Medication Use Among Individuals With Work-Related Asthma, Asthma Call-Back Survey, 2012-2013

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Rationale: National guidelines for treatment of asthma were established to improve asthma therapy and outcomes, including long-term control medications to achieve and maintain control of persistent asthma and rescue medications for treatment of acute symptoms and exacerbations. Work-related asthma (WRA) is asthma that is caused or made worse by exposures at work and is associated with poorer asthma control and more severe symptoms than non-WRA. Medication use has not been examined among adults with WRA.
Objective: To assess asthma medication use among adults with WRA, possible WRA, and no WRA.
Methods: Data from the 2012–2013 Asthma Call-back Survey for ever-employed adults (≥18 years) with current asthma from 29 states collecting landline and cellular telephone household data were analyzed. Persons with WRA had been told by a physician that their asthma was work-related. Persons with possible WRA had asthma caused or made worse by their current or previous job, but did not have WRA. Asthma medications taken in the last 3 months were classified as controller and rescue medications based on National Asthma Education and Prevention Program's Expert Panel Report 3 guidelines. Seven drug classes: corticosteroids, anti-inflammatory, anti-cholinergics, short acting β-agonists, long acting β-agonists, leukotriene modifiers, and methylxanthines were examined. Differences in mean number of rescue and controller medications and prevalence ratios (PRs) adjusted for age, sex, race/ethnicity, education, and asthma severity were assessed.
Results: Among an estimated 11 million ever-employed adults with current asthma in 29 states, 14.1% had WRA and an additional 39.8% had possible WRA. Compared with adults with no WRA, persons with WRA and possible WRA, on average, took more controller (0.62 vs 0.46, p-value<0.0001; 0.53 vs 0.46, p-value<0.0001, respectively) and rescue (0.89 vs 0.60, p-value<0.0001; 0.75 vs 0.60, p-value<0.0001, respectively) medications. Furthermore, those with WRA were more likely to use anti-cholinergic medications (PR=2.10, 95% confidence interval [CI]=1.19–3.72) and leukotriene modifier medications (PR=1.38, 95%CI=1.01–1.89) and those with possible WRA were more likely to use methylxanthine medications (PR=2.54, 95%CI=1.24–5.21) than those with no WRA.
Conclusions: Individuals with WRA were prescribed more medications, corroborating previous research indicating WRA symptoms are more severe and potentially more difficult to treat than non-WRA.

This abstract is funded by: This abstract was supported by Cooperative Agreement Number 3U36OE000002 from the Centers for Disease Control and Prevention and the Association of Schools and Programs of Public Health.