



# Airborne Hazards and Open Burn Pit Registry Overview for Department of Defense Health Care Providers

Adapted by the U.S. Army Public Health Command from the presentation  
by Paul Ciminera, MD MPH for Veterans Health Administration staff

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# Terminal Learning Objectives

- Participants will learn:
  - The history leading up to the establishment of the registry
  - The eligibility requirements for the registry
  - What we hope to gain from the registry
  - How the registry is set up
  - The roles of medical staff in accomplishing medical evaluations for registry participants
  - Medical considerations for the clinician seeing registry participants
  - Where to go for more information about the registry
  - Frequently asked questions about the registry

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- Eligibility
- Purpose
- Process
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- Common Questions

# Background: History

- In January 2013, President Obama enacted Public Law 112-260 requiring VA to establish an open burn pit registry to
  - monitor the health of Veterans who may have been exposed to airborne hazards
  - inform Veterans about the registry, and
  - periodically notify Veterans of significant developments related to the study and treatment of conditions associated with exposures.
- In August 2013, VA and the Department Of Defense extended registry participation to Active Duty Servicemembers.
- The registry is now available to Veterans, Reservists, National Guard members, Coast Guard members, and Active Duty Servicemembers who served in the Southwest Asia theater of operations on or after August 2, 1990, or in Afghanistan or Djibouti on or after September 11, 2001.

## Background: What is the concern about airborne hazards and open burn pits?

- Burn pits were used in Operation Enduring Freedom and Operation Iraqi Freedom to dispose of all sorts of solid wastes.
- Material may have included human and medical waste, as well as substances known to generate carcinogens and other harmful substances through the combustion process.
- In addition, elevated levels of particulate matter from industrial activities and other man-made and natural sources contributed to poor air quality in many locations. Many deployed individuals wonder if these exposures affected their health.

## Background: What are the clinical concerns?

- There are published reports of higher rates of self-reported pulmonary symptoms, higher rates of asthma, sinusitis, and rare, unexpected conditions (e.g., eosinophilic pneumonia and constrictive bronchiolitis) among Servicemembers deployed to Southwest Asia.
- However, there are also publications that report finding no elevation in disease or symptom-reporting. Given the different methods and conclusions of these studies, it is still unclear exactly what problems deployed individuals may develop or how widespread these problems are. However, current evidence does warrant heightened clinical attention to individuals reporting cardiopulmonary symptoms.

## Background: What does the IOM say?

- In 2011, the Institute of Medicine (IOM) reviewed the scientific literature related to the possibility of adverse long-term health effects of open burn pits. The report noted U.S. Department of Defense air quality monitoring data measured levels of particulate matter (PM) higher than generally considered safe by U.S. regulatory agencies.
- It also cited work linking high PM levels to cardiopulmonary effects, particularly in individuals at increased risk due to pre-existing conditions such as asthma and emphysema. The IOM concluded there is only limited evidence suggestive “of an association between exposure to combustion products and reduced pulmonary function in these populations.”

# Eligibility

- Eligibility for the registry is based on deployment information from the Department of Defense.
- Eligibility includes Veterans and Servicemembers who deployed to contingency operations in **Southwest Asia on or after August 2, 1990.**
- Eligibility includes Veterans and Servicemembers who deployed to **Afghanistan or Djibouti on or after September 11, 2001.**
- These regions include the following countries, bodies of water, and the airspace above these locations:  
Iraq, Afghanistan, Kuwait, Saudi Arabia, Bahrain, Djibouti, Gulf of Aden, Gulf of Oman, Oman, Qatar, United Arab Emirates, Waters of the Persian Gulf, Arabian Sea, and Red Sea



# Purpose

To ascertain and monitor potential health effects from exposure to airborne environmental hazards in Servicemembers.

## Airborne Hazards and Open Burn Pit Registry

### Is this for me?

- The registry is a database of information about **Veterans and Servicemembers** collected through a questionnaire.
- **OEF/OIF/OND** or 1990-1991 Gulf War **Veterans and Servicemembers** can use the registry questionnaire to report exposures to airborne hazards (such as smoke from burn pits, oil-well fires, or pollution during deployment), as well as other exposures and health concerns.

[Learn more »](#)

### Why sign up?

- Create a snapshot from which to identify changes in your health.
- Print and use your completed questionnaire to discuss concerns with your provider.
- Learn about follow-up care and VA benefits.
- Instructions are available if you need assistance with the questionnaire.

[Get Registry Help »](#)

### Sign up in 3 easy steps

1. Use your Department of Defense Self-Service **Logon (DS Logon)** to access questionnaire.
2. Complete entire questionnaire and submit.
3. Print or save completed questionnaire for your records.

[Need a DS Logon? »](#)

[DS Logon Sign in »](#)

## Process: In Brief

- The registry consists of a web-based self-assessment to be completed by the eligible Veteran or Servicemember.
- The questionnaire will be available at:  
<https://veteran.mobilehealth.va.gov/AHBurnPitRegistry>
- When the questionnaire is complete, Veterans and Servicemembers can print it out or save a copy.
- Participants may schedule an optional in-person clinical evaluation.

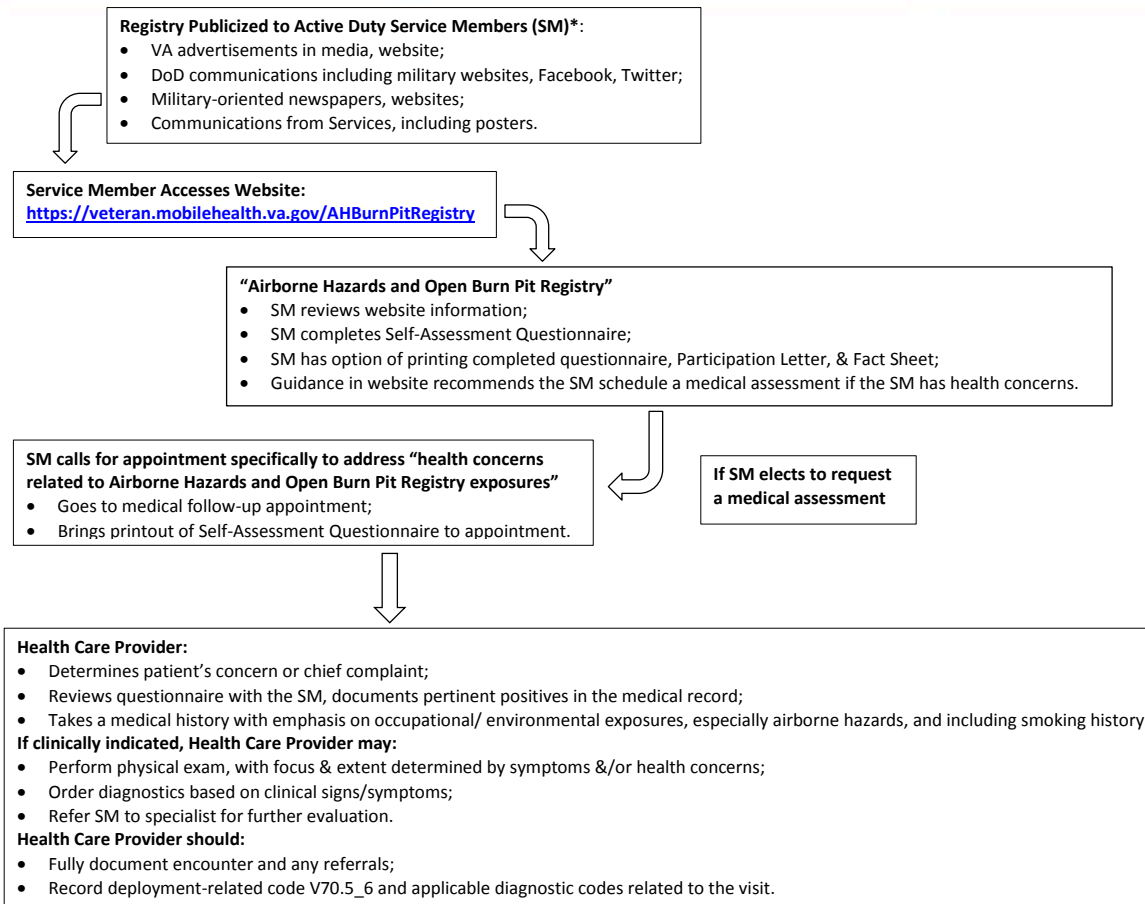
# Process: Self-Assessment Categories

- Deployment Information
- Displays country name and dates from DoD. Asks the Servicemember or Veteran to validate, and select contingency bases from list provided to VA from DoD.
- Asks about activities that may affect health (burn pit exposure, blowing dust, pollution, blast and weapon exposures).
- Exposure Concerns
- Organ effects (respiratory, kidney, reproductive, cancer, etc.)
- Level of concern (high, medium, low)
- Type (past illness, current illness, future illness)
- Health (diagnosed conditions and symptoms)
- Activity limitations (exercise ability, breathlessness)
- Additional risk factors that may affect a Servicemember's or Veteran's health (occupation, hobbies, second-hand smoke, tobacco use, residential address).
- Veteran or Servicemembers preferred communications (web, email, mail, in-person)

## Process: Medical Evaluation

- Servicemembers are encouraged to print a copy of their completed questionnaires for their own files.
- Servicemembers may schedule an in-person medical evaluation to address questions and concerns they have about their potential exposures, as well as any questions or concerns about their medical and mental health status.
- Servicemembers should be encouraged to bring a copy of their completed questionnaire to their appointment.
- **DoD medical treatment facilities** will provide **Active Duty Servicemembers** with a voluntary medical evaluation upon request.
- Whether discharged or still serving, **Reserve Component members** (Army and Air National Guard, and Reserve) will be managed by the **VA** in the same manner as other Veterans. The VA will provide a voluntary medical evaluation upon request.
- A medical evaluation is **not** required for enrollment in the registry.

# Process: Schematic



\*Retirees and Reserve Component personnel who are not activated will be managed by VA

# Process: Communication about the Registry

The DoD will inform Servicemembers about the registry through:

- Websites
- Fact sheets
- Social media (Facebook and Twitter)
- Print products
- Articles and news releases
- Point-of-care education
- Re-deployment health briefing

## Staff Roles and Responsibilities: Administrative Staff

- Be aware of the registry and Servicemembers' right to a medical evaluation once the questionnaire is complete.
- Be aware that Servicemembers may have printed registry questionnaires for the health care provider to evaluate.
- Facilitate the encounter appropriately.

# Staff Roles and Responsibilities: Health Care Providers

- Requested medical examinations must be completed.
- A printed questionnaire is not required, but ensure the Servicemember is enrolled in the registry.
- Treat the patient, not the exposure
  - Physical exam, ancillary tests, and referrals should be
    - targeted towards the patient complaints, signs, symptoms, etc., and
    - based on the clinical and professional judgment of the provider.
- There are **no** specific ancillary tests or referrals required unless clinically indicated.
- There are **no** specific reporting back requirements or additional forms for the registry.
- Annotate the clinical record with the deployment-related code V70.5\_6 in addition to diagnostic codes.



# Staff Roles and Responsibilities: Health Care Providers

## Health risk communication

- Ensure questions from Servicemembers and Family members about exposures, diagnoses, exam findings, ancillary test findings, including negative results, are addressed.
- Listen to the Servicemember's concerns to establish trust and credibility, and to assess gaps in knowledge and differences of opinion. This information can be critical for making decisions about management of health concerns. Identifying areas of agreement and focusing on risk reduction and optimization of health and function may provide a constructive way forward.
- Health risk communication is a paradigm of communication that emphasizes the importance of building trust through active listening and empathy, recognizing the relevance of perceptions of possible harm, and the uncertainties related to extent of exposure, relationship between exposures and possible health effects, diagnostic certainty, management options, and prognosis.

## Clinical Considerations: Initial Evaluation

- Assess the intensity and specific focus of concern of the individual using a health risk communication approach. Patients seeking medical attention may have a variety of symptoms and exposure concerns.
- At this time, there are no biomarkers specific to the environmental exposure-related health concerns of U.S. Servicemembers deployed to Southwest Asia, Afghanistan, or Djibouti.
- Clinicians must rely on their own evidence-based knowledge, expertise, and skills to guide a patient-centered evaluation and management.

# Clinical Considerations: Initial Evaluation (continued)

## Initial evaluation (continued)

- Airborne hazards exposure and possibly associated health risks are complex issues with many uncertainties.
- Other risk factors may be present, such as past or current:
  - cigarette smoking
  - civilian occupational exposures
  - other inhalation exposures which can complicate causal attribution
- The complex interplay can result in disagreement about the relative contribution of various risk factors to the current health status of a patient.
- **It is often impossible to ascertain the contribution of a particular risk factor for an individual.**

## Clinical Considerations: Initial Evaluation (continued)

Initial evaluation example:

- For an individual with chronic lower respiratory symptoms, such as wheezing, chronic cough, or dyspnea with exertion, the following might be appropriate:
  - **a complete blood count (CBC)**—to rule out anemia
  - **posteroanterior and lateral chest radiographs**—to rule out significant structural abnormalities
  - **pulse oximetry**—to assess for hypoxia
  - **spirometry with bronchodilator**—to assess pulmonary function and reversibility of bronchoconstriction
- Other symptoms should be evaluated according to best clinical practices, as well.

# Clinical Considerations: Specialty Consultations

- Specialty evaluations should be requested in the context of the patient's concerns, symptoms, initial evaluation findings, and the comfort level of the primary care team. Specialty evaluations are considered part of the registry evaluation and are available at no cost to the Servicemember or Veteran.
- Specialties of particular relevance include:
  - Pulmonary (PULM)
  - Ear, nose and throat (ENT)
  - Allergy/immunology (ALL/IMM)
- Consultations might result in additional assessments, such as high-resolution chest computerized tomography (CT) scan, full pulmonary function tests, assessment of vocal cord function, cardiopulmonary exercise tests, or lung biopsy.

## Clinical Considerations: Patients with Normal Spirometry

“There is no single approach to evaluating the young patient with dyspnea and normal spirometry.

Most consideration should be given to establishing the presence or absence of AHR, upper airways disorders such as vocal cord dysfunction, and ruling out underlying parenchymal lung disease.”

This quote and the following algorithm are taken from:

Thomas B. Zanders, Pedro F. Lucero, David G. Bell, William C. Frey, Georgette Haislip, Michael J. Morris. San Antonio Military Medical Center, Pulmonary Disease Clinic. Presented at the CHEST 2012 Clinic Center of Excellence, Atlanta, Georgia, October 22–24, 2012.

# Clinical Considerations: Patients with Normal Spirometry (continued)

NORMAL SPIROMETRY	CONSIDERATIONS
Spirometry Post-BD	Review spirometry for reduction in FEV <sub>1</sub> ; 12% increase Post-BD diagnostic of airway hyperactivity (AHR)
Spirometry w/symptoms	Intermittent nature of asthma may require repeat spirometry when patients are symptomatic
Chest radiograph	Will be normal in most patients; helpful to eliminate pulmonary infiltrates, effusions, or mediastinal disease
Complete blood count	Rule out anemia, especially in females
Inspiratory FVL	Review the inspiratory flow volume loop (FVL) on all spirometry exams for truncation or flattening
Exercise laryngoscopy	Presence of abnormal FVL or history of inspiratory wheezing or noisy breathing; diagnostic for vocal cord dysfunction

# Clinical Considerations: Patients with Normal Spirometry (continued)

NORMAL SPIROMETRY	CONSIDERATIONS
Bronchoprovocation testing	With normal spirometry, important to rule out underlying airway reactivity such as exercise-induced bronchospasm (EIB).
Methacholine	Most common test used for AHR with good negative predictive value; diagnostic for EIB with associated exercise symptoms
Mannitol	Newest modality with equivalence to methacholine; requires 15% decrease in FEV <sub>1</sub>
Eucapnic hyperventilation	Equivalent to methacholine for diagnosing AHR but requires 15% decrease in FEV <sub>1</sub>
Exercise spirometry	Poor predictability compared to other methods and may not reproduce symptoms in laboratory setting
Impulse oscillometry	Newer modality that measures airway resistance and may identify AHR based on reduction in post-bd values



# Clinical Considerations: Patients with Normal Spirometry (continued)

NORMAL SPIROMETRY	CONSIDERATIONS
High resolution CT	May identify subclinical lung disease, airway trapping or bronchiectasis; low diagnostic yield in this population
Cardiopulmonary exercise testing	Primarily used to assess patient's ability to exercise and measure VO <sub>2</sub> max. Given limited reference values and low suspicion for cardiac disease, may not identify specific cause
Allergy evaluation	Consideration for allergy testing in patient with other atopic symptoms such as atopic dermatitis, allergic rhinitis
Cardiology evaluation	Very low likelihood of cardiac disease in a younger population. Referral should be based on physical exam findings
Electrocardiogram	Numerous nonspecific changes found in younger population and rarely diagnostic
Echocardiogram	Numerous nonspecific changes found in younger population and rarely diagnostic

# Clinical Considerations: War Related Illness and Injury Study Center

After local medical evaluation is completed, some patients may have complex, difficult-to-diagnose or medically unexplained health concerns related to airborne hazards concerns or other deployment-related exposures. For these patients, consultation with the DoD Deployment Health Clinical Center or VA [War Related Illness and Injury Study Center \(WRIISC\)](#) might be appropriate.

## Additional Resources

Additional information for DoD clinicians is available at:

<http://phc.amedd.army.mil/PHC%20Resource%20Library/AHOBPR.pdf>

Please make a note of this address or save it as a favorite.

Up-to-date information about the registry and related resources is available at the VA Office of Public Health:

<http://www.publichealth.va.gov/exposures/burnpits/action-plan.asp>

# Common Questions

## **Q-1: I am experiencing symptoms that I believe are related to exposure to burn pits. What should I do?**

**A-1: Veterans:** Medical professionals in military exposures and health care benefits are available at VA medical centers. Veterans who are already enrolled in VA health care should talk to their primary care provider or Patient Aligned Care Team (PACT) to schedule an appointment for a medical evaluation. Veterans who are not already enrolled should contact an Environmental Health Coordinator at the nearest VA medical center. Find the nearest Environmental Health Coordinator by visiting the following link: <http://www.publichealth.va.gov/exposures/coordinators.asp>

**Active Duty (Active Duty Service members, including activated Reserve and Guard personnel):** If you have any health or exposure concerns, you may contact your local military hospital or clinic to schedule an appointment for a voluntary medical evaluation. You should state that you are calling for an appointment specifically to address “health concerns related to the Airborne Hazards and Open Burn Pit Registry exposures.” DoD will provide you with a voluntary medical evaluation upon request. Please note a medical evaluation is NOT required to be in the registry.

**Reserve Component members (Army and Air National Guard, and Reserve):** Whether discharged or still serving, these individuals will be managed by the VA in the same manner as other Veterans. The VA will provide a voluntary medical evaluation upon request. If you are a Veteran or inactive/separated National Guard or Reservist, and you are enrolled in the VA Health Care System, you should contact your primary care physician or Patient Aligned Care Team (PACT) to schedule an appointment for a medical evaluation. If you are a Veteran or inactive/separated National Guard or Reservist, are not enrolled in the VA Health Care System and would like to schedule an initial no-cost medical evaluation, please contact a VA Environmental Health Coordinator (EHC) in your area by visiting this link: <http://www.publichealth.va.gov/exposures/coordinators.asp>

## Common Questions (continued)

### **Q-2: How do I participate in the Airborne Hazards and Open Burn Pit Registry?**

**A-2:** Visit the following link: <https://veteran.mobilehealth.va.gov/AHBurnPitRegistry/>. You will be required to enter your DS Logon information to access the registry. If you do not have DS Logon information, or forgot your information, please visit the following link to obtain DS Logon information: <https://www.dmdc.osd.mil/appj/dsaccess>. Once you have DS Logon information, you may login in and complete the registry.

### **Q-3: Why should I participate in the registry?**

**A-3:** Veterans and Servicemembers should participate in the registry to become more aware of their health, to receive information about ongoing health studies and VA services, and to create a “snapshot” of their health to assist discussing their health concerns with a health care provider. Veteran participants are also eligible for a no-cost Veterans Health Administration medical evaluation. In addition, other benefits include helping VA learn more about the health effects of exposure to burn pits and other airborne hazards. By participating, Veterans are helping VA to monitor certain diseases and health conditions.

## Common Questions (continued)

### **Q-4: Am I eligible to participate?**

**A-4:** VA will use deployment data provided by the Department of Defense (DoD) to determine your eligibility. To be eligible, you must be a Veteran or Servicemember who deployed to contingency operations in the Southwest Asia theater of operations at any time on or after August 2, 1990 (as defined in 38 CFR 3.317(e)(2)) or Afghanistan or Djibouti on or after September 11, 2001. These regions include the following countries, bodies of water, and the airspace above these locations: Iraq, Afghanistan, Kuwait, Saudi Arabia, Bahrain, Djibouti, Gulf of Aden, Gulf of Oman, Oman, Qatar, United Arab Emirates, Waters of the Persian Gulf, Arabian Sea, and Red Sea.

### **Q-5: What is a burn pit?**

**A-5:** The use of burn pits was a common waste disposal practice at military sites outside of the U.S. such as in Iraq and Afghanistan. Smoke and other emissions from these pits contained an unknown mixture of substances that may have short and long-term health effects, especially for individuals who were exposed for longer periods or those with pre-existing conditions such as asthma or other lung or heart conditions.

## Common Questions (continued)

### **Q-6: What is the Airborne Hazards and Open Burn Pit Registry?**

**A-6:** The registry is a tool to help Servicemembers and Veterans to become more aware of their own health issues and to help the Department of Veterans Affairs (VA) to identify health conditions possibly related to burn pit exposure during military service. Participation in the registry is voluntary. Active duty Servicemembers and Veterans can enroll in the registry by completing a web-based health questionnaire about their exposures and health. Information reported by participants is maintained in a secure database, and may be used in future research studies.

### **Q-7: Do I need to participate in the Airborne Hazards and Open Burn Pit Registry to submit a claim for disability compensation through VA?**

**A-7:** Veterans do not need to participate in the registry to submit a claim for disability compensation. The registry and the disability compensation processes are separate and not related. Veterans can find information on how to submit a claim for disability compensation through VA at the following link: <http://www.benefits.va.gov/compensation/>

## Common Questions (continued)

### **Q-8: Why did VA develop the on-line registry?**

**A-8:** Studies have shown that many Veterans, particularly those who served September 2001 or later, use the Internet frequently to seek information on VA benefits and services and to obtain news and information. Veterans who receive health care from VA view blogs and online videos about health more frequently than Veterans receiving care elsewhere. Research also shows that more Veterans receiving care from VA report having signed up to receive email about health issues when compared to Veterans not receiving care from VA.



## Common Questions (continued)

### **Q-9: What types of questions should I be prepared to answer?**

**A-9:** We estimate that the questionnaire should take no longer than 40 minutes to complete. The questions have been designed to give us a broad picture of your health and current and past exposures. You will be asked a series of questions in the following categories:

- Deployment timeframes and bases to which you were stationed
- Conditions and health issues that cause difficulty with daily activities
- Current and past health symptoms
- Residential history (where you lived)
- Occupational history (what type of work you do)
- Dust, gas, vapors or fumes exposures
- Home environment and hobbies
- Health care use
- Contact preferences

## Common Questions (continued)

**Q-10: Why does the questionnaire ask questions about my current job and hobbies?**

**A-10:** It is important for medical providers to have a complete picture of your health. The questionnaire asks a broad range of questions because an individual's health is greatly influenced by their lifestyle. Health conditions can worsen over time from additional or prolonged exposures received during work or recreation. Note: Your current or past jobs, hobbies, civilian exposures, and lifestyle will not affect eligibility for benefits.

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Thank You

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<http://www.publichealth.va.gov/>