Framingham 10-year high risk cohort was more likely to be defined among less educated, unmarried, overweight/obese people reporting higher numbers of comorbidities, poorer general health, and higher use of public insurance.

**Abstracts**

**PR56**

EFFECT OF NICOTINE GUM PRICE ON MEDICATION ACQUISITION AND SMOKING CESSATION IN AN OVER-THE-COUNTER SETTING

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OBJECTIVES: The objective of this study was to evaluate the effects of nicotine gum price changes on medication acquisition and smoking abstinence outcomes in an over-the-counter setting. METHODS: Adult smokers (N = 270) were randomized to acquire nicotine gum from a study clinic for $20/box, $10/box, or without charge. They were then followed up at 2, 6, and 12 weeks after their initial gum purchase. At each time point, several indicators of smoking abstinence and medication acquisition were used to model the number of acquired boxes of nicotine gum as a function of intervention group, time of follow-up, and the interaction of these two factors. Smoking abstinence was modeled separately at each time point using exact multiple logistic regression. All effectiveness analyses were performed by intent to treat. RESULTS: The mean (SD) number of boxes of gum acquired prior to the 2-week visit was 1.04 (1.21), 1.53 (1.48), and 4.01 (2.26) in the $20/box, $10/box, and $0/box arms, respectively. The mean (SD) number of boxes acquired over the course of the study was 2.11 (1.39), 3.48 (6.69), and 11.42 (12.72) in the $20/box, $10/box, and $0/box arms, respectively. Differences in the number of boxes of gum acquired across intervention groups and time points were statistically significant (p < 0.001). At 26 weeks, abstinence rates were 1.08%, 6.74%, and 10.47% in the $20/box, $10/box, and $0/box arms, respectively. Relative to the $0/box arm, the OR [95% CI] for abstinence in the $10/box and $20/box arms were 0.094 [0.004, 0.590] and 0.620 [0.197, 1.845], respectively. CONCLUSIONS: This is the first study to demonstrate in an OTC setting that the price of nicotine replacement therapy has an effect not only on medication acquisition but also on medication effectiveness. Price was also observed to have a deleterious effect on subject retention.

**PR57**

TRIPLE THERAPY FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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OBJECTIVES: Chronic obstructive pulmonary disease (COPD) is characterized by chronic inflammation throughout the airways, parenchyma and pulmonary vasculature. Three classes of inhaled drugs are prescribed for the treatment of moderate-to-severe COPD: anticholinergic bronchodilators, beta agonist bronchodilators and inhaled corticosteroids. All three have different mechanisms of action, therefore enabling them to be used in combination. Canadian guidelines now recommend use of triple therapy (both bronchodilators plus steroid) for the management of moderate-to-severe COPD and the anticipated increase in the use of triple therapy may have an impact on publicly-funded drug programs. The objective of this research was to determine the clinical effectiveness of triple therapy for the management of moderate-to-severe COPD. METHODS: A systematic literature search was conducted to identify randomized controlled trials of ≥3 months duration, evaluating triple therapy in moderate-to-severe COPD. All three classes of inhaled drugs were prescribed for the treatment of moderate-to-severe COPD and the anticipated increase in the use of triple therapy may have an impact on publicly-funded drug programs. The objective of this research was to determine the clinical effectiveness of triple therapy for the management of moderate-to-severe COPD. OBJECTIVES: A systematic literature search was conducted to identify randomized controlled trials of ≥3 months duration, evaluating triple therapy in moderate-to-severe COPD. All three classes of inhaled drugs were prescribed for the treatment of moderate-to-severe COPD and the anticipated increase in the use of triple therapy may have an impact on publicly-funded drug programs. The objective of this research was to determine the clinical effectiveness of triple therapy for the management of moderate-to-severe COPD.

METHODS: A systematic literature search was conducted to identify randomized controlled trials of ≥3 months duration, evaluating triple therapy in moderate-to-severe COPD. All three classes of inhaled drugs were prescribed for the treatment of moderate-to-severe COPD and the anticipated increase in the use of triple therapy may have an impact on publicly-funded drug programs. The objective of this research was to determine the clinical effectiveness of triple therapy for the management of moderate-to-severe COPD. OBJECTIVES: A systematic literature search was conducted to identify randomized controlled trials of ≥3 months duration, evaluating triple therapy in moderate-to-severe COPD. All three classes of inhaled drugs were prescribed for the treatment of moderate-to-severe COPD and the anticipated increase in the use of triple therapy may have an impact on publicly-funded drug programs. The objective of this research was to determine the clinical effectiveness of triple therapy for the management of moderate-to-severe COPD. OBJECTIVES: A systematic literature search was conducted to identify randomized controlled trials of ≥3 months duration, evaluating triple therapy in moderate-to-severe COPD. All three classes of inhaled drugs were prescribed for the treatment of moderate-to-severe COPD and the anticipated increase in the use of triple therapy may have an impact on publicly-funded drug programs. The objective of this research was to determine the clinical effectiveness of triple therapy for the management of moderate-to-severe COPD.

RESULTS: Of the 2,038 citations identified four were retained for evaluation. Triple therapy was tiotropium plus a fluticasone/salmeterol combination inhaler in 3 trials, with the fourth evaluating tiotropium plus budesonide/formoterol. The monotherapy comparator for all trials was tiotropium. Meta-analyses were conducted for quality of life, lung function and exacerbations. There was a significant improvement in St George’s Respiratory Questionnaire scores: WMD 3.75 (95%CI: 1.56, 5.64) and lung function: WMD 0.06 L (95% CI: 0.03, 0.09). For acute/severe exacerbation rate the pooled OR 0.57 (95% CI: 0.32,1.38) was not significant. Significant reduction in COPD hospitalization rate was also reported using different data types (RR 0.53 and RR 0.33). CONCLUSIONS: There is significant heterogeneity across the trials providing the exacerbation data therefore interpretation of the results of the meta-analyses is difficult. Pooled results are not significant but individual trial results are conflicting. Triple therapy does improve quality of life, lung function and COPD hospitalization rates compared to monotherapy but incremental benefit of triple therapy compared to dual therapy is still unanswered.

**PR58**

RISK OF SERIOUS ASTHMA EXACERBATION AND SPIROMETRY TEST IN CHILDREN

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OBJECTIVES: We examined effectiveness of spirometry for children with asthma in the employer-based insured population using propensity score method. METHODS: A retrospective study of 25,664 children with asthma aged 5 to 18 was conducted with 2003-2007 MarketScan data. The cohort was limited to continuously enrolled children who had at least one emergency department visit or hospitalization (an acute asthma event) due to asthma in 2003-2006. A child was classified as having a spirometry test if that child had at least one spirometry test in 2005-2006. The main health outcome measure was the number of acute asthma events in 2007. We used propensity score matching (PSM) method to control for confounding between the groups with and without spirometry test. Four different PSM strategies were used to find for each child with spirometry all observations among children with no spirometry with close propensity scores: one neighbor (0.02), five neighbors (0.02), local linear regression and kernel matching with bandwidth 0.8. The treatment effect was all children who had a spirometry test while four separate control groups were generated based on each of four PSM strategies previously defined. RESULTS: Children with a spirometry test had similar demographic, geographic, health status and health plan type characteristics to those without; however children with a spirometry test had on average more controller and reliever medication refills and specialist visits related to asthma compared to children without a spirometry test. The average number of acute asthma events in 2007 in the treatment group was 0.105, while that among children without a PMV was 0.117, 0.139, 0.131 in an over-the-counter setting, respectively. CONCLUSIONS: Thus having a spirometry test was associated with 6% to 11% fewer acute asthma events (p < 0.01) depending on the PSM strategies used. CONCLUSIONS: Spirometry testing had a significant positive association with reduced frequency of serious asthma events.