



FEAR THE FIRE:

Burn Pits Exposed

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ABSTRACT

Military personnel who deploy to support Operations Enduring Freedom (OEF), Iraqi Freedom (OIF), and New Dawn, may have exposure to airborne hazards. These hazards can include contaminants or toxic substances that are inhaled through the air. The degree of risk for short-term or long-term health effects can vary based on several factors, such as the type of waste burned, the frequency and proximity of exposure, wind direction, and the presence of other environmental hazards like sand or dust. Burn pit exposure can affect nearly every part of the body, including blood, organs, and tissues. In 2014, the VA created the Airborne Hazards and Open Burn Pit Registry to help identify symptoms and health concerns for veterans who may have been exposed to toxic substances. However, the registry had several limitations. In 2017, the National Academy of Sciences evaluated the program and recommended changes, including altering the questions on the registry, increasing completion rates, and developing other methods of study. This discussion will cover airborne hazards and burn pit exposure, risk factors, systems affected, and legislative changes that aim to improve education, research, and treatment for all veterans enrolled in VA healthcare.

LEARNING OBJECTIVES

- Define Airborne Hazards and Burn Pit Exposure
- Evaluate Risk Factors and Populations Affected
- Examine Systems Affected and Nursing Considerations for Burn Pit Exposure
- Airborne Hazards and Burn Pit Information for Health Care Providers
- Human and Fiscal Costs
- Key Communities of Interest
- Analysis of PACT Act, Legislation and Existing Policies
- Burn Pit Registry Information and Recommendations

AIRBORNE HAZARDS & BURN PIT EXPOSURE

- Airborne Hazards are any contaminants or toxic substances inhaled through the air we breathe.
- The Department of Defense cataloged 63 burn pit sites in Iraq as of Nov 2009 and 197 burn pits in Afghanistan as of 2011. (National Academies of Sciences, Engineering, and Medicine, 2017).
- Military Service Members may be exposed to airborne hazards from:
 - Smoke from open burn pits
 - Sand, dust, or particulate matter
 - Air pollution
 - Aircraft exhaust and mechanical fumes
 - Oil well fire smoke

(U.S. Department of Veterans Affairs, 2022)



Images courtesy of VA News.
<https://news.va.gov/104959/teams-working-to-care-for-veterans-exposed-to-burn-pits/#>



SYSTEMS IMPACTED BY AIRBORNE HAZARDS & BURN PIT EXPOSURE

- Bronchiolitis is an infection of the bronchial and bronchiolar epithelial cells causing edema and inflammation which in turn causes airway obstruction (Bith-Melender et al., 2021).
- Cancers of the brain, GI tract, head, neck and throat cancers, kidney cancer, lymphatic cancer, reproductive cancers, and some respiratory conditions are now on the list of presumptive conditions for Airborne Hazards and Burn Pit exposure (U.S. Department of Veterans Affairs, 2022c).

NURSING CLINICAL CONSIDERATIONS

- Nearly all body parts to include blood, organs and tissues have been found to develop symptoms perceived by study participants to be from burn pit exposure (Bith-Melander, 2021).
- Symptom patterns include:
 - Chronic breathing difficulty
 - Fatigue
 - Generalized Pain
 - Memory Issues
 - Slow recovery
 - Sleep disturbances
 - Light Sensitivity
 - Skin conditions
 - Chronic Infections



AIRBORNE HAZARDS AND BURN PIT INFORMATION FOR HEALTHCARE PROVIDERS

- When discussing exposure with veterans, make sure to listen attentively and show that their concerns are taken seriously.
- Exposure Ed app can help healthcare providers engage veterans in discussing military exposures and provides an easy way to share information and search VA facilities to help veterans get the care they need.

HUMAN COSTS

- Since 2001, more than 2.7 million U.S. military members have been deployed in support of Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn in Central Asia (Afghanistan and Kyrgyzstan), Southwest Asia (Iraq, Kuwait, Qatar and United Arab Emirates), and Africa (Djibouti) (Garshick et al., 2019). Approximately 45% of those members have deployed multiple times (Falvo et al., 2014).
- Respiratory illnesses were reported in 69% of 15,459 U.S. military members who were surveyed after being deployed to Iraq or Afghanistan from 2003-2004 (Garshick et al., 2019).

FISCAL COSTS

Congressional Budget Office (CBO)

Title I. Expansion of Health Care for Toxic Exposure Veterans

- Section 101 and 102 would expand health care to veterans who had service connected environmental exposures to toxic substances, airborne hazards, or open air burn pits (CBO, 2021).
 - 75% of veterans not previously eligible for healthcare would become eligible
 - It is estimated by 2026, over 1.5 million veterans would newly enroll into VA health care with an average yearly cost of \$7,400 for each veteran.
 - Health Care costs under title I would total over 78.3 billion from 2022-2031.
 - Presumption of service-connected exposure is estimated to result in 17,000 additional veterans receiving compensation with estimated cost of 89.5 billion between 2022-2031.

KEY COMMUNITIES OF INTEREST

- Military members deployed to Iraq and Afghanistan demonstrate increased rates of acute respiratory symptoms during deployment and may be at a greater risk of post-deployment respiratory symptoms and illness (Falvo et al., 2014).
- Characteristics of deployed military members may raise the health risks of airborne hazards and burn pit exposures include:
 - Smokers- Approximately 40% of active duty military members smoke (Falvo et al., 2014). Tobacco use while deployed is 2 times higher than tobacco use in non-deployed military members (Falvo et al., 2014). Cigarette smoke increases the susceptibility to airborne hazards.

ANALYSIS

- Analysis of existing system/policy and recommendations for practice
 - Future longitudinal research needed with comprehensive and objective assessments to better understand long-term health implications associated with airborne hazards during deployment to Iraq and Afghanistan (Falvo et al., 2014).
 - Veterans Burn Pits Exposure Recognition Act of 2021 requires the VA to concede health care benefits and wartime disability compensation that a veteran was exposed to specific toxic substances, chemicals and hazards from burn pits while on active duty in covered location during a covered period of time (Public Law No: 117-133).

AIRBORNE HAZARDS AND OPEN BURN PIT REGISTRY

The VA Airborne Hazards and Open Burn Pit Registry was created in 2014 to help the VA understand possible health effects of toxic exposure and proactively help identify symptoms and health concerns for veterans to discuss with their health care providers (VA Pact Act, 2022).

- Veterans can voluntarily join the registry to provide information to help the VA understand long-term health conditions related to toxic exposures and burn pits.
- Joining the registry with or without symptoms or illness can help the VA provide better care to other veterans.
- Veterans are eligible to join if they were deployed to Southwest Asia or Egypt anytime after August 2, 1990 or Afghanistan, Djibouti, Syria, or Uzbekistan on or after September 11, 2001.
- Registry includes an online questionnaire and an optional, free evaluation (Public Health, 2022).

OVERCOMING CHALLENGES

Many veterans are unaware of their eligibility for benefits and services related to their service (White House, 2022).

- In November of 2021, the VA began a campaign to encourage veterans to file claims related to environmental exposures.
- Compensation and pension providers have mandatory training to understand and treat veterans with toxic exposure concerns.
- VA has implemented a network of specialized providers and a call center called VET-HOME, which specializes in patient assessments in regards to the health effects of military toxic exposures.

OPEN BURN PIT REPORT TO CONGRESS

- DoD prohibits the use of open burn pits for waste disposal unless there is no other alternative.
- Specific requirements on reporting, analysis of waste management plans, frequency of monitoring and health assessments has reduced the overall exposure to service members.
- Risk management and exposure monitoring continue to be the solution until an alternative is found for waste management.
- DoD works with the VA on burn pit registry enrollment to improve education, research, and care for veterans.

OPEN BURN PIT REGISTRY LIMITATIONS AND RECOMMENDATIONS

National Academy of Sciences committee was asked to evaluate the VA Airborne Hazards and Open Burn Pit Registry program in 2017.

- Recommendations made to remove questions from survey and to provide alternate means of completion such as mail-in forms and computer-assisted phone interviews to reach those who may not use the internet but would still like to participate.
- Recommendations made to formulate strategies to encourage completion and submission rates. Limitation identified that nearly 40% of those who started the questionnaire completed it, and the data for the partially finished was not available.
- Recommendations made for the VA to develop other means for evaluating potential health issues related to airborne hazards such as a well-designed study to evaluate the relationship between exposure and health outcomes.
- Analysis has revealed registry is unsuitable for assessing whether exposures have caused health problems. The committee recommends that service members, veterans, family members, the VA, Congress, and any other interested parties develop a realistic understanding of both the limitations and the strengths of the registry so more appropriate studies can be conducted to improve healthcare for those affected by airborne hazards and burn pits.

THE PACT ACT AND VA BENEFITS

The Promise to Address Comprehensive Toxics (PACT Act) is a law that expands VA healthcare benefits for veterans exposed to toxic substances including burn pits providing benefits and care to veterans and their survivors.

- Over 20 more presumptive conditions have been added, meaning the VA will automatically presume the service caused the condition without having to “prove” anything.
- Requires VA to provide a toxic exposure screening to every veteran enrolled in VA healthcare.
- Helps improve education, research, and treatment options related to exposures.
- Veterans and survivors are encouraged to apply for benefits now. The VA will begin processing benefits in January 2023 and will likely backdate the benefits to the date of the bill signing.

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