



Considerations and Strategies for Obtaining an Occupational & Environmental Exposure History from a Veteran

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March 22, 2024

Disclaimer

The views expressed in this presentation are those of the presenters and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.

There are no financial conflicts of interest to disclose.



Presentation Outline

Introduction to the WRIISC

Military Culture & Exposure Context

Clinical Case Study – Strategies for Exposure History

Neurocognitive Considerations for Exposure Concerns

Institutional Betrayal in the Context of Military Exposures

Psychosocial Considerations for Exposure Concerns

Summary and Tips for Effective Communication



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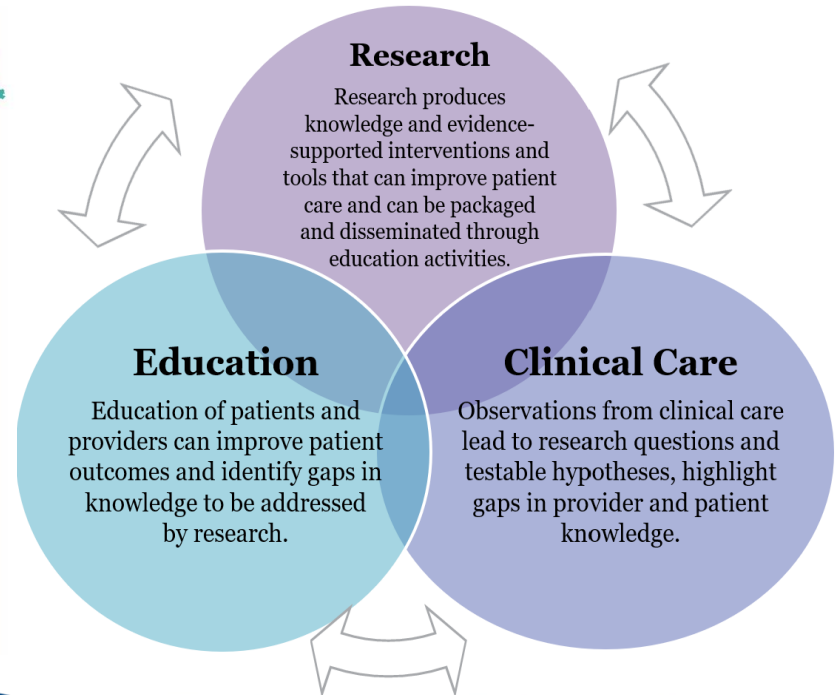
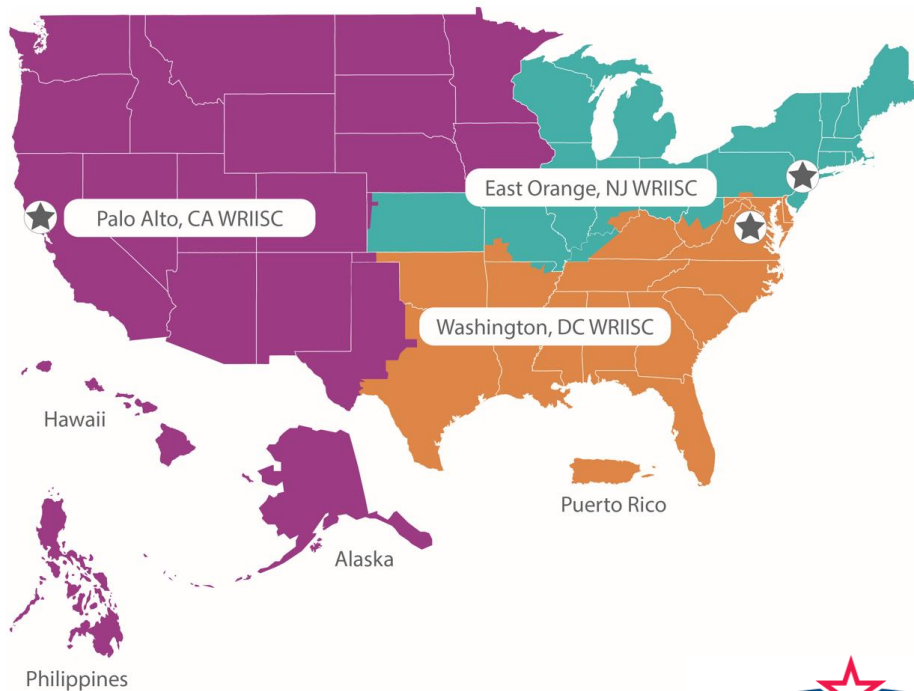


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War-Related Illness and Injury Study Center

A National VA Post-Deployment Health Resource

(Public Law 105-368, 1998; WRIISC established 2001)



WRIISC in VHA Services

4. War Related Illness and Injury Study Center

- Expertise in deployment-related health and exposure concerns
- Special access to data related to exposures concerns
- Familiarity with the range of treatment and specialty resources available
- Inform research, education, and policy through direct patient care

3. Local post-deployment health expertise

- More advanced knowledge of deployment-related health and exposure concerns
- Greater knowledge of treatment resources and approaches
- Coordination of referral to higher level resources

2. Primary care

- Basic military cultural competency
- Knowledge of general deployment-related health and exposure concerns
- Primary care-appropriate knowledge of local treatment and rehabilitation resources
- Basic understanding of benefits and familiarity with community resources

1. Public health surveillance

- Health care utilization reports
- Pre- and post-deployment health assessment surveys
- Environmental monitoring
- Casualty reports

WRIISC is a tertiary care service designed to:

- Consult and support the field
- Learn from the Veterans we help
- Innovate for our population

WRIISC Clinical Program

- The WRIISC is a National Program under Health Outcomes of Military Exposures (HOME).
- WRIISC provides expert “second opinion” consultations on issues regarding post-deployment health and related environmental exposures.
- WRIISC provides clinical evaluations for Veterans with difficult to diagnose and/or treat conditions and deployment-related exposure concerns from all conflict eras.
- Primary Care Physicians complete an “IFC War Related Illness” consult request in CPRS.
 - <http://www.warrelatedillness.va.gov/referral/va-referrals.asp>



WRIISC Clinical Interfacility Consult (IFC) Program

WRIISC E-Consults (all referrals)

- Thorough medical record review
- Diagnostic impressions
- Tailored recommendations for next steps
- Engages Provider(s) and Veteran

Comprehensive Interdisciplinary Evaluations

- Interdisciplinary evaluation with WRIISC clinical team;
- Provides diagnostic impressions and a “road map” of tailored recommendations to improve function and quality of life

Environmental Exposure Assessments

- Assesses potential contribution of exposures to Veteran health concerns as a component of comprehensive evaluation
- Stand-alone service with telehealth consults available

Components of a WRIISC Comprehensive Clinical Evaluation

✓ Medical/History & Physical

✓ Exposure Assessment Evaluation

✓ Neuropsychological Evaluation

✓ Psychosocial / Social Work Evaluation

± Advanced & Innovative Diagnostic Tests

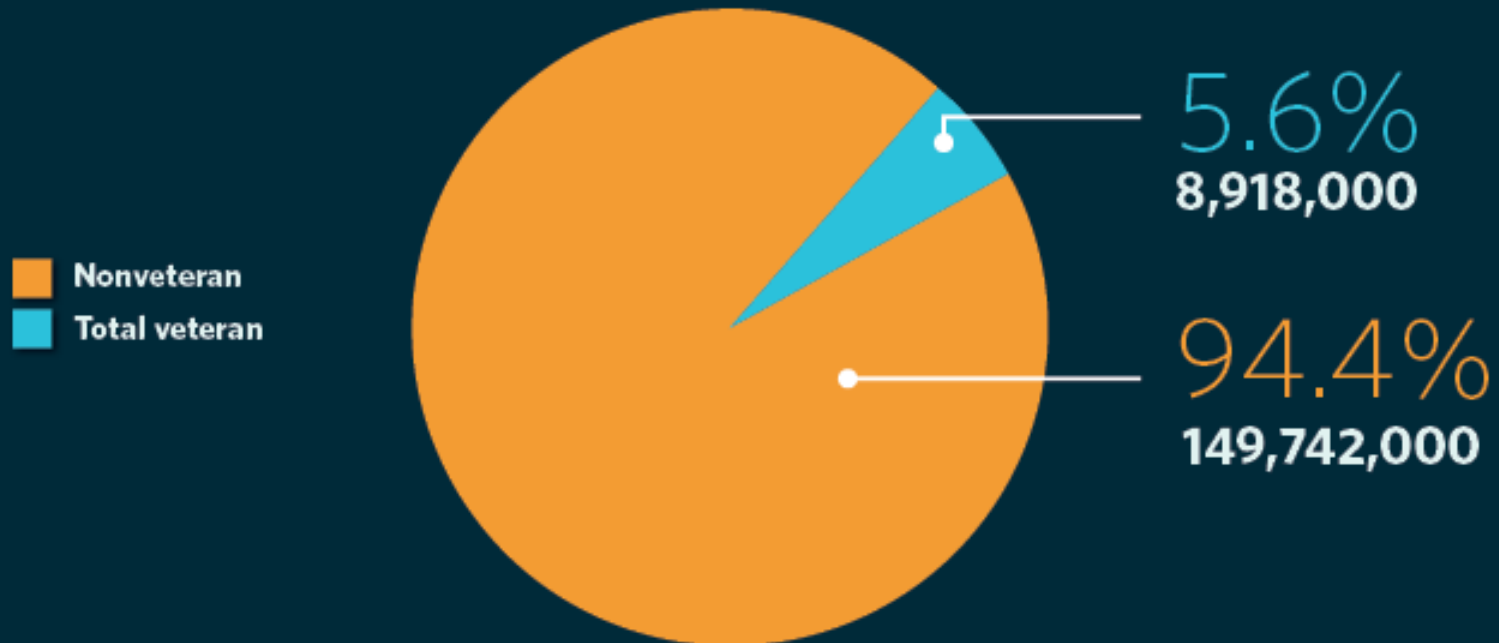
✓ Team & Patient/Care giver Conference/Health Education

✓ Patient letter with extensive recommendations



You may encounter more Veterans than you think...

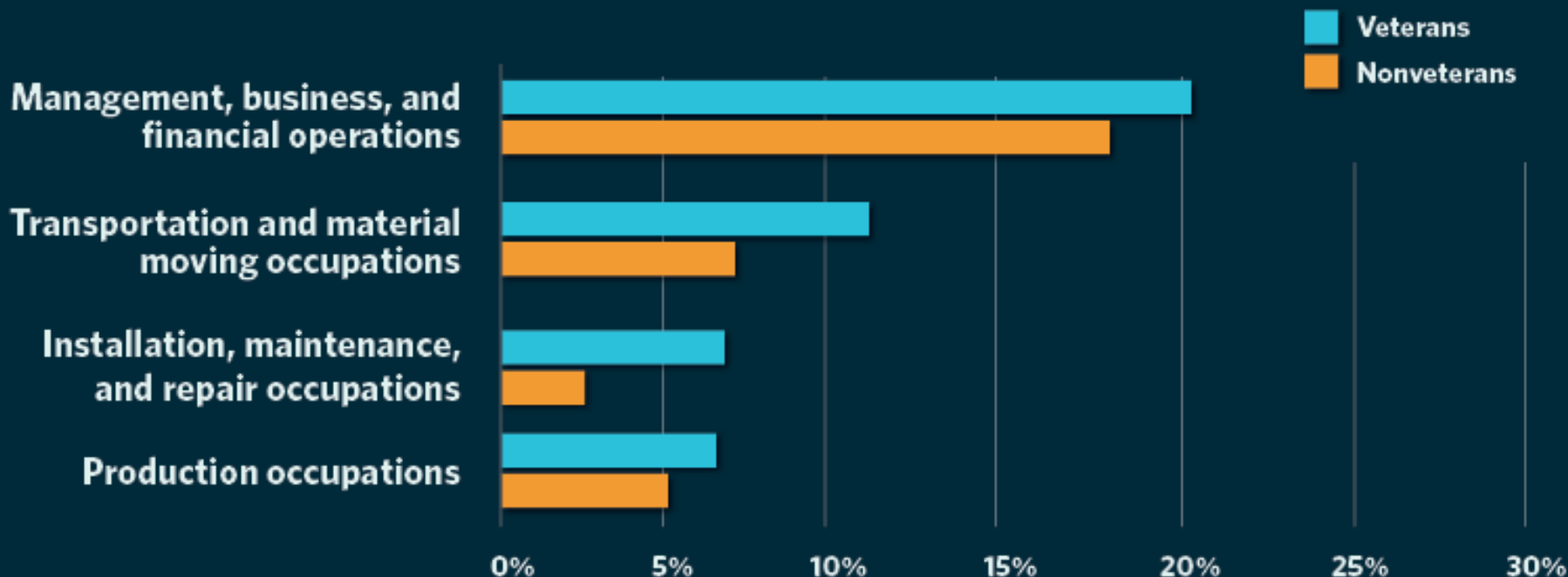
NUMBER OF VETERANS AND NONVETERANS IN THE LABOR FORCE, 2020



Source: BLS

...in occupations commonly seen by OEM providers

PERCENT OF VETERANS AND NON-VETERANS EMPLOYED IN MAJOR OCCUPATIONAL GROUPS



Source: BLS

VHA Mission



- Honor America's Veterans by providing exceptional health care that improves their health and well-being.
 - What makes Veterans unique?
 - What does it mean to be a Veteran?
 - What distinguishes VHA from other health care systems?

ASK LISTEN LEARN



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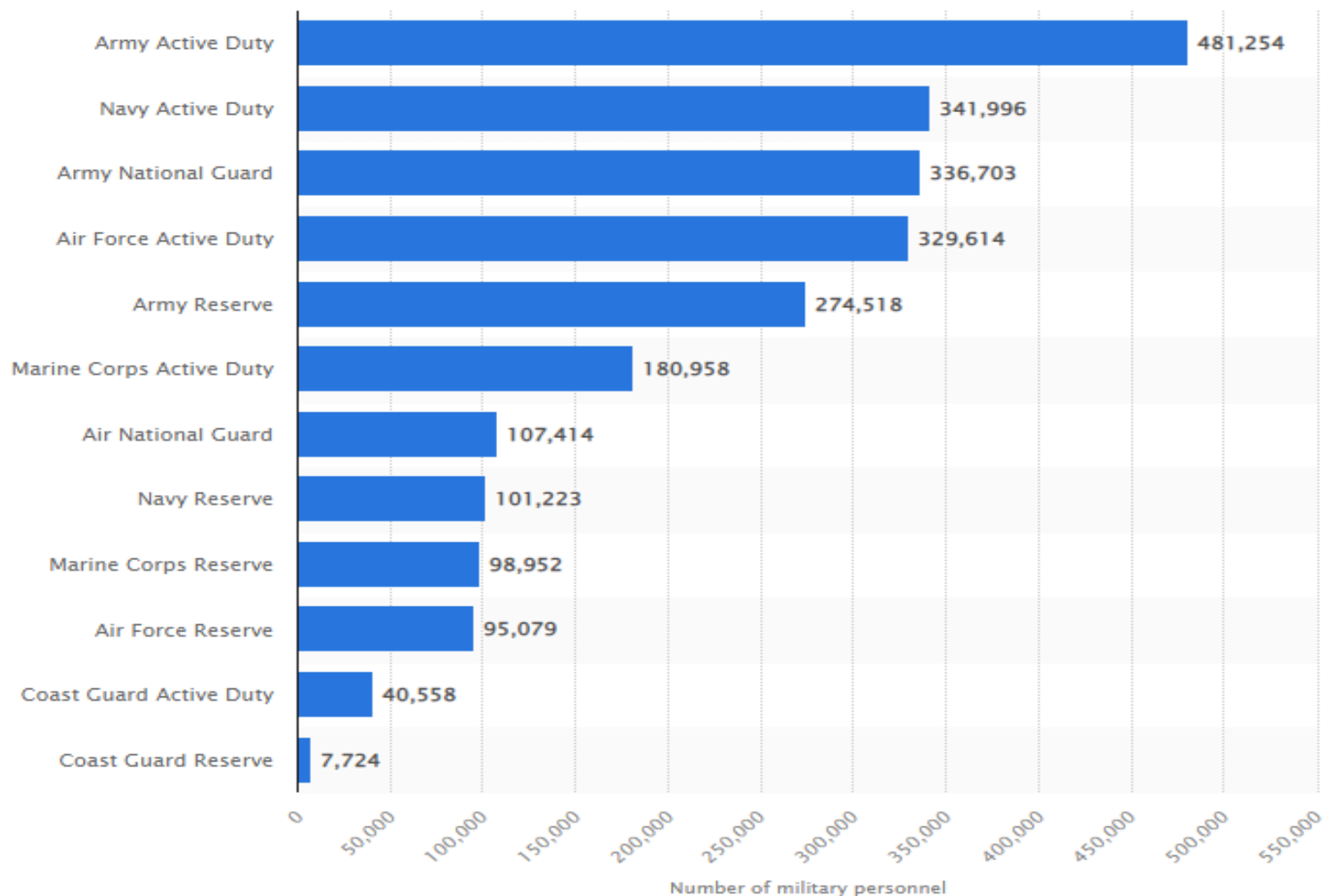
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Cultural Competency



- What is the Military?
- “Not just a job, a way of life.”
- Duty, Honor, Courage
- Service to Country
- A Vet is a Vet
- History and Purpose
- Service Branches:
 - Army
 - Marine Corps
 - Navy
 - Air Force
 - Space Force
 - Coast Guard

Population of Each Service Branch / Component



<https://www.statista.com/statistics/232330/us-military-force-numbers-by-service-branch-and-reserve-component/>



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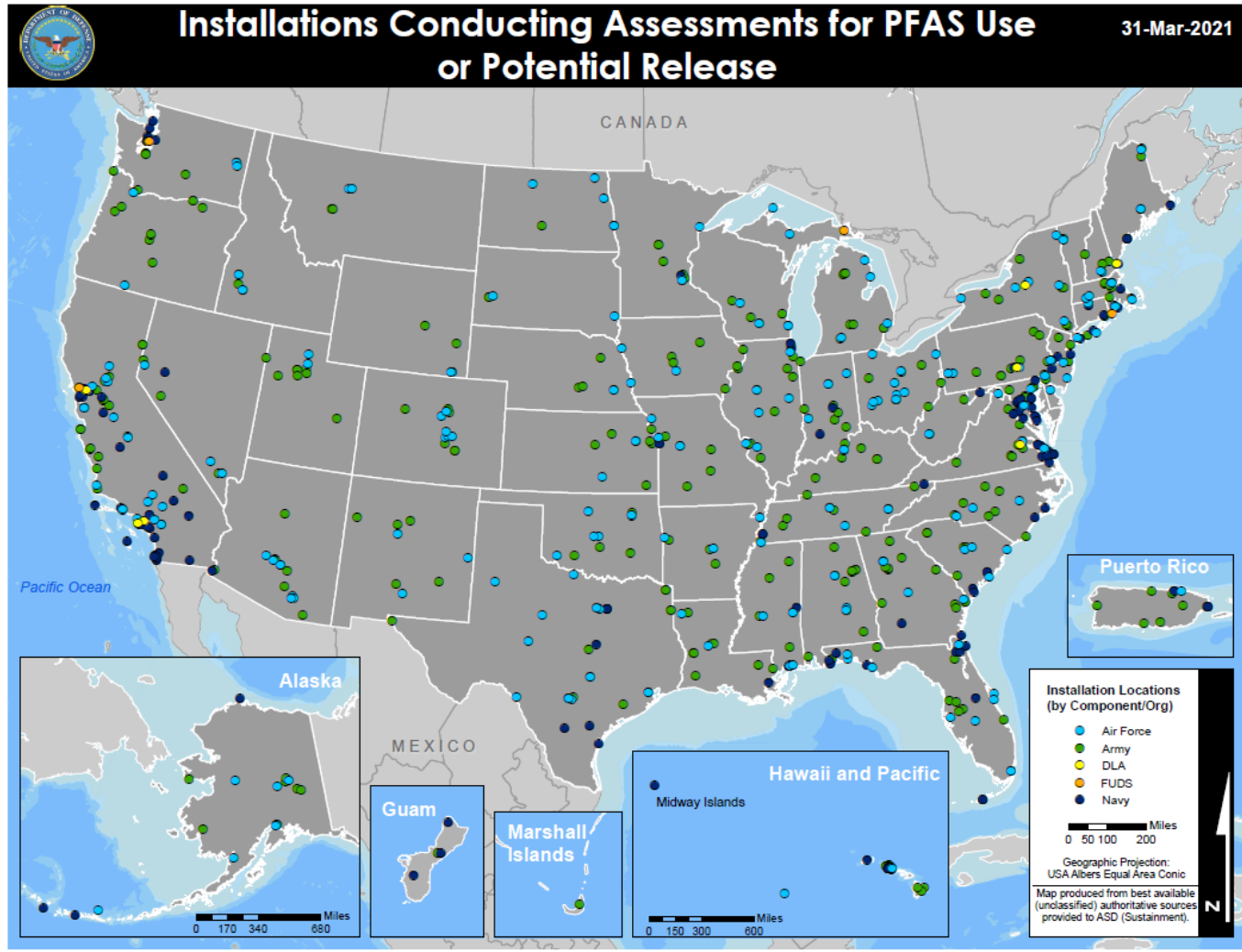
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Magnitude of U.S. Military Operations

- More than 800 bases
- Presence in every state plus DC
- Total acreage = 24,119,498 (24 mil acres)
 - Louisiana acreage = 25,454,000 (25 mil acres)
 - Larger area than 20 of 50 states
- Top six states have 18,116,775 acres (CA, NM, AZ, NV, UT, NC).
- Bottom six states have 18,326 acres (CT, MN, RI, NH, WV, DE).
- U.S. military bases occupy approximately 1% of the total land mass of the United States.

Military Bases & Environmental Pollution

700+ bases are being evaluated for PFAS Use/Release



<https://www.ewg.org/interactive-maps/2020-military-pfas-sites/map/>

United States at War for ~ 250 Years

Recent Conflicts

| | |
|--|--|
| World War II | 1941-1945 |
| Korean War | 1950-1953 |
| Vietnam War | 1961-1975 |
| Grenada (Operation Urgent Fury) | 1983 |
| Panama (Operation Just Cause) | 1989 |
| First Gulf War | 1990-1991 |
| Somalia (Operation Gothic Serpent) | 1993 |
| Bosnian War | 1993-1995 |
| Global War on Terrorism (GWOT) | 2001-Present |
| <ul style="list-style-type: none"> • Afghanistan <ul style="list-style-type: none"> ○ Operation Enduring Freedom (OEF) ○ Operation Freedom's Sentinel (OFS) • Iraq <ul style="list-style-type: none"> ○ Operation Iraqi Freedom (OIF) ○ Operation New Dawn (OND) • Global: Operation Inherent Resolve (OIR) | <ul style="list-style-type: none"> • 2001-2021 <ul style="list-style-type: none"> ○ 2001-2014 ○ 2015-2021 • 2003-2011 <ul style="list-style-type: none"> ○ 2003-2010 ○ 2010-2011 • 2014-Present |



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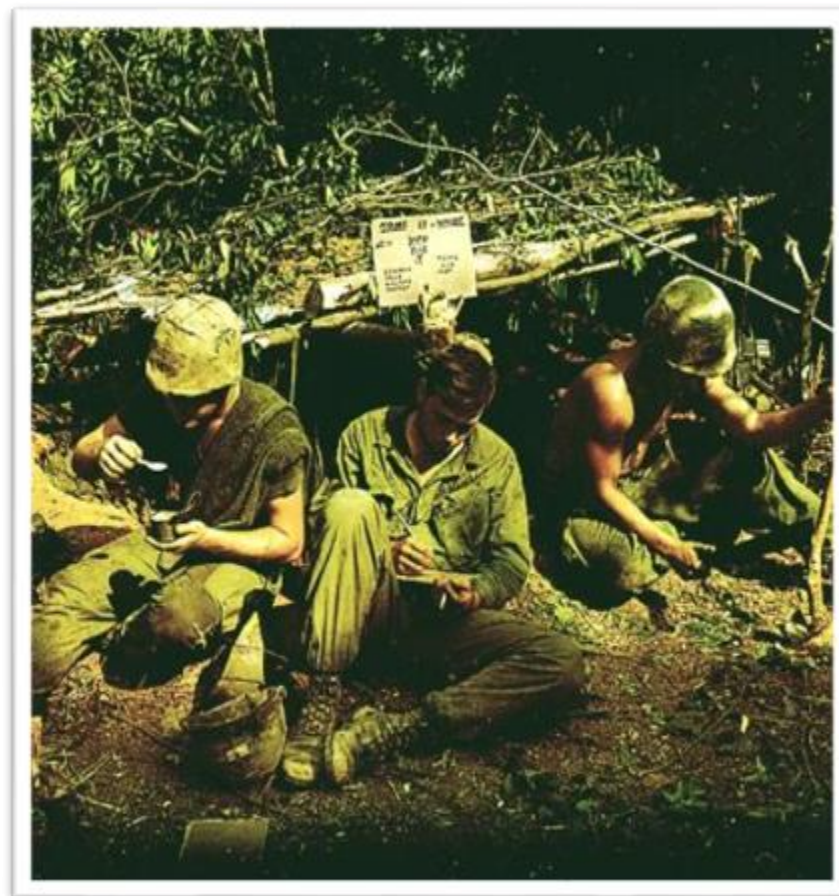
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Differences Between the Conflicts: *Stressors*

- Volunteer vs. Draft
- Lengthy or Multiple Deployments
- Technology
- Civilian Support
- Threats
- Media
- Casualties



Military and VA Jargon

- DD Form 214 = Certificate of Release or Discharge from Active Duty (i.e., “resume/CV” of military service)
- MOS = Military Occupational Specialty
 - Used by all service branches, though some call MOS by alternate names
 - AFSC = Air Force Specialty Code
 - NEC = Navy Enlisted Classification
 - Rating = occupational field
 - Rate = pay grade / rank
 - Detail/Crew = team-based specific duty, often not exclusive to a single MOS (e.g., “wash crew” for cleaning aircraft)
- ILER = Individual Longitudinal Exposure Record
- MEPS = Military Entrance Processing Station, where health clearance occurs
- National Guard / Reserve
 - AT = Annual Training, typically 2 weeks yearly
 - Drill = Routine Training, typically 1 weekend monthly
- Duty Station
 - Often both workplace and residence
 - May be a ship or an overseas base
- Non-deployment Travel (typically <6 months)
 - TDY = Temporary Duty Travel; used by Army, Air Force, and Space Force
 - TAD = Temporary Additional Duty; used by Navy and Marine Corps
- “Deployment” (often >6 months, but variable)
 - Navy / Marine Corps Sea Service
 - Air Force Overseas Long Tour
 - GW = Gulf War
 - Various operations as previously noted (e.g., OEF, OIF, etc.)
- VBA = Veterans Benefits Administration
 - C&P = Compensation & Pension Service
 - SC = Service Connection; health condition(s) linked to military service; ranges from 0-100%
 - 100% P&T = 100% Permanent and Total disability status; SC cannot be reduced
- And many others!



Exposure-Informed Care for Veterans



42% of Veterans seeking care in VA are concerned about military exposures.

- 1 in 3 1990 GW Veterans have Gulf War Illness (GWI)
 - 6 in 10 OEF/OIF Veterans have GWI

Become conversant with health relevant military exposures.



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Case Study: 55-Year-Old Hispanic Male Gulf War Veteran



“I have lots of pain in my joints, muscles – pretty much everywhere! My sinuses are always flaring up, and sometimes I’m wheezing and can’t breathe. I can’t sleep and am always tired. I have diarrhea and constipation. On top of all this, I can’t concentrate at work and keep forgetting things.”

Veteran wants to know if his military exposures are making him sick.



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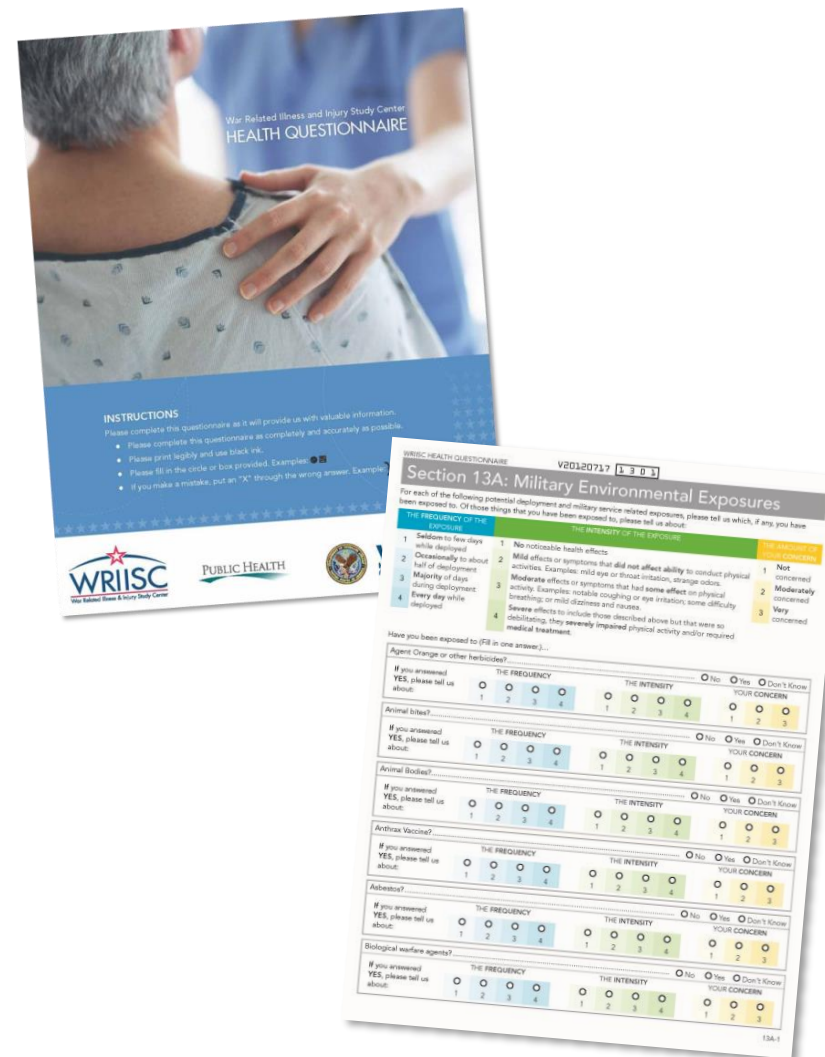
What Does an Exposure Evaluation Entail?

- Prescreening with team chart review
- Scheduled outpatient clinic:
 - Video telehealth (since COVID-19 pandemic)
 - Telephone (backup option)
 - In person (on hold)
- Goals:
 - Positively impact quality of life.
 - Establish an exposure timeline.
- Conducive environment
 - Engage with Veteran
 - Encourage dialogue
 - Typically 2 hours in length to facilitate the above



Review Available Information

- Reason(s) for WRIISC referral
 - Veteran's exposure concern(s)
 - Intake phone call and questionnaire
- Pre/Post Deployment Health Assessment (PDHA)
 - Pre: DD Form 2795
 - Post: DD Form 2796
- Medical records
- Registry exam questionnaires
 - Ionizing Radiation
 - Agent Orange
 - Gulf War
 - Airborne Hazards/Burn Pit



Starting the Evaluation: 3 Steps

- **Introduction:** Display empathy and care for the Veteran to establish trust and credibility. Tell the Veteran upfront that you will be honest - explaining what you do and don't know. Listen actively and patiently.
- **Explanation of plan:** Describe how you'll conduct the assessment. This gives the Veteran some "control" and makes them a partner in the process. Keep in mind that this is a Veteran, trained to listen to authority, but who may feel that this trust has been violated due to their experiences.
- **Basic toxicology:** Explain the need for a route of exposure and for a temporal relationship between exposure and effect. Outlining this in a general sense helps the Veteran report exposures more accurately and may make discussions of specific exposures much easier for the Veteran to understand.



Goal: Positively Impact Quality of Life

Veteran

- Hostility
- Frustration
- Fear
- Unhappiness
- Pessimism
- Mistrust
- Misinformation

Clinician

- Empathy
- More Empathy: Let them talk!
- Impact and Gently Guide Expectations
- Hope, Optimism, and Serenity for the Future
- Truth
- Educate



Exposure history should be comprehensive and chronological

- 
- A hand holding a dark blue pen over a white clipboard with a silver clip at the top. The clipboard contains a list of exposure categories.
- **Non Military Exposures**
 - Civilian non-occupational exposures
 - Civilian occupational exposures
 - **Military Exposures**
 - Military occupation specialty
 - Deployment-related exposures



Comprehensive Assessment of Exposure

- **Non-Military**
 - Childhood, including gestation and perinatal period
 - Place(s) of residence
 - Take-home exposures from parents and other household members
 - Pets and other animals
 - Schools and jobs
 - Hobbies and travel
- **Potential Contributors to Current Health Issues**
 - Conditions predating military service, such as childhood illnesses/injuries
 - Latent allergies/asthma
 - Secondhand tobacco smoke
 - Substance use/abuse
 - Chronic diseases
- **Military Exposures**
 - Physical
 - Psychological
 - Biological
 - Chemical
 - Radiological
- **Pre/Post Military Civilian Occupational Exposures**
 - Physical
 - Psychological
 - Biological
 - Chemical
 - Radiological

Asking the Right Questions

Exposure Assessment Important Elements

Who

What

Where

When

Why

How



Who Was Exposed?

- Who was exposed?
- Any pre-existing conditions that would place the exposed person(s) at greater risk of disease development?
- Did others have similar exposures and outcomes?



What was the Exposure?



Physical/Psychological

Heat/Cold Injuries, Incoming Fire, Explosions and Blasts, Musculoskeletal Injuries, Loud Noises, Psychological and Mental Stressors



Chemical

Petrochemical Solvents and Fuels, Depleted Uranium, CARC Paint, Pesticides, Chemical Weapons



Prophylactic Measures

Anthrax Vaccine, Smallpox Vaccine, Antimalarial Prophylaxis (Mefloquine, Doxycycline), Pyridostigmine Bromide Pills, DEET/Pesticides



Biological

Animal/Insect Bites, Infectious Agents, Blood/Bodily Fluids, Biological Weapons



Airborne Hazards Oil Well Fires, Burn Pit Smoke, Sand/Dust Storms, Industrial Air Pollution



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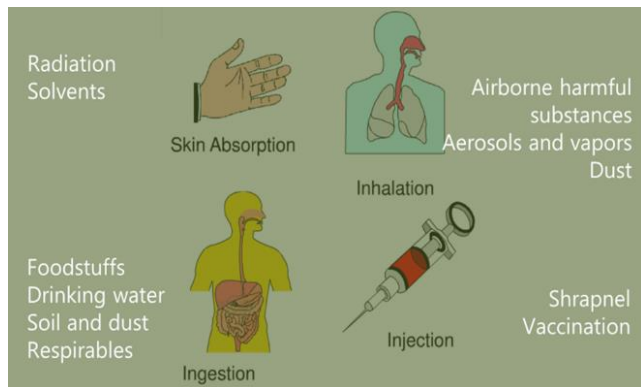
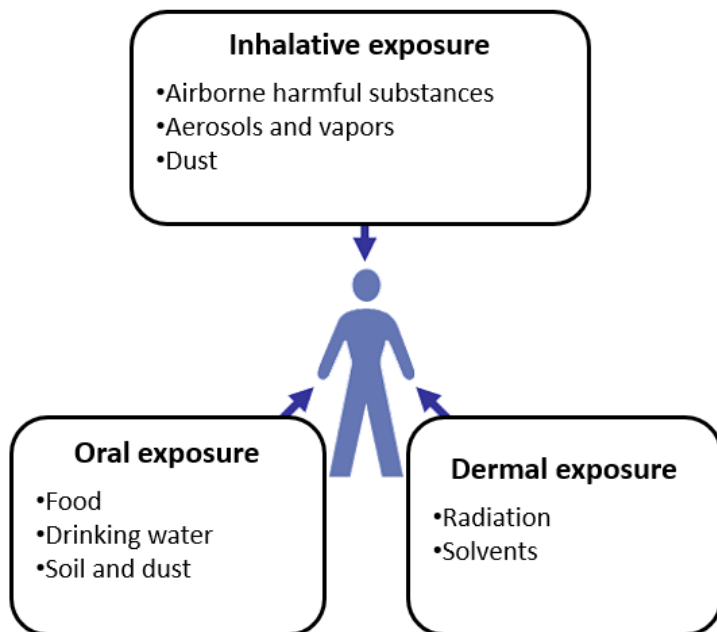
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Where and When did the Exposure Occur?



Exposure Pathways

Routes of Exposure



- **Military Considerations**
 - Routes of Exposure
 - **Inhalation** > Dermal > Oral
 - Frequency / Types of Exposures
 - Unique to deployment, MOS, etc.
 - Any Means of Protection
 - Improvised PPE, such as a cravat/kerchief for airborne hazards
 - PPE factors: efficacy, ease of use, consistency of use, training, climate, MOS, etc.
 - Potential Health Effects
 - New disease processes
 - Impact of preexisting conditions
 - Disorders that can be remedied versus those that cannot

How will the Exposures Affect ME?

- What were you exposed?
- When were you exposed?
- **How much were you exposed to?**
- **How long you were exposed?**
- What were your military duties?
- **What about your genetic makeup?**
- Any other lifetime exposures? Civilian exposures?
- What are relevant lifestyle behaviors?
- What other diagnoses do you have?
- What about your medications?

– ***JUST REMEMBER***


– ***People Respond to Environmental Exposures Differently***

Did the Exposure Make Me Sick?

- Two-step presumption:

If you were there....  You were exposed



If you were exposed and develop one of the conditions....
 It is related to the exposure

1. VA presumes that certain chronic unexplained symptoms existing for ≥ 6 months anytime after August 2, 1990, are related to Gulf War service without regard to cause.
2. Must have appeared during active duty in the Southwest Asia theater of military operations OR by December 31, 2026 **AND** be at least 10 percent disabling.

Gulf War-related Chronic Multisymptom Illness

Gulf War Illness (GWI)

- **Chronic Fatigue Syndrome (ME/CFS)**
- **Fibromyalgia**
- **Functional Gastrointestinal Disorders**
 - **Irritable bowel syndrome (IBS)**, functional dyspepsia, and functional abdominal pain syndrome
- **Certain Undiagnosed Illnesses**
 - Must be undiagnosed even after a thorough, complete evaluation
 - May include abnormal weight loss, fatigue, cardiovascular disease, muscle and joint pain, headache, menstrual disorders, neurological and psychological problems, skin conditions, respiratory disorders, sleep disturbances, etc.
 - Case-by-case basis

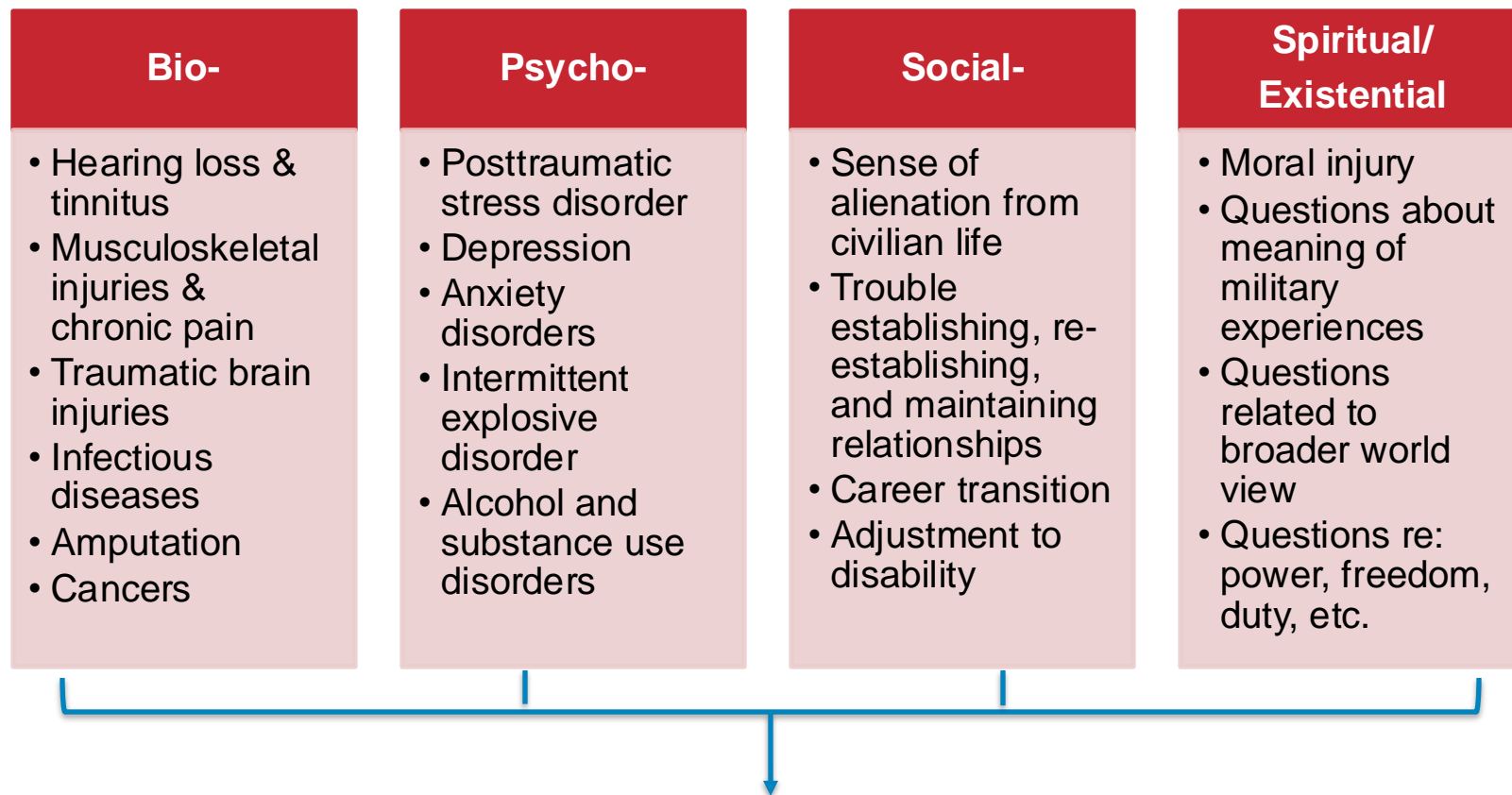


Common Misconceptions about Veterans

- Myth: All Veterans have experienced combat.
 - Fact: On average, about 60% of Veterans have been deployed. Before the 9/11 terror attacks, this was only about 24%. After 9/11, this has increased to 77% due to the ongoing GWOT. Not all deployments involve combat.
- Myth: Most Veterans have PTSD.
 - Fact: Only about 21-29% of Veterans since the First Gulf War have had PTSD at some point in their life.
- Myth: Veterans join the military because they are especially patriotic and/or especially desperate.
 - Fact: Veterans join for many reasons. Popular reasons include wanting to travel, to gain job skills/experience, to get benefits that come with military service, and to improve career opportunities after military service.
- Myth: Veterans are not diverse.
 - Fact: About 41% of Veterans identify as members of minority groups. Women are the fastest growing group of Veterans.




Biopsychosocial Considerations and Military Exposures



Suicide, homelessness, and other adverse outcomes

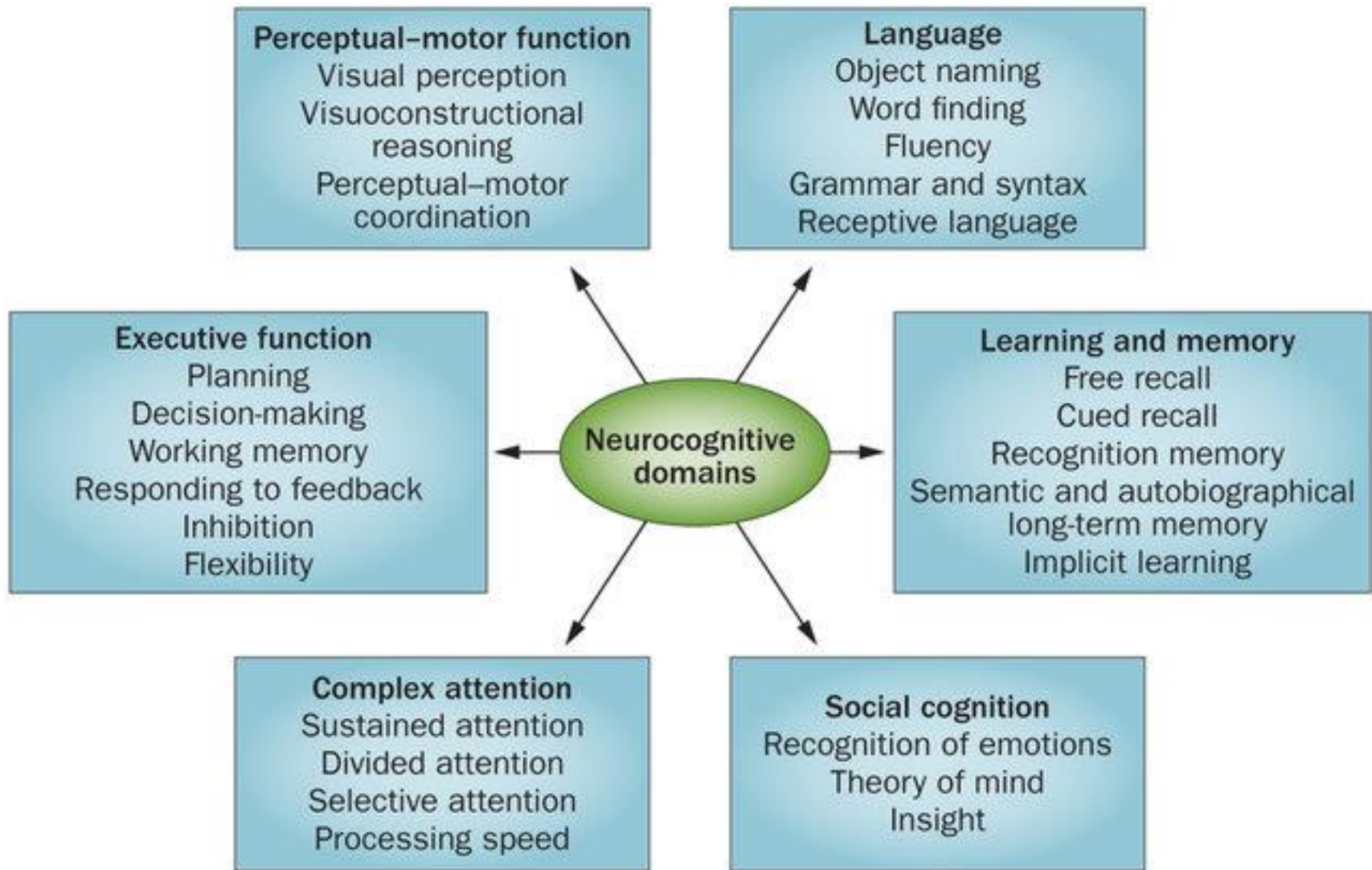




“My depression never lifts. I don’t enjoy things as much as I used to. I feel guilty over many things. I am worried that I am breaking down inside.”



DSM-5-TR NEUROCOGNITIVE DOMAINS



Post-Deployment Mental Health: Beyond PTSD



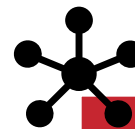
Primary DSM-5 TR Diagnoses

- Posttraumatic stress
- Panic attacks
- Dissociative symptoms
- Depression
- Bipolar disorder
- Generalized anxiety
- Obsessive-compulsive disorder
- Intermittent explosive disorder
- Psychotic symptoms
- Eating disorders
- Alcohol and substance use disorders



Additional Concerns

- Grief
- Anger
- Moral injury
- Impact of killing
- Spiritual concerns
- Existential concerns
- Betrayal
- Suicidality
- Homicidality
- Self-injury
- Intimate partner violence
- Social isolation
- Adjustment to disability
- Vocational issues
- Transitioning to Civilian life



Comorbidities

- Insomnia
- Sleep apnea
- Sexual dysfunction
- Chronic pain
- Traumatic brain injury
- Neurocognitive disorders, dementia
- Poorer physical health

Differentiating and Types of TBIs

Traumatic brain injury

- Blasts
- Sports
- Falls
- Combatives training
- Parachuting
- Motor vehicle accidents
- Physical abuse
- Penetrating head injury

Other brain injury

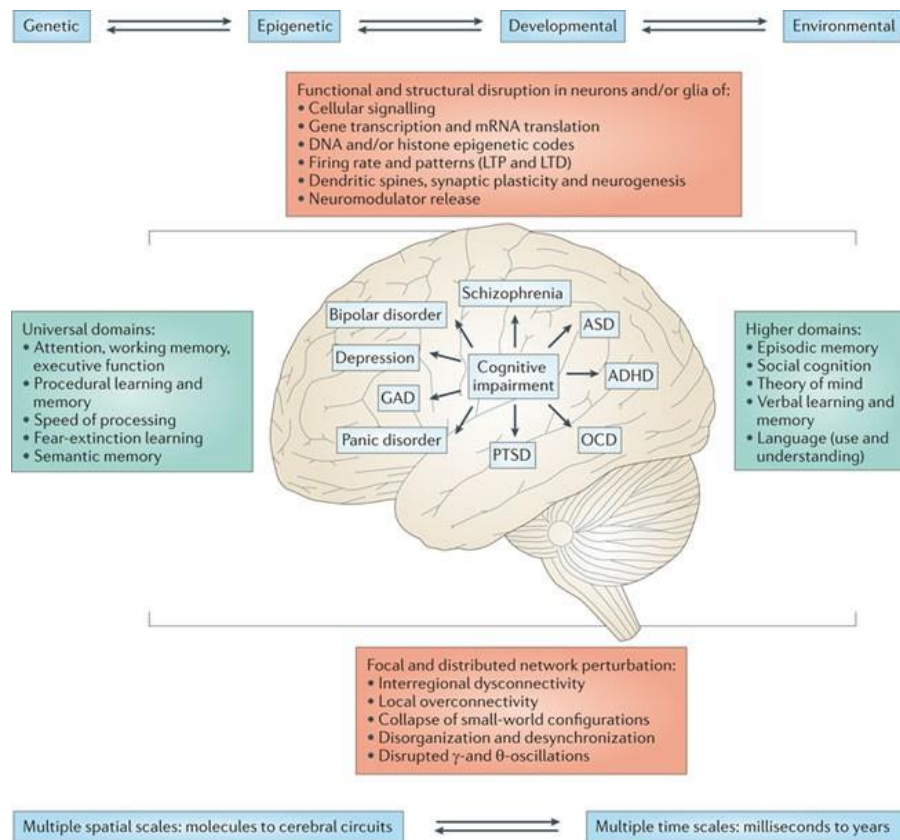
- Drug overdose
- Alcohol intoxication
- Seizure
- Stroke
- Diving injury
- Electrical injury
- Toxic encephalopathy
- Anoxia/Hypoxia
- Tumor
- Infection
- Surgery

| | Mild (Concussion) | Moderate | Severe |
|------------------------|----------------------|--------------------|--------------------|
| Loss of Consciousness | 0- 30 min | 30 min – <24 hrs | > 24 hrs |
| Altered consciousness | Up to 24 hours | > 24 hrs | |
| Post-traumatic Amnesia | 0-1 day | 1-7 days | > 7 days |
| Neuroimaging | Normal | Normal or Abnormal | Normal or Abnormal |

VA/DoD Clinical Practice Guideline for the Management of Concussion-Mild TBI, 2016

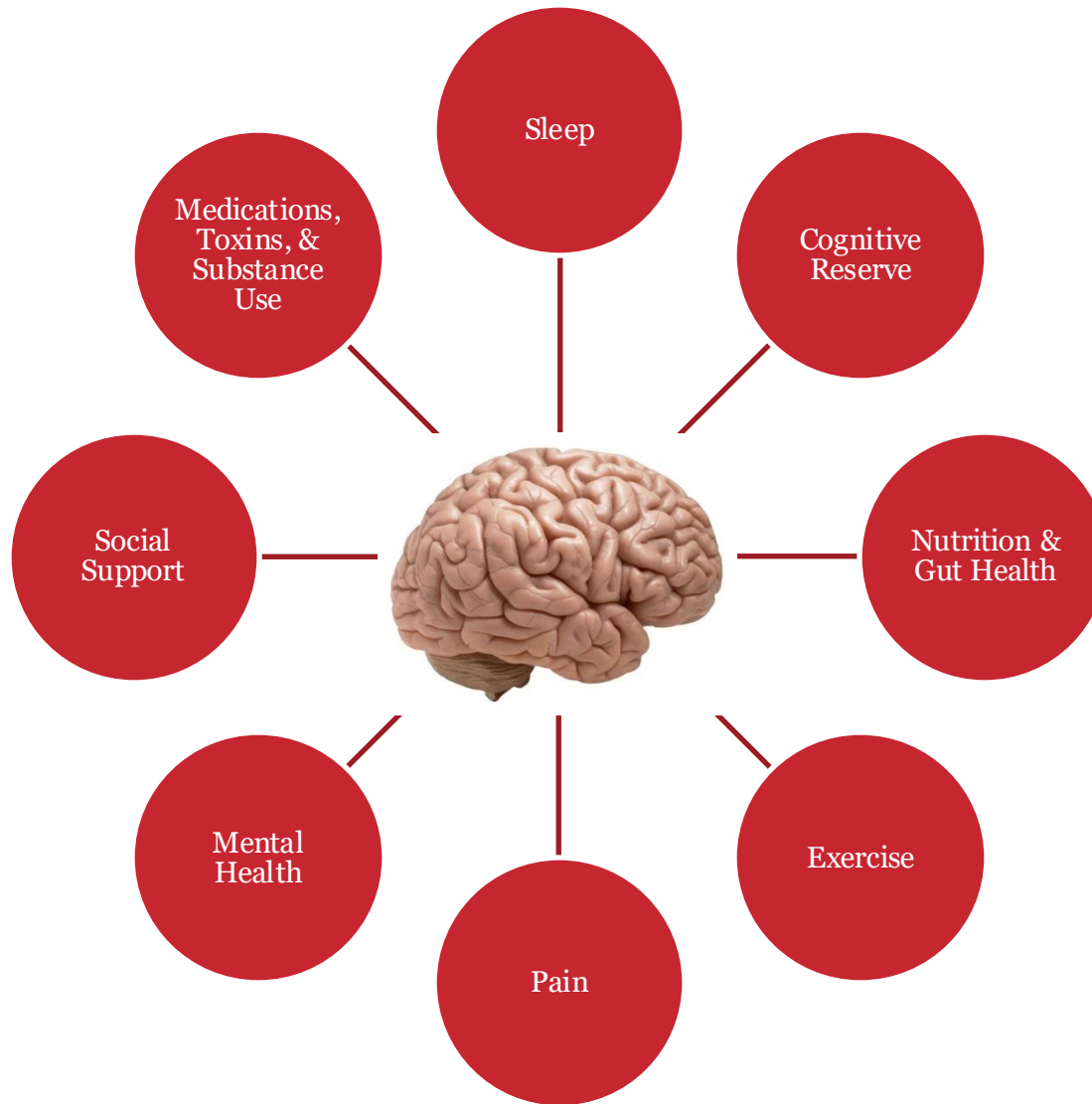
Mental Health and Cognition

- Chronic stress and cognition
 - Higher cortisol levels and memory
- Cognitive dysfunctions and depressive disorders
 - “Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).”
- PTSD and attentional bias
- Anxiety and cognitive functioning

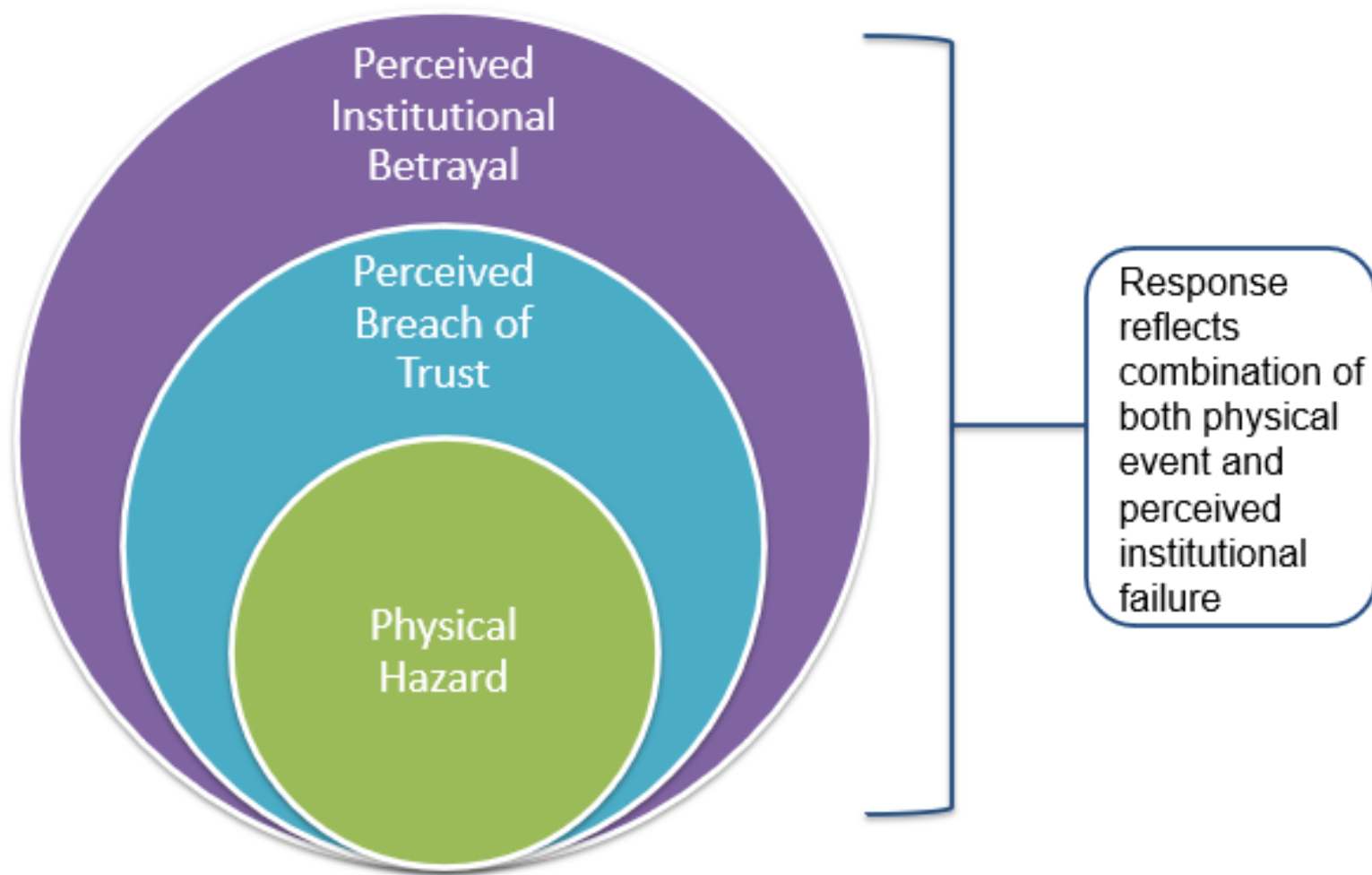



Nature Reviews | Drug Discovery

Other Factors Impacting Cognition



Environmental Hazards and Institutional Betrayal





“I lost my job - it is difficult to make ends meet. I am going through a divorce.”



Social Work

- Biopsychosocial approach
- Person in the environment
- Stressors
- Goals
- Strengths Perspective, Resilience and improved quality of life



Social Work Assessment

- Physical health
- Mental health
- Family/ circumstances
- Employment
- Education
- Finances
- Housing
- Transportation
- Legal
- Alcohol/substance abuse
- ADL's/IADL'S/DME/Safety
- Religion and spirituality
- Support/ networks
- Oppression/risk factors
- Needs/concerns
- Barriers/access issues



Social Work Interventions

- Impressions
- Referrals and resources
- Empathy, Validation
- Counseling
- Education
- Advocacy
- Coordination of care and Interdisciplinary team approach



Clinical Summary: Findings & Recommendations

Medical & Exposure

- Gulf War Illness
 - Fibromyalgia
 - Chronic fatigue syndrome (CFS)
 - Irritable bowel syndrome, mixed type (IBS-M)
- Airborne Hazards
 - Chronic sinusitis
 - Asthma
- All the above are presumptive service connections.
- Join eligible VA registries.

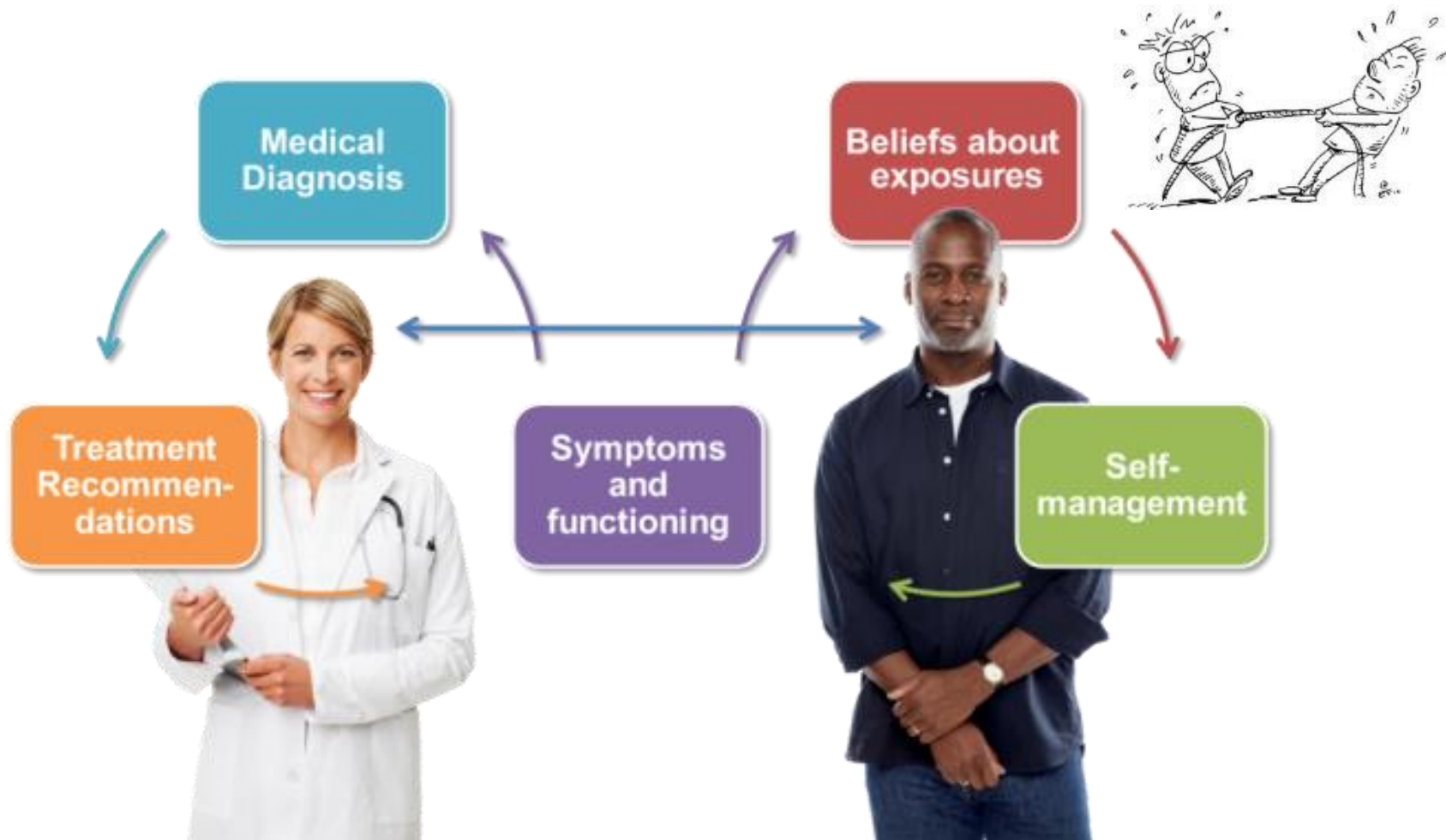
Neuropsychological

- Posttraumatic Stress Disorder due to Military Deployments
- Persistent Depressive Disorder with Intermittent Major Depressive Episodes, Current Episode Severe
- Tobacco Use Disorder
- Mild Neurocognitive Disorder

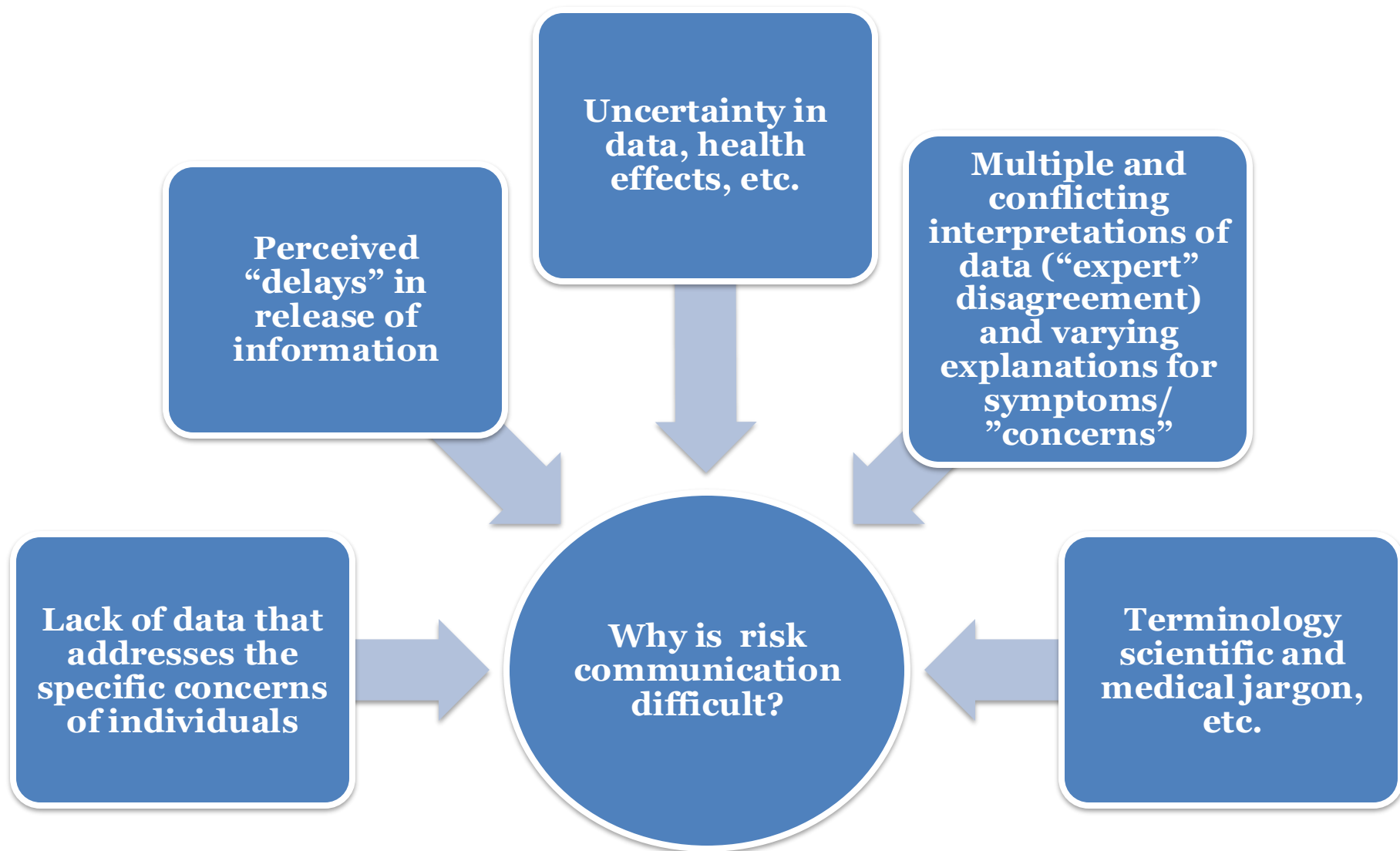
Social Work

- Advance Directive
- Veteran Service Officer
- Emergency financial assistance
- Veterans Readiness and Employment
- Vet Center
- Legal support
- Military2VA Case Management

Exposure Assessment and Communication Strategies



Why is Communication About Military Exposures Difficult?



Addressing Exposure Concerns

- An important Risk Communication principle is to identify the Veteran's concerns and provide information that addresses those concerns.
- Ranking the degree of concern can be helpful.
- The goal is to demonstrate that you were listening, and that the evaluation is a dialogue.

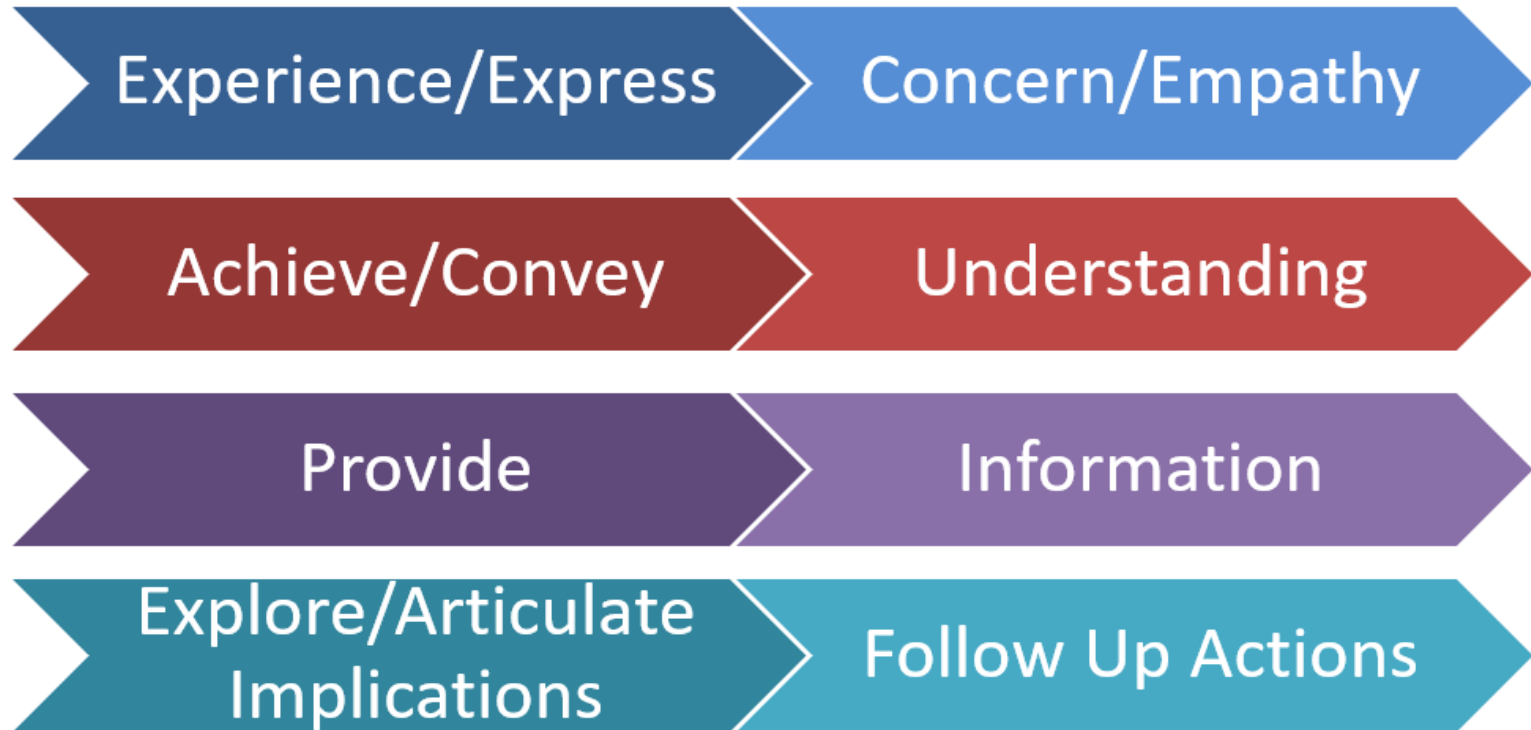


Education & Risk Communication

- Honest information from a knowledgeable and credible source is the key to the assessment.
- Risk communication must be integrated throughout the evaluation.
 - Listen to what is being said, verbally and otherwise, including underlying concerns.
 - Don't talk down to the veteran.
 - Risk perception is not misperception, but a different perception
 - Risk communication is a two-way street, it is not risk speaking.



Achieve Effective Communication



Resources

- [Provider & Clinician Training - War Related Illness and Injury Study Center \(va.gov\)](#)
 - Including Level 1 and Level 2 **Military Environmental Exposure Certifications**:
 - [Military Environmental Exposures Certifications | ACPM](#)
- [Information sheets - War Related Illness and Injury Study Center \(va.gov\)](#)
- [Military Exposures - Public Health \(va.gov\)](#)
 - **Including 4 Ways to Find Exposures**:
 - [Exposure Topics A-Z - Public Health \(va.gov\)](#)
 - [Exposure Related Health Concerns - Public Health \(va.gov\)](#)
 - [Exposures by Wars and Operations - Public Health \(va.gov\)](#)
 - [Exposure Categories - Public Health \(va.gov\)](#)
- Exposure Ed: VA Mobile **App**
<https://mobile.va.gov/app/exposure-ed>
- Military Health History: **Pocket Card** for Health Professions Trainees and Clinicians:
<https://www.va.gov/OAA/docs/mhpcmobile.pdf>
- VA/DoD **Clinical Practice Guideline** for Managing Chronic Multisymptom Illness
<https://www.healthquality.va.gov/guidelines/mr/cmi/>





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