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Conclusions of cost-effectiveness for an asthma intervention might not be warranted

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To the Editor:

We read with interest about the study by Sullivan et al¹ that evaluated the cost-effectiveness of the National Cooperative Inner-City Asthma Study (NCICAS). The NCICAS appears to be a good candidate for evaluation of the cost-effectiveness of an asthma program, inasmuch as it randomized children to intervention or usual care groups, used a comprehensive asthma care intervention, had sites in multiple urban areas, and enrolled a large number of patients. Sullivan et al stated that their method of analyzing the outcomes, costs, and cost-effectiveness of the NCICAS was in accord with the principles for conducting economic evaluations outlined by the US Public Health Services' Panel on Cost-Effectiveness in Health and Medicine.² Consequently, we were disappointed to examine the details of the method and determine that the conclusion presented in the abstract did not appear to be justified.

The US Health Services' Panel's recommendations on cost-effectiveness analysis (ie, incremental cost per life-year or quality-adjusted life-years gained) were proposed as a mechanism to allow the comparisons of costs and benefits across disease states. The

authors' use of symptom-free days does not lend itself to comparisons of this type, and—as was acknowledged by the authors—it makes interpretation from a policy perspective difficult.

Accordingly, we were surprised to see the conclusion in the abstract that the program was cost-effective. Although there are some general guidelines for what is deemed cost-effective on the basis of cost per quality-adjusted life year, it is entirely unclear what should be considered cost-effective on the basis of an outcome measure of cost per symptom-free day. The authors' assertion that the program was cost-effective appears to be based on the comparison of this study's results with those of Rutten-van Molken et al.³ However, Rutten-van Molken et al acknowledged that whether inhaled corticosteroids are worth the additional costs “would have to be weighed against a range of competing alternative uses of health care resources.”³ In addition, the authors pointed out that a generic quality of life measure would allow for a better assessment of the relative value of the medication.

Additional limitations of the study by Sullivan et al¹ that further compound our concern about the claim of cost-effectiveness are the exclusion of drug costs from the cost-effectiveness ratios and the report of cost savings in the most severe strata when the 95% CIs for these cost-effectiveness ratios included zero.

Given that disease management programs are often targeted at small portions of the population—ie, individuals who consume a large portion of healthcare resources—such programs appear to be rational methods of managing the total costs of care for chronic diseases. Unfortunately, studies examining the return on investment for such programs in patients with asthma have provided mixed results,⁴ and many have not been conducted with sufficient rigor to make their conclusions meaningful. Moreover, given the vested interest that for-profit organizations have in demonstrating the value of disease management programs, our concern is that others will inappropriately and prematurely cite this study as evidence of the cost-effectiveness of disease management programs. Thus, the cost-effectiveness of disease management programs remains an important area for further research.

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1. Sullivan SD, Weiss KB, Lynn H, Mitchell H, Kattan M, Gergen PJ, et al. The cost-effectiveness of an inner-city asthma intervention for children. *J Allergy Clin Immunol* 2002;110:576-81.

[MEDLINE](#)

[CROSSREF](#)

[ABSTRACT](#)

[FULL TEXT](#)

2. Gold M, Siegel J, Russell L, Weinstein M. Cost-effectiveness in health and medicine. New York: Oxford University Press; 1996.

3. Rutten-van Molken MPMH, Van Doorslaer EKA, Jansen MCC, Kerst-jens HAM, Rutten FFH. Costs and effects of inhaled corticosteroids and bronchodilators in asthma and chronic obstructive pulmonary disease. *Am J Respir Crit Care Med* 1995;151:975-82.

[MEDLINE](#)

4. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness: the chronic care model, part 2. *JAMA* 2002;288:1909-14.

[MEDLINE](#)
