INTRODUCTION

There are 11 billion smokers worldwide, and about one third of all adults and half of all youth are regularly exposed to tobacco smoke. Estimates indicate that tobacco use is related to some 50 disease and is responsible for as many as 6 million deaths each year. (1) Every year, more than 150,200 of Brazilian people are killed by tobacco-caused disease. Brazil is a world benchmark in combating smoking and promoting actions through the National Program for Tobacco Control and other Risk Factors for Cancer (PNTOFR). The restriction of the availability, control of marketing and commercialization, educational activities in schools, assistance in primary care for health professionals and the general population, control of consumption in public places and work are some of the actions that contributed to reduction in the prevalence of smoking in Brazil from 32.7% in 1997 to 14.8% in 2011. The results indicate the effectiveness of the actions of PNTOFR, but smoking is still a public health problem. (2,3)

OBJECTIVE

Clinical smoking cessation interventions have been found to be highly cost-effective (4). This study aimed to evaluate the cost effectiveness of smoking cessation treatment with drug therapy in a healthcare plan.

METHODS

A self-administered survey was conducted online for 97,983 beneficiaries of a health plan in Brazil, with a sample of 2,188 individuals, using a question with categorical answers, we asked the interviewees if they smoked, never smoked or stopped smoking. The survey also assessed the quantity and time of use of tobacco. A control group was established in the proportion of 3:1. The cost-effectiveness ratio was estimated by the average cost per user who quit smoking compared to those individuals who, despite treatment, continued to smoke. The annual cost was estimated in three aspects: total cost of the health plan, cost per user, and expenditures for smoking cessation drugs. Statistical analysis used OpenEpi version 3.01 software, by calculating the relative and absolute frequencies, means and standard deviation. For analytical statistics, Chi-square tests (Mantel-Haenszel and Fisher’s Exact), when p <0.005.

RESULTS

From the sample of 2,188 individuals, 3.5% were smokers (mean age 52 years, 48% male and 52% female). The use of the health plan by smokers beneficiaries was significantly higher than utilization by non-smokers for outpatient procedures (p <0.001, OR 3.11) and not significant by inpatient events (p = 0.250; OR 3.89). The annual expenditure per smoker was US$ 1,248.00 versus US$ 849.87 by non-smokers (p <0.001; OR 4.40). The cost effectiveness of treatment was calculated separately for each drug and the incorporation by health plan of varenicline 12 weeks, bupropion generic 8 weeks and nicotine replacement therapy 12 weeks showed different success rate scenarios.

CONCLUSIONS

Interventions and programs in order to promote smoking cessation should be considered a standard of good practice in healthcare plans, but, in our study, realized with a private healthcare population, only the incorporation of bupropion seems to be cost effective and should be part of a healthcare program.

REFERENCES