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Traumatic brain injury and associated sequelae, such as persistent postconcussion syndrome (PCS), have emerged as important public health concerns among military personnel serving in Iraq and Afghanistan. The objective of this study was to examine trends in the incidence of PCS among US service members on active duty between 1997 and 2007. Our primary hypothesis was that the incidence rate for PCS would be relatively stable prior to the initiation of combat operations in Iraq and Afghanistan but would significantly increase after 2002. A retrospective cohort study was conducted utilizing data from the Defense Medical Surveillance System to identify all incident cases of PCS within the study population. Multivariable Poisson regression was used to analyze the data. The overall incidence rate for PCS among all active duty military personnel was 1.09 (95% CI= 1.07, 1.10) cases per 1000 person-years. The adjusted average annual percentage increase in the incidence of PCS from 1997 through 2002 was 8.1%. Following the initiation of combat operations, the average annual percentage increase in the incidence rate for PCS was 49.7%. In comparison to the baseline period (1997-2002), the incidence rate for PCS was 5 times higher (IRR=5.08, 95% CI= 4.83, 5.34) in 2007. Significant increases in the incidence rate for PCS were observed following the initiation of combat operations in Iraq and Afghanistan and trends were influenced by branch of military service, occupational group, and deployment status. The increase in the incidence for PCS suggests an increased burden on the Military Health System during wartime.

**Learning Areas:**
- Epidemiology
- Occupational health and safety
- Public health or related public policy

**Learning Objectives:**
To evaluate changes in the incidence rate of persistent postconcussion syndrome over time in active duty military personnel prior to and following the initiation of combat operations in Iraq and Afghanistan.

**Keywords:** Mental Health, Traumatic Brain Injury

**Poster References**


