

In search of social value

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Economic evaluation is a search for value. The objective: to ascertain the value of what is done in the name of public health in comparison to the value of what is not done, to help ensure that we make the best use of scarce resources.

Increasingly, public health is looking upstream to social interventions that tackle the social determinants of health. These include non-health sector policies in income, housing and education, as well as health promotion activities such as community development that harness the properties of social environments to generate their effects. Social interventions offer the greatest potential for promoting population health and reducing inequalities. They are also relatively untouched by health economics (Rush et al. 2004) and one wonders whether economic methods, developed for health care interventions, are up to the challenge they pose.

The case of the walking school bus (WSB) serves to illustrate the concerns. The WSB is a popular idea. It involves a group of eight children walking to school with two adult supervisors. The alleged benefits are substantial: less traffic congestion and air pollution; more opportunities to meet friends and neighbours, and to make new friends; increased sense of community and self confidence; reduced travel and time costs for parents who are not 'driving' the bus. And health benefits as well: fewer road accidents and increased physical activity leading perhaps to improved cardiovascular fitness, reduced risks of osteoporosis, depression and diabetes, and possibly even obesity.

However, at close to \$1 million Australian per disability-adjusted life-year gained, the WSB is also remarkably poor value for money (Victorian Department of Human Services). Not surprisingly, a synthesis of the economic literature in public health named the WSB among "interventions that have been found to be not cost-effective" (Jan 2007).

The reactions of the two health departments involved in commissioning the original study and the synthesis are not known,

but schools that operate walking school buses do not seem to be heeding the evidence. This may be fortunate. As we will see, the economic evaluation seriously understates the potential value of the WSB.

Problems arise because social interventions have multiple benefits that extend beyond health, even when this is defined broadly. Social interventions also interact with the context in which they are implemented. This sets up feedback loops that generate virtuous and vicious cycles. The benefits of social interventions are multiple, and *multiplied*. For example, the organisers of the WSB program gain administrative and managerial skills that can be generalised to other tasks; the paired bus 'drivers' discuss with each other issues of common concern, such as the corner store that sells cigarettes to pupils, and begin to plan action to stop this; health and social benefits are enjoyed by older children who are now allowed to walk or cycle to school unescorted, and so on.

To capture the value of social interventions we need to track these multiple and multiplier effects. How did the evaluators of the WSB deal with this problem? They ignored it. A long list of potential non-health benefits was identified but not included in the calculations of cost-effectiveness. Of all the possible health benefits, only those due to reduced risk of obesity (modelled through hypothesised changes in body mass) were counted. The benefits of physical activity that are independent of changes in body mass were ignored, as were other health outcomes (from improved road safety for example). The authors duly noted these omissions, but none were taken into account in the analysis and so we cannot tell whether the neglected outcomes would have made a difference. Neither did the subsequent synthesis refer to the authors' many caveats.

As a result, we know that the WSB is not a good way of reducing obesity, but then this was never its (sole) objective. We know nothing, however, of its social value.

The accepted wisdom in economic evaluation is to ensure

that all significant costs and benefits are *identified* even if they cannot all be measured and valued, lest they be otherwise overlooked (Drummond et al. 1987). The authors of the WSB evaluation did exactly this and yet it was not enough. The wisdom works best when the excluded benefits constitute just a small part of the value of the intervention. This may be the case in health care: it is not so in social interventions.

The ethical imperative of opportunity cost demands we evaluate the costs and benefits of health promoting interventions. The WSB example suggests that methodologically health economics has some way to go before it can stand up to the challenge of social interventions. Until we can do a better job of dealing with multiple outcomes, practitioners need to be

vigilant and ensure that we measure everything of value. The alternative is we value only that which has been measured, and this may mean the end of the line for social interventions such as the walking school bus.

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