ECONOMIC EVALUATION OF A TOBACCO CESSATION PROGRAM AT A MAJOR CANCER CENTER
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OBJECTIVES: To evaluate the cost-effectiveness of three tobacco cessation pharmacotherapy strategies: varenicline only, nicotine transdermal patch plus nicotine polacrilex gum (NRT), and bupropion plus nicotine transdermal patch. All patients also received multiple individual sessions of cognitive behavioral and motivational intervention, as part of the Tobacco Treatment Program (TTP) for cancer patients at M.D. Anderson Cancer Center. Patients with psychiatric disorders were assessed and treated by the program psychiatrist. METHODS: A decision analytical model was developed and populated with retrospective cost and outcomes data from the TTP databases. The model estimated the incremental cost-effectiveness of the three aforementioned strategies for the treatment of tobacco addiction. Costs included direct institutional medication costs, and the direct costs plus institutional overhead for counseling and psychiatric sessions. All costs were adjusted to January 2008 dollars. The model was evaluated for two outcomes of interest: 1) tobacco cessation—defined as seven-day abstinence after 12 weeks of therapy, and 2) tobacco use reduction of at least 50% after 12 weeks. RESULTS: Efficacy and utilization data from 281 patients in the TTP were used to populate the model. The results showed that NRT (patch plus gum) was the least costly strategy for quitting. However, varenicline was more effective, with an incremental cost-effectiveness of $3,778 per quit event. For reducing tobacco use by at least 50%, NRT was most cost-effective, being the least costly and most effective; dominating the other two strategies for that outcome. CONCLUSIONS: In this sample of cancer patients, NRT in the form of the nicotine transdermal patch and gum appears to be a cost-effective option for reducing tobacco use, although varenicline was found to be most effective when only considering quit rates. The results of this study provide preliminary evidence to guide decision making regarding pharmacotherapy options in tobacco cessation programs.