

VETERANS HEALTH ADMINISTRATION (VHA) MILITARY EXPOSURE RESEARCH

National Advisory Environmental Health Sciences (NAEHS) Council

June 4-5, 2024

Karen Block, Ph.D.

Director of Gulf War Research Program

Designated Federal Officer – Research Advisory Committee on Gulf War Veterans' illnesses

Office of Research and Development

U.S. Department of Veterans Affairs

810 Vermont Avenue, NW (14RD) (Station 127)

Office location: 811 Vermont Ave



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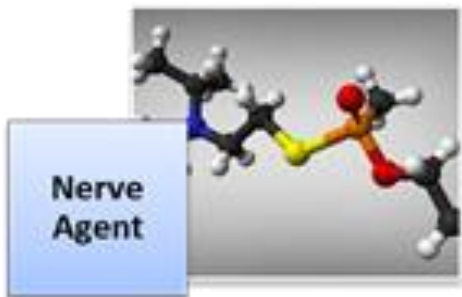
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DEPLOYMENT-RELATED MILITARY EXPOSURES

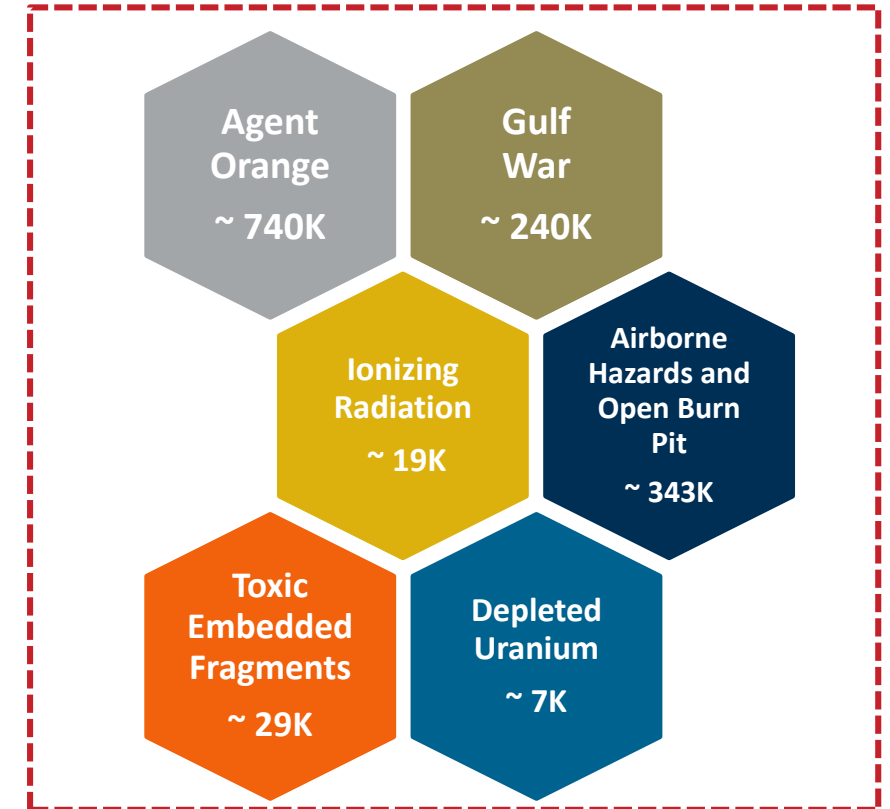


The Veterans Health Administration has two complementary offices that provide different strengths to generate evidence and inform policy on military exposures

Health Outcomes Military Exposures (HOME)

- Maintains Congressionally-mandated Military Environmental Exposures registries.
- Provides surveillance and epidemiologic studies on exposures and health outcomes.
- Monitors scientific literature and trends in Veterans Benefits Administration claims data, Veteran healthcare, morbidity and mortality outcomes.
- Manages / supports 3 War Related Illness and Injury Study Centers (WRIISCs)
 - Clinical care, research, and education
- Manages / supports Congressionally-designated centers:
 - Airborne Hazards and Burn Pits Center of Excellence
 - Toxic Embedded Fragments/Depleted Uranium Center (TEF/DUC)

Six Congressionally-mandated exposure registries

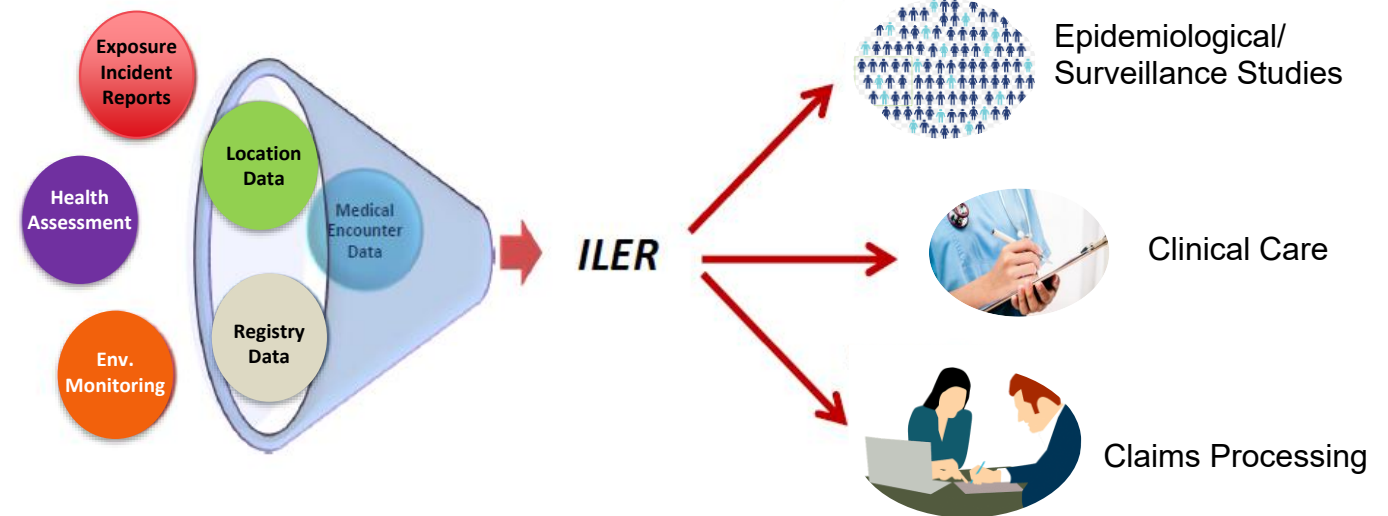


Individual Longitudinal Exposure Record (ILER)

ILER for Research

Joint DOD:VA trusted data sources into a web-based application that links individual exposures to locations.

- Time of Deployment
- Locations and events during deployments
- All-Hazard occupational data
- Environmental hazards that were known or found later
- Medical encounter information



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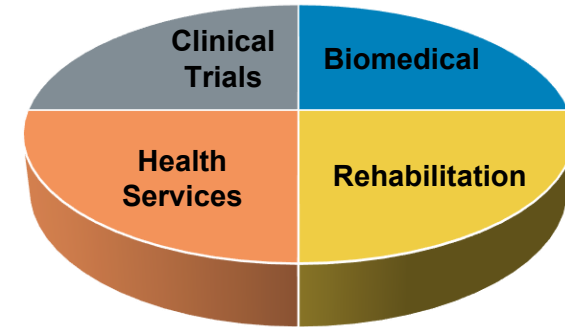
VHA Office of Research and Development (ORD)

- ~100 VAMCs conduct research.
- Over 90% of U.S. medical schools partner with VA for clinical training and research.
- VA Research is an Intramural Program.
- ORD funds peer-reviewed research conducted by VA field investigators.
- Broad, extensive research portfolio that balances the needs of all Veterans.

Other Programs/Repositories supported by ORD:

- Cooperative Studies Program
- Million Veteran Program
- Brain Bank
- VA SHIELD (COVID biorepository)
- Airforce Health Study – Vietnam Ranch hand, Agent Orange Exposure. 90k specimens including: Whole blood, Serum, Urine, Semen, Skin and fat biopsies, Stool smears

SAVE THE DATE: August 13 – 15, 2024



CVD
NEPHROLOGY
NEUROLOGY
ONCOLOGY
PULMONOLOGY

GASTROENTEROLOGY
MENTAL HEALTH
PAIN/OPIOD
PTSD
MILITARY EXPOSURES

- **1990-91 Gulf War Research Program** (congressionally mandated, 2002: PL 105-368)
- **Military Exposure Research Program** (Vietnam and post-911 Era, est. 2022)



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COLLABORATIVE RESEARCH

- **SUBJECT MATTER EXPERTISE**
- **TECHNOLOGIES**
- **REPOSITORIES (DATA & SPECIMENS)**



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The 1990-91 Gulf War (Operation Desert Shield/Desert Storm)

- The United States and coalition forces campaigned together to liberate Kuwait from Iraq's invasion.
- After the 43-day air campaign and 100-hour ground operation, the U.S. led coalition expelled Iraq from Kuwait.

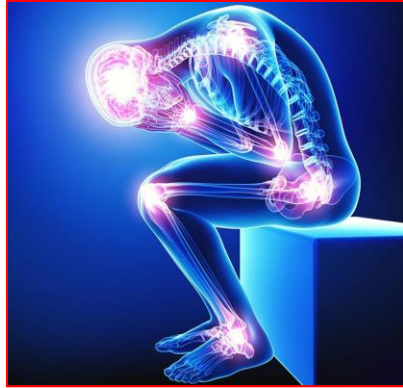
However, a new battle was starting...

- Approximately 35% of returning troops (US and coalition forces) were experiencing new and debilitating health concerns without explanation.
- Health concerns experienced by Gulf War service members encompassed a variety of symptoms and disorders.
- These health issues remain in Gulf War Veterans (GWV) and are known as Gulf War Illness (GWI) or chronic multi-symptom illness.



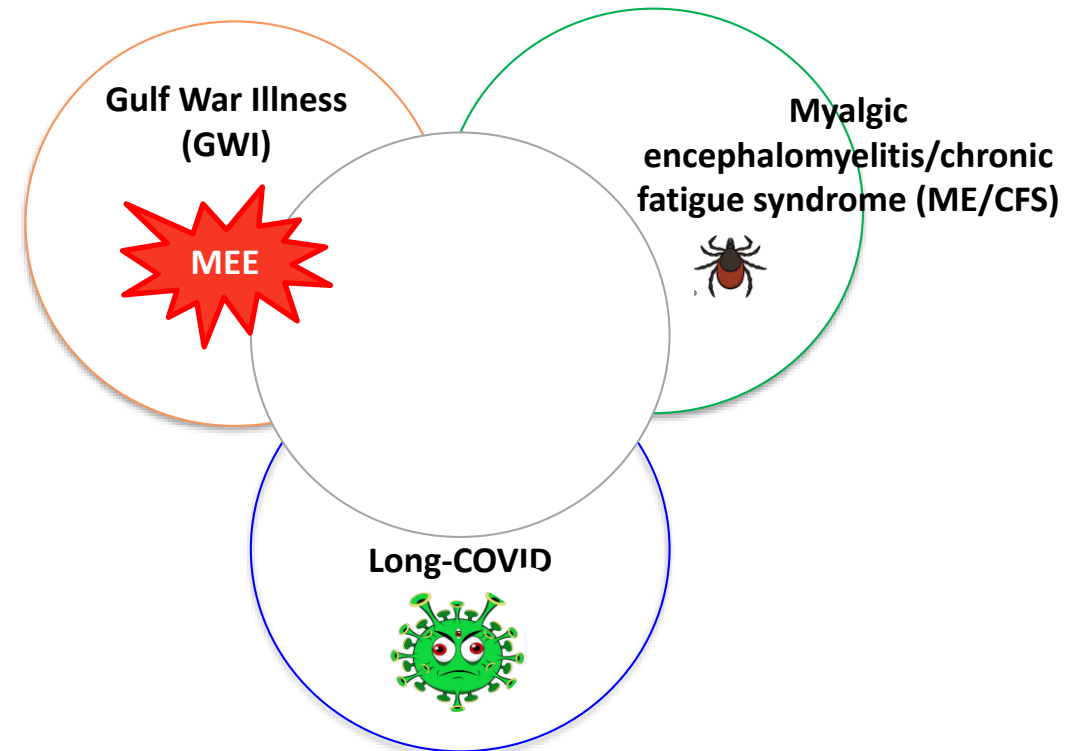
GULF WAR ILLNESS (1990-91)

Program-Directed Research: Building knowledge through collaborations



Common Symptoms (mild to severe)

- Chronic Fatigue
- Irritable Bowel Syndrome
- Brain Fog (Cognitive Dysfunction)
- Skin Rash
- Widespread pain: Joint Pain, Fibromyalgia, Migraine
- Respiratory issues



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Project IN-DEPTH VA:NIH NINDS



*Study Co-Chair,
Washington DC*

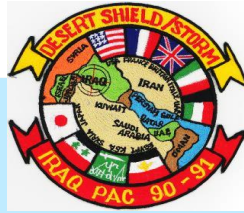
M. Reinhard, PsyD



*Study Co-Chair,
Miami FL*

N. Klimas, MD

VA PI Team



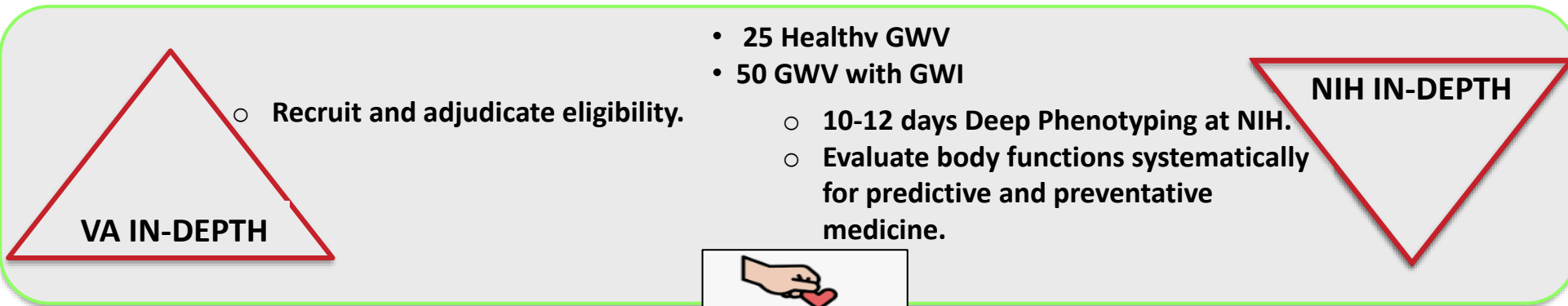
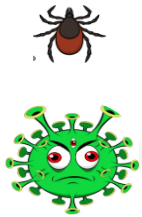
1990-91 GWV



*NIH/NINDS,
Principal
Investigator*

B. Walitt, MD

NIH Study Team



- 25 Healthv GWV
- 50 GWV with GWI
 - 10-12 days Deep Phenotyping at NIH.
 - Evaluate body functions systematically for predictive and preventative medicine.



For more information on recruitment, please visit:

Project IN-DEPTH - War Related Illness and Injury Study Center (va.gov)



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Post-Exertion Malaise in Gulf War Illness VA:COLUMBIA UNIVERSITY

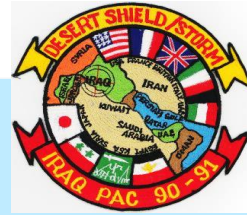


**Study PI,
Madison, WI**
D. Cook, PhD



**Study Co-PI,
NJ WRIISC**
M. Falvo, PhD

VA PIsTeam

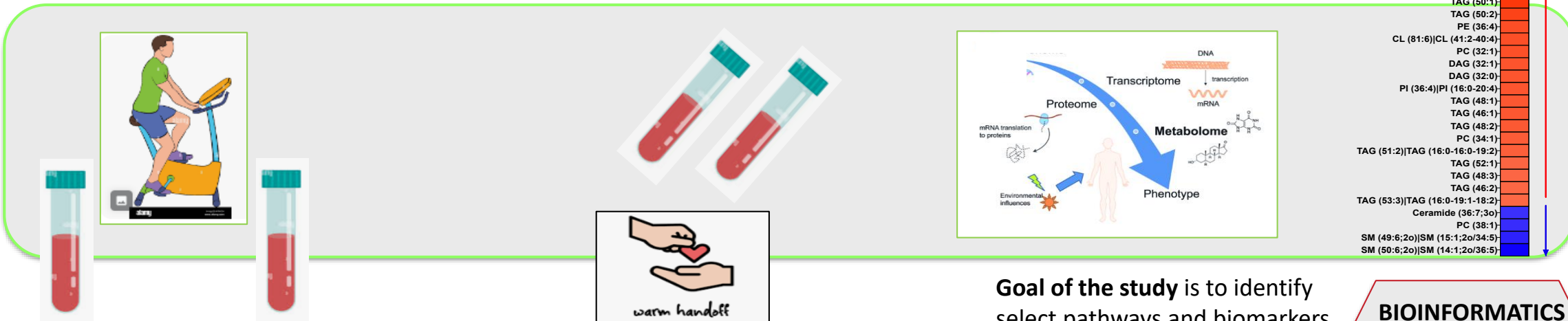


1990-91 GWV



**Columbia
University**
I. Lipkin, MD

**Columbia Study
Team**



Goal of the study is to identify select pathways and biomarkers in response to physical exertion in GWV with and without GWI.

**BIOINFORMATICS
PATHWAY ANALYSIS**



For more information on the GWI Exercise Study:
800-225-5170



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Veterans Health Administration

H.R.3967: Sergeant First Class Heath Robinson Honoring our Promise to Address Comprehensive Toxics (PACT) Act of 2022



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What is the PACT Act?



Vietnam



Gulf War Era



Post-9/11 Afghanistan and Iraq



The Sergeant First Class Heath Robinson

Promise to Address Comprehensive Toxics (PACT) Act of 2022

is a new law that expands VA health care and benefits for Veterans exposed to burn pits and other toxic substances. This law helps us provide generations of Veterans—and their survivors—with the care and benefits they've earned and deserve.

The PACT Act :

- Expands and extends eligibility for VA health care for Veterans with toxic exposures and Veterans of the Vietnam era, Gulf War era, and Post-9/11 era.
- Expands eligibility for benefits for Veterans exposed to toxic substances.



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PACT ACT, 2022

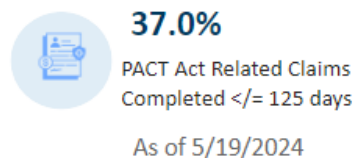
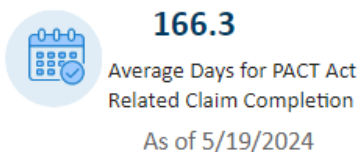
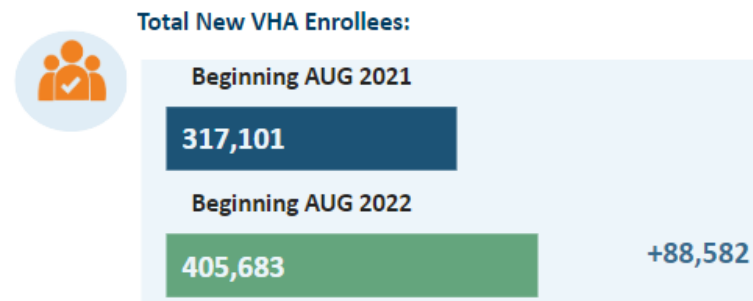
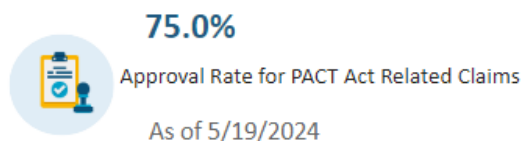
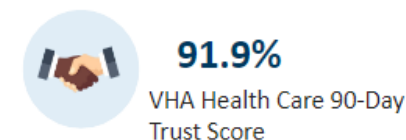
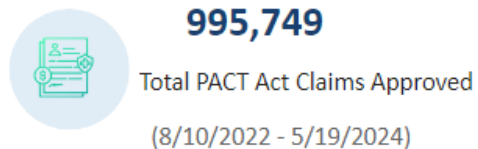
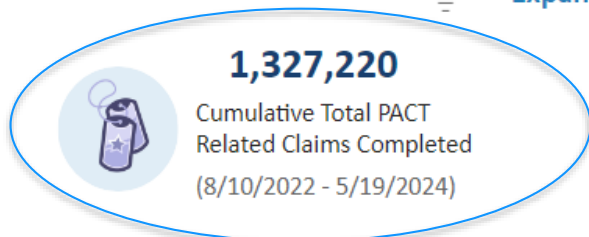
(EXPANDING CARE AND BENEFITS TO VETERANS EXPOSED TO TOXIC SUBSTANCES)

BENEFITS AND CARE

The PACT Act is perhaps the largest health care and benefit expansion in VA history. In this section, we are measuring the overall impact of PACT Act in terms of its expansion of health care and benefits.

Expanding Benefits

Expanding Care



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Gulf War Era and Post-9/11 Eligibility

If a Veteran served in any of these locations and time periods, they are eligible for the new Gulf War-related presumptions. This includes the airspace above any of these locations.



On or After August 2, 1990:

- Bahrain
- Iraq
- Kuwait
- Oman
- Qatar
- Saudi Arabia
- Somalia
- The United Arab Emirates (UAE)



On or After September 11, 2001:

- Afghanistan
- Djibouti
- Egypt
- Jordan
- Lebanon
- Syria
- Uzbekistan
- Yemen



PACT ACT (NEW Presumptive Coverage)

As of August 10, 2022, a long list of new conditions are presumed to be service-connected due to various in-service toxic exposures. **APPLY NOW** at [VA.gov/PACT](https://va.gov/PACT) to expedite your claim and benefits.

- Asthma (diagnosed after service)
- Brain cancer
- Chronic bronchitis
- Chronic obstructive pulmonary disease (COPD)
- Chronic rhinitis
- Chronic sinusitis
- Constrictive bronchiolitis or obliterative bronchiolitis
- Emphysema
- Gastrointestinal cancer of any type
- Glioblastoma
- Granulomatous disease
- Head cancer of any type
- High blood pressure (hypertension)
- Interstitial lung disease (ILD)
- Kidney cancer
- Lymphoma of any type
- Melanoma
- Monoclonal gammopathy of undetermined significance (MGUS)
- Neck cancer
- Pancreatic cancer
- Pleuritis
- Pulmonary fibrosis
- Reproductive cancer of any type
- Respiratory (breathing-related) cancer of any type
- Sarcoidosis



PACT Act Title V: Research Matters

Section 501 Overview

SEC. 501. INTERAGENCY WORKING GROUP ON TOXIC EXPOSURE RESEARCH.

(a) ESTABLISHMENT.—

(1) **IN GENERAL.**—Not later than one year after the date of the enactment of this Act, the Secretary of Veterans Affairs shall, in collaboration with the heads of the entities described in paragraph (2), establish the Toxic Exposure Research Working Group (in this section referred to as the “Working Group”).

(2) **COMPOSITION.**—The Working Group shall consist of employees, selected by the Secretary, of the following:

(A) The Department of Veterans Affairs.

(B) The Department of Defense.

(C) The Department of Health and Human Services.

(D) The Environmental Protection Agency.

(E) Other entities of the Federal Government involved in research activities regarding the health consequences of toxic exposures experienced during active military, naval, air, or space service.

(b) **FUNCTIONS.**—The Working Group shall perform the following functions:

(1) Identify collaborative research activities and resources available among entities represented by members of the Working Group to conduct such collaborative research activities.

(2) Develop a five-year strategic plan for such entities to carry out collaborative research activities.

(c) **REPORTING.**—The Secretary shall submit to the Committee on Veterans’ Affairs of the Senate and the Committee on Veterans’ Affairs of the House of Representatives the following:

(1) Not later than one year after the date of the enactment of this Act, a report on the establishment of the Working Group under subsection (a).

(2) Not later than two years after the date of the enactment of this Act, a report containing the collaborative research activities identified, and the strategic plan developed, by the Working Group under subsection (b).

(3) Not less frequently than annually during the five-year period covered by the strategic plan under subsection (b), a progress report on implementation of the strategic plan.

(d) **TERMINATION.**—The Working Group shall terminate after submitting the final report under subsection (c).



PACT Act Section Spotlight: 501

Toxic Exposure Research Working Group (TERWG)

YEAR 1 (FY2023)

Legislative Requirements

- Establish a federal wide ‘working group’ consisting of employees of VA, DOD, EPA, HHS and other entities involved in research activities regarding the health consequences of toxic exposures experienced during active military.

Approach

- Socialized the PACT Act SEC. 501 charge and needs with mission-aligned Federal agencies with the goal of establishing collaborations in research activities regarding the health consequences of toxic exposures experienced during active military.
- Partnered with Executive Office of the President (EoP)/Office of Science and Technology Policy (OSTP), National Science and Technology Council’s (NSTC’s), Joint Subcommittee on Environment, Innovation and Public Health (JEEP) to leverage broad toxic exposure expertise, infrastructure, and resource capabilities across the Federal family.
- Formal letters to join the TERWG were sent.
- ~35 SMEs and representatives from 8 federal departments and several agencies joined.



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FY23 - Establishment of the Federal 'WORKING GROUP' Toxic Exposure Research Working Group (TERWG)

Co-Chairs

Benjamin Place, Assistant Director for Environmental Health, OSTP

Karen Block, Director Gulf War Research, Veterans Health Administration, ORD

Melanie Buser, Health Scientist, Agency for Toxic Substances and Disease Registry

Mark S. Johnson, Director, Toxicology, Defense Health Agency - Public Health [2023 – 2024]

Thomas Sussan, Chief, Toxicity Evaluation Division, Defense Health Agency - Public Health [2024 – Present]

Executive Administrator

Marsha Turner, Health System Specialist, Veterans Health Administration, Durham

Technical Writer

Daniel Sloper, Technical Writer-Editor, Veterans Health Administration, ORD



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Toxic Exposure Research Working Group (TERWG)

Strategy Team Members

David Balshaw, HHS/NIH/NIEHS
Michelle Buchanan, DOE
Shae Buchanan, VA/VBA/MET
Antonia Calafat, HHS, CDC
Joel T Culpepper, VA/VHA/HOME
Maria Carolina Gonzalez-Prats, VA/VBA
Kathie Dionisio, EPA/ORD
Annette Guiseppi-Elie, EPA/ORD
Kim Heermann-Do, VA/FEHRM
Grant Huang, VA/VHA/ORD
Steven P Jones, DOD/OASD-HA
Kaitlin Kelly-Reif, HHS/CDC/NIOSH
Kathryn Kundrod, EOP/OSTP/JEEP
Carmine S Leggett, EOP/OMB
Michael Lewin-Smith, DOD/JPC
Ruth M Lunn, HHS/NIH/NIEHS
Coty Maypole, DOD/DHA
Suril Mehta, HHS/NIH/NIEHS

Sri Nadadur, HHS/NIH/NIEHS
Patricia Passman, DOD/ASD-R
Molini Patel, DOS
Charles Pitrat, DOD/DHA
Pamela Protzel-Berman, HHS/CDC/NCEH/ASTDR
Christopher M Reh, HHS/CDC/NCEH/ASTDR
Jessica Reiner, DOC/NIST
Catherine Rimmer, DOC/NIST
Rudolph P Rull, DOD/NHRC
Peter Rumm, VA/VHA/HOME
Carla Ryan, VA/VBA/MET
Patricia Underwood, DOD/OASD/EI&E
Natalia Vinas, DOD/OASD/EI&E
Christine Whittaker, HHS/CDC/NIOSH
Marc Williams, DOD/DHA
Jody R Wireman, DOD/OASD-HA
Joey Zhou, DOE/EHSS



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PACT Act Section Spotlight: 501

Toxic Exposure Research Working Group (TERWG)

YEAR 2 (FY2024)

Legislative Requirements

- **(1)** Identify collaborative research activities and resources available among entities represented by members of the Working Group to conduct such collaborative research activities.
- **(2)** Develop a five-year strategic plan for such entities to carry out collaborative research activities.

WORKING GROUP MEETINGS:

- The TERWG CO-CHAIRS meet weekly.
- The full TERWG meets bi-weekly (since June 26, 2023, with exception of Holidays).

ACTIVITIES:

- VA and DOD military exposures research and initiatives were presented to the TERWG.
- Key research gaps were identified.
- Non-military mission aligned exposures research was discussed and outside efforts were highlighted.
- A landscape synthesis of trusted resources and capabilities across the TERWG representatives was conducted.



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PACT Act Section Spotlight: 501

STRATEGIC PLAN

STRATEGIC PLAN APPROACH

- A problem formulation was developed to provide a central focus of scope and discussion across all agencies for the plan.
- The TERWG successfully identified research needs and key priorities toward the understanding of adverse health effects from military toxic exposures.
- A strategic plan frame-work, including a directional and infrastructure strategy was formulated.

PRIORITIES:

The **directional strategy** outlines three high level categories of research priorities with meaningful, specific, measurable, and attainable goals.

- **Category A:** Characterizing the military exposome (defined as military exposures encountered by a person serving in the armed forces throughout entrance and exit of military service).
- **Category B:** Linking military exposures to toxicity and adverse health outcomes, and
- **Category C:** Preventing and mitigating adverse health outcomes from military toxic exposures.

A TERWG **infrastructure** strategy was incorporated to frame interagency needs for leveraging resources and conducting of the 5-yr mission-aligned strategic plan.



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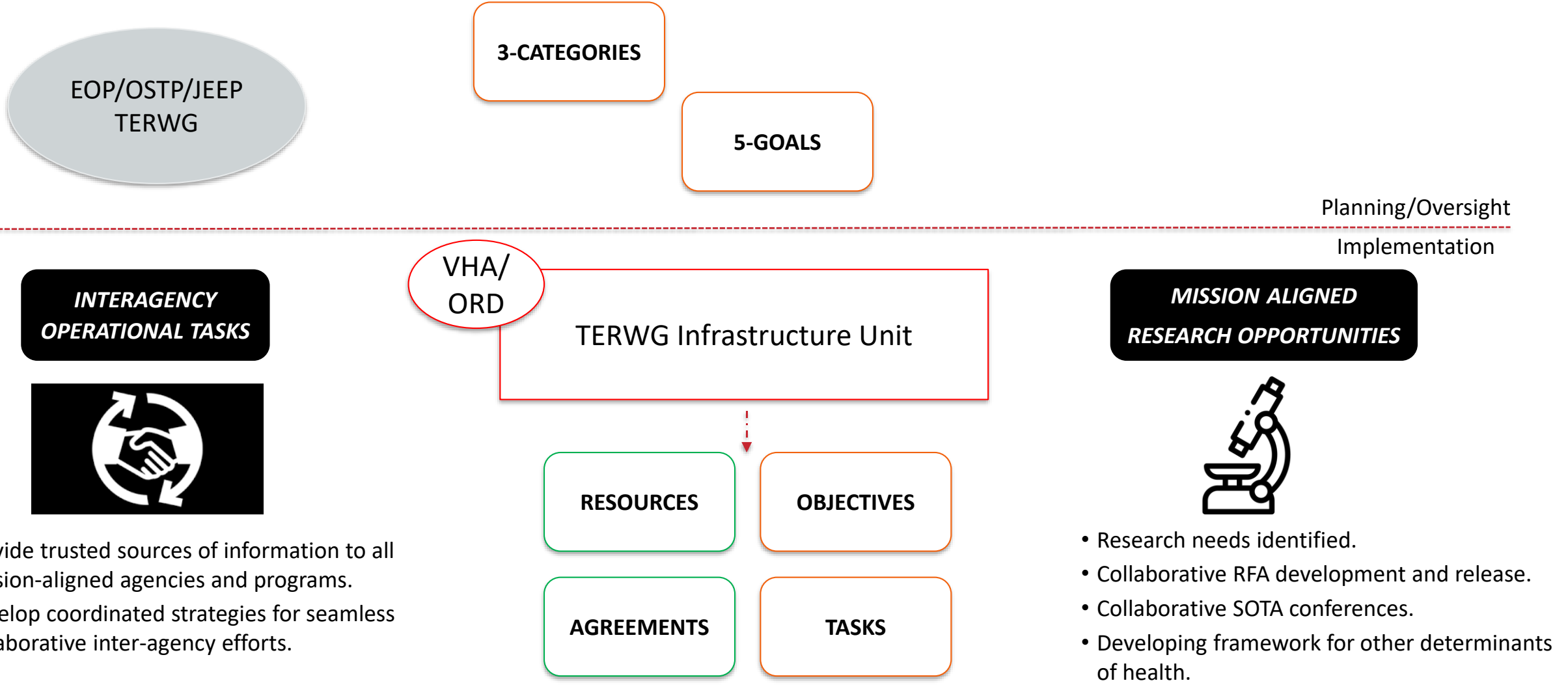
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TERWG STRATEGIC PLAN

Understanding Adverse Health Outcomes from Military Toxic Exposures



Toxic Exposure Research Working Group (TERWG) SUMMARY

FY24 Accomplishments:

- Congressional Mandated Report (FY24) is under agency wide concurrence (Deadline: Aug 2024).

Key actions planned for FY25

- Continue TERWG under the unprecedented partnership with OSTP's National Science and Technology Council (NSTC)/Joint Subcommittee on Environment, Innovation, and Public Health (JEEP) infrastructure to facilitate discussions and progress on topics under the plan.
- Establish an organizational entity dedicated to coordinating operational/administrative, scientific, and regulatory activities for research on toxic military exposures (VHA/ORD).
- Develop and manage mechanisms for collaborative military toxic exposures research including governmental and non-governmental partnerships.



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KAREN.BLOCK@VA.GOV



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