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Trends in Rates of Chronic Obstructive Respiratory Conditions Among US Military Personnel, 2001-2013.

- **Source:** U.S. Army Medical Department Journal . Jul-Sep2014, p33-43. 11p. 4 Charts, 5 Graphs.

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- **Abstract:** Background: The US military has been continuously engaged in combat operations since 2001. Assessing trends in respiratory health diagnoses during this time of prolonged military conflict can provide insight into associated changes in the burden of pulmonary conditions in the US military population. Purpose: To estimate and evaluate trends in rates of chronic obstructive pulmonary diseases in the active duty US military population from 2001 through 2013. Methods: A retrospective analysis of ambulatory medical encounter diagnosis data corresponding to a study base of over 18 million personnel-years was performed to estimate average rates and evaluate temporal trends in rates

of chronic obstructive lung conditions. Differences in rates and the time trends of those rates were evaluated by branch of military service, military occupation, and military rank. Results: During the 13-year period, we observed 482,670 encounters for chronic obstructive pulmonary disease and allied conditions (ICD-9 490-496) among active duty military personnel. Over half (57%) of the medical encounters in this category were for a diagnosis of bronchitis, not specified as acute or chronic. There was a statistically significant 17.2% average increase in the annual rates of this nonspecific bronchitis diagnosis from 2001-2009 (95% CI: 13.5% to 21.1%), followed by a 23.6% annual decline in the rates from 2009 through 2013 (95% CI: 8.6% to 36.2%). Statistically significant declines were observed in the rates of chronic bronchitis over time (annual percentage decline: 3.1%; 95% CI: 0.5% to 6.6%) and asthma (annual percentage decline: 5.9%; 95% CI: 2.5% to 9.2%). A 1.6% annual increase in the rate of emphysema and a 0.1% increase in the rate of chronic airways obstruction (not elsewhere classified) over the study period were not statistically significant (P >.05). The magnitude of the estimated rates of these chronic obstructive lung conditions, and, to a lesser extent, the temporal trends in these rates, were sensitive to the requirement that there be persistence of the diagnosis evidenced in the medical record in order qualify as an incident case. Conclusions: We observed decreases in the rates of asthma and chronic bronchitis over the 13-year study period. The increase, and then decrease, over time in rates of bronchitis that has not been specified as acute or chronic drives the overall trends in chronic respiratory disease trends.
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