

Cost-Effectiveness of the Clinical Practice Recommendations in the AHCPR Guideline for Smoking Cessation

Cromwell, J., Bartosch, W.J., Fiore, M.C., Hasselblad, V., & Baker, T. (1997). Cost-effectiveness of the clinical practice recommendations in the AHCPR guideline for smoking cessation. *JAMA*, 278 (21):1759-1766.



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In the mid-1990s, Congress instructed the Agency for Health Care Policy & Research (now the Agency for Healthcare Research and Quality, AHRQ) to develop and disseminate a guideline to physicians on the best evidence-based practice patterns, including how to help patients quit smoking. As part of the guideline development, 15 smoking interventions were recommended ranging from minimal physician counseling to intensive, multi-visit counseling with adjunct pharmacotherapy. Taking a societal perspective, a cost-effectiveness study was conducted as part of the guideline development. Each of the 15 interventions was costed by valuing physician and other office staff time using Medicare fees and Bureau of Labor Statistics' estimates of nurse and receptionist wages. Times by intervention were provided by expert opinion. Costs of promotional brochures and of nicotine patch and gum pharmacotherapies were also included based on expert estimates of utilization and average wholesale prices.

Published literature provided logistic meta-analysis estimates of quit rates associated with each of the interventions. Quit rates were converted to life-years saved (LYS) and quality-adjusted LYS (QALYS) using published differences in life expectancy of smokers versus non-smokers for various age groups.

Cost-effectiveness ratios were derived for each intervention separately using national smoking rates in 1993 (25%) and expert estimates of the joint likelihood of smokers willing to try to quit and use of the patch or gum. An overall guideline cost-effectiveness ratio was calculated by (expert) weighting of patients' likely choice of intervention intensity.

The guideline was estimated to cost society \$6.3 billion a year in labor and pharmacotherapy costs while producing 1.7 new quitters (\$3,780 per quitter per year). Cost per LYS was \$2,587, and cost per QALY saved was \$1,915. Group intensive counseling had the lowest cost per QALY saved. The guideline's cost-effectiveness ratio was comparable with the costs for cervical cancer screening and pneumonia vaccination and far more cost-effective than annual mammography or hypertension screening.

Link: <http://jama.ama-assn.org/cgi/content/abstract/278/21/1759>