovations with particular emphasis on their cost effectiveness, has recently been implemented in several countries, especially those with publicly funded healthcare systems.<sup>2</sup> Australia and Canada were among the first countries worldwide that began to require drug firms to submit cost-effectiveness data for all new drugs.<sup>3,4</sup> More and more countries are considering similar initiatives and this trend appears to be spreading to the nonpublicly funded sector such as health management plans as evidenced by the Mather et al paper published in this issue of the journal.<sup>5-8</sup>

### Formulary Approvals: Ideal Criteria

The ideal informational requirements for implementing an evidence-based decision-making process for formulary approvals should include clinical data on therapeutic use, demonstrated efficacy and safe-

ty data from randomized clinical trials, and finally cost-effectiveness information. The requirement for cost-effectiveness data often alternatively referred to as “pharmacoeconomic” or as “economic” evaluations is new to the traditional model of drug evaluations. The objective of using economic evaluations to facilitate formulary decision making is based on the economic principle of optimal resource allocation, which relies on “cost benefit” or “cost effectiveness” analyses as its decision making criterion. The ultimate objective of such a process is to maximize the health benefits accruing to beneficiaries of a drug plan given its operating budget. It is important to note the distinction between adopting such an optimizing framework as opposed to strategies that aim to merely contain costs. To achieve such a mandate of “benefit maximization,” cost-effectiveness data on each new drug seeking drug plan coverage has to be evaluated and an implicit rank ordering of the most cost-efficient to the least cost-efficient drugs seeking formulary approval needs to be created. Once this ranking is available, the plan should spend its budget by going down the list until all funds are exhausted. No other allocation of drug plan resources based on other criteria will maximize total health benefits.<sup>9</sup>

### Formulary Approvals: Reality

Mather et al report on their experience with the use of guidelines outlining the information submission requirements for drug manufacturers to facilitate formulary inclusion decisions in the State of Washington. The intent of the original guidelines established in 1994 by Regence BlueShield was to introduce and incorporate evidence-based decision making as a process for both review of the existing and for making additions to the health plan formulary. The early experience with these guidelines was disappointing because the appropriate data on clinical, economic, and socioeconomic variables was not forthcoming from drug manufacturers. Consequently, to

From the Department of Health Care and Epidemiology, University of British Columbia, Vancouver, BC, Canada.

Address correspondence to: Aslam H. Anis, PhD, Center for Health Evaluation and Outcome Sciences, 620-1081 Burrard Street, Vancouver, BC, Canada, V6Z 1Y6.

improve compliance with the informational needs imposed by the new decision-making process, Regence BlueShield implemented revised guidelines necessitating the submission of a detailed dossier that provided projections of the overall (ie, cost, quality-of-life, etc.) impact of the approval decision on the health plan. Concurrently, a process for critical review and evaluation of all industry submitted dossiers was established.

Among the perceived shortcomings of the initial process established by Regence was the lack of available evidence-based assessments of new drugs seeking formulary approval. Mather et al correctly note that this problem was exacerbated as the US Food and Drug Administration (FDA) continued to shorten approval times for "life-saving" drugs. In reality, shortening approval times involves a trade-off. While it may be imperative for the FDA to streamline and shorten its approval process, the more it does so while continuing to ignore the distinction between "efficacy" and "effectiveness"—as well downplaying the role of cost-effectiveness data—the less likely it is that drug manufacturers will produce this information. Further, it is a misnomer to accept that the time needed to produce the appropriate cost and quality-of-life data would necessarily delay the drug approval process. This would hardly be the case if prospective pharmacoeconomic studies were initiated concurrently with the Phase III clinical trials of new drugs.

Canada initially entertained several alternatives with a view towards establishing the appropriate infrastructure/institutions where pharmacoeconomic assessments could be routinely conducted and widely disseminated.<sup>10</sup> Towards this end, national guidelines for the conduct of pharmacoeconomic assessments were published.<sup>11,12</sup> Although conducting pharmacoeconomic analysis or compliance with published guidelines is not a mandatory federal regulation, pharmacoeconomic evaluations are used in several provinces to evaluate new drug products seeking reimbursement eligibility from the provincial drug plan. This is so because in a publicly funded drug plan setting, managers are faced with the problem of having to allocate limited drug plan dollars over the gamut of drugs seeking reimbursement eligibility.

From the experience to date with guidelines, several recommendations and observations can be made. First, the message to industry about the importance of submitting the appropriate type of pharmacoeconomic studies has to be reiterated. Furthermore, establishing minimal standards for

data requirements, acceptable analytical techniques, and presentation format are needed as reinforcements in addition to the currently published guidelines. There must be full disclosure that all currently available evidence has been incorporated into the submission. This would reduce the burden on the reviewers of having to continuously reevaluate their recommendations due to resubmissions. The strategic use of "inappropriate comparators" needs to be discouraged. This occurs when submitting firms choose to compare their new drug with an existing drug that is not the "least costly" or the most "commonly used" alternative to their product so as to project the new drug in the best light.

Finally, using the above process is but one aspect of the multidimensional approach that must be adopted to keep drug plans affordable. In Ontario, the first Canadian province to adopt cost and pharmacoeconomic considerations into their formulary decision making, user fees (patient copayment) were recently instituted. In contrast, in British Columbia, the second province to formally mandate pharmacoeconomic submission requirements, user fees had been instituted several years ago and the province had to subsequently add the cost-effectiveness considerations into the decision-making process. One cannot but come to the realization that the expenditure pressures have been so great that no single policy response has been adequate in and of itself. Nonetheless, when faced with fiscal shortages, adopting a process of rational and evidence-based decision making is superior to ad hoc rationing. We fully expect these processes to evolve as we "learn by doing." For instance, we know from the Australian experience, where the industry's initial reaction and experience with cost-effectiveness guidelines have been published, that this is a dynamic process.<sup>13</sup> The revised Australian pharmacoeconomic guidelines have been criticized by industry as being "more onerous and less flexible."<sup>14,15</sup> The response to the Mather et al guidelines will similarly need to be evaluated in a few years.

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... REFERENCES ...

1. Anis AH, Rahman T, Schechter MT. Using pharmacoeconomic analysis to make drug insurance coverage decisions. *PharmacoEcon* 1998;13(1Pt 2):119-126.
2. Lipsy RG. Institutional formularies, the relevance of pharmacoeconomic analysis to formulary decisions. *PharmacoEcon* 1992;1:265-281.
3. Canadian Coordinating Office for Health Technology

Assessment. *Guidelines for Economic Evaluations of Pharmaceuticals*: Canada. 1st ed. Ottawa: CCOHTA; 1994.

4. Commonwealth Department of Human Services and *Guidelines for the Pharmaceutical Industry on Preparation of Submissions to the Pharmaceutical Benefits Advisory Committee Including Major Submissions Involving Economic Analyses*. Canberra: Australian Government publishing Service; 1995.

5. Ikeda S, Naoki I, Oliver AJ, et al. A case for the adoption of pharmacoeconomic guidelines in Japan. *PharmacoEcon* 1996; 10:546-551.

6. Garattini L, Grilli R, Scopelliti D, et al. A proposal for Italian guidelines in pharmacoeconomics. *PharmacoEcon* 1995;7:1-6.

7. Drummond MF, Rutten F, Brenna A, et al. Economic evaluation of pharmaceuticals: A European perspective. *PharmacoEcon* 1993;4:173-186.

8. Annemans L, Crott R, De Clercq H, et al. Pricing and reimbursement of pharmaceuticals in Belgium. *PharmacoEcon* 1997;11:203-209.

9. Kamlet MS. The comparative benefits modeling project: A

framework for cost-utility analysis of government health care programs. US Department of Health and Human Services; 1992.

10. National Pharmaceutical Strategy Office, National Pharmaceutical Strategy Planning Workshop, Health Canada. June 7-9, 1993; Ottawa, Canada.

11. Detsky A. Guidelines for economic analysis of pharmaceutical products: A draft document for Ontario and Canada. *PharmacoEcon* 1993;3:354-361.

12. Torrance GW, Blaker D, Detsky A, et al. Canadian guidelines for economic evaluation of pharmaceuticals. *PharmacoEcon* 1996;9:535-559.

13. Gorham P. Cost-effectiveness guidelines: The experience of Australian manufacturers. *PharmacoEcon* 1995;8:369-373.

14. Langley PC. The November 1995 revised Australian guidelines for the economic evaluation of pharmaceuticals. *PharmacoEcon* 1996;9:341-352.

15. Grobler MP, Macarounas-Kirchmann K, Pearce GA, et al. Industry comment on the 1995 revised Australian pharmacoeconomic guidelines. *PharmacoEcon* 1996;9:343-356.