the age range for HPV vaccination were willing to get it. Also, there was a lower prevalence of cervical cancer screening in females 21-29 years old when compared with 30-45 years old. In conclusion, there is a need for more education about HPV associated cancers and vaccine.

53034

Melatonin use and occurrence of respiratory illnesses

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ABSTRACT IMPACT: Melatonin use could alleviate virus-induced respiratory illnesses. OBJECTIVES/GOALS: Melatonin was identified as a potential repurposable drug in the fight against SARS Cov-2. Its ability to attenuate some virus inoculation effects raises the question whether melatonin use could alleviate virus-induced respiratory illness. Here we evaluated the occurrence of respiratory conditions in melatonin users and non-users surveyed. METHODS/STUDY POPULATION: Records from the Medical Panels Expenditure Survey (MEPS) database made available by the Agency for Healthcare Research and Quality were used to evaluate whether melatonin may be associated with reduced viral respiratory disease burden. First, all subjects reporting melatonin use (1996-2017) were collected along with records for all subjects reporting respiratory diseases as identified by consolidated ICD-9/10 codes. Second, all diagnosis codes were retrieved for all individuals identified in the first step. In total there were 201,490 occurrences of the specified conditions among 180,468 unique individuals. The relative risk of specific respiratory disease occurrence was computed for melatonin users and non-users. Population estimates for melatonin use were also determined. RESULTS/ANTICIPATED RESULTS: Among 221 melatonin users, 132 had at least one respiratory illness. Among the 180,468 total subjects reporting at least one respiratory condition, melatonin use was associated with a lower rate of the common cold, pharyngitis, strep throat, scarlet fever, and sinusitis. Furthermore, melatonin was associated with a significantly reduced risk of common cold (RR 0.760, CI 0.587-0.985) and sinusitis (RR 0.407, CI 0.186-0.890). Due to low subject counts, the reduced risk observed for scarlet fever and strep throat was not considered significant. Melatonin users had a higher relative risk of allergic rhinitis (RR 1.393, CI 1.043-1.862) and asthma (RR 2.166, CI 1.672-2.806), probably due to melatonin active prescribing in these patients as sleep aid. DISCUSSION/SIGNIFICANCE OF FINDINGS: Although melatonin showed a lower relative risk of certain viral respiratory conditions, the low melatonin user numbers and their heterogeneous distribution over the time interval led to highly variable population estimates. Yet, our data suggests that melatonin may alleviate viral respiratory illness and deserves further investigation.

56600

Statin use and medical expenditure in patients with Parkinson's disease

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ABSTRACT IMPACT: Despite their clinical benefits reported in patients with Parkinson's, statin use is not associated with cost savings. OBJECTIVES/GOALS: Statins have unique lipid-lowering, anti-inflammatory and anti-oxidant benefits. Their pleiotropic benefits were shown to decrease risk of occurrene and progression of Parkinson's disease (PD). In this study we explored whether or not statin use reflects medical or prescription cost savings. METHODS/STUDY POPULATION: Records from the Medical Panels Expenditure Survey (MEPS) database made available by the Agency for Healthcare Research and Quality were used to identify all PD subjects (n=613). Demographics and PD ICD9/10 codes, 332/G20, were abstracted from the medical condition files for all the subjects (1996-2018). Prescribed cholesterol drugs were identified based on generic and brand names following a manual review to detect any misspellings. Total medical expenses and prescription expenses were abstracted for all identified PD subjects. Subject were surveyed for two consecutive years, thus expenses were assessed for each of the two surveyed years. Costs were adjusted for inflation and expressed in 2018 dollars. The relationship between cholesterol drug use, cost and age or gender was evaluated by Fisher's exact test. RESULTS/ANTICIPATED RESULTS: Out of the 613 PD subjects identified, 421 received no cholesterol management, 15 received non-statins, 153 received a statin and 24 received a statin-based combo therapy. While the medical expenses in the general population receiving a statin are roughly three times higher than non-statin users, no significant cost difference was noticed between PD subjects receiving or not statins. However, after adjusting for age and gender, receiving statin vs. non-statin vs combo vs none was significantly associated with total expense (p=0.017) suggesting that cholesterol management decision may play a significant role. DISCUSSION/SIGNIFICANCE OF FINDINGS: Selection of specific cholesterol treatment may play a considerable role in the overall PD expenditure. Duration of statin treatment and type of statin are expected to play a role.

61586

Impact of Diabetes and Pre-diabetes on Prevalence of Infection with Mycobacterium tuberculosis among Household Contacts of Active Tuberculosis Cases in Ethiopia*

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ABSTRACT IMPACT: This work examines the association between diabetes mellitus and latent tuberculosis infection among a cohort of household contacts exposed to active tuberculosis in Ethiopia, focusing attention on the need for further translational research to determine the mechanisms of susceptibility to Mycobacterium tuberculosis infection among individuals with diabetes and pre-diabetes. OBJECTIVES/GOALS: Diabetes mellitus (DM) is an established risk factor for active TB disease, but there is limited understanding of the relationship of DM and latent tuberculosis (LTBI). We sought to determine the relationship between DM or pre-DM with LTBI among household or close contacts (HHCs) of active TB cases in Ethiopia. METHODS/STUDY POPULATION: We conducted a cross-sectional study of the HHCs of index active TB cases enrolled in an ongoing TB Research Unit (TBRU) study in Addis Ababa, Ethiopia. HHCs of individuals with laboratory-confirmed TB had QuantiFERON ®-TB Gold Plus (QFT) and glycated hemoglobin (HbA1c) tests performed. LTBI was defined as a positive QFT and lack of symptoms. HbA1C results were used to define no DM (HbA1c <5.7), pre-DM (HbA1c 5.7-6.5%), and DM (HbA1c >6.5% or prior history of diabetes). Logistic regression was used to