

Individual Longitudinal Exposure Record (ILER): Advancements in Military Medical Record Technology

Eric Shuping, MD, MPH

Steve Jones, MPH

Larry Vandergrift II

24 September 2020

0855 – 0955 (ET)



“Medically Ready Force...Ready Medical Force”

Presenters



Eric Shuping, MD MPH
Director, Environmental Health Program - Post 9-11
Post Deployment Health Services
Veterans Affairs, Central Office
Washington, DC

Steve Jones, MPH
Director, Force Readiness and Health Assurance Policy
Office of Deputy Assistant Secretary for Health Readiness Policy & Oversight, DoD

Larry Vandergrift II
ILER Project Manager
Solution Delivery Division, DHA
Clinical Support Management Office

Eric Shuping, MD, MPH



Dr. Eric Shuping is board certified in family practice, preventive medicine, and occupational medicine. He came to the Veterans Health Administration (VHA) after retiring from 27 years of service in the Army. His last assignment was as the Director of the Public Health Directorate, Deputy Chief of Staff (DCOS) and an Occupational Medicine Consultant. Dr. Shuping deployed to Iraq as a Theater Preventive Medicine Consultant from 2006 to 2007.

Dr. Shuping earned his medical degree from the Uniformed Services University of the Health Sciences (USUHS). Since that time, he has obtained significant experience in environmental health issues within the Army and Department of Defense (DoD) in deployed and garrison settings.

Steve Jones, MPH



Mr. Steve Jones is a retired Army Environmental Science and Engineering Officer and senior consultant with over 39 years of medical, public health, and environmental health experience at all levels of the DoD. He has extensive experience in deployed, humanitarian, disaster relief, and other operating environments at enduring and contingency locations, to include coordination with engineering, facilities, medical, environmental, and other base support managers.

Mr. Jones is responsible for developing policy for force health protection, deployment health, occupational and environmental health, burn pits, individual medical readiness, comprehensive health surveillance, and bio-surveillance. He is also responsible for advising on health issues related to garrison and deployment occupational and environmental exposures.

Mr. Jones is currently the functional proponent for the joint DoD-VA Individual Longitudinal Exposure Record (ILER).

Larry Vandergrift II



Larry Vandergrift serves as the project manager for ILER and is responsible for the day-to-day development activity and engagement with key stakeholders. With nearly 20 years of program management and technology modernization experience, Mr. Vandergrift prioritizes users' needs and requirements to deliver value added functionality to the field as quickly as possible.

DISCLOSURES



- Dr. Eric Shuping, Mr. Steve Jones, and Mr. Larry Vandergrift have no relevant financial or non-financial relationships to disclose relating to the content of this activity.
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Learning Objectives



At the conclusion of this session, participants will be able to:

1. Recognize the interactions between DoD and VA in terms of promoting and working with ILER.
2. Discuss the importance of having exposure information available for clinical care.
3. Identify the health care user groups that will utilize ILER.

OUTLINE



■ Environmental exposures

■ What is ILER*?

- ☐ Individual Longitudinal Exposure Record

■ Live demonstration

- ☐ Search by individual

- Defense Health Agency Clinical
- Veterans Health Administration (VHA)
- Veteran Benefits Administration (VBA)

- ☐ Search by location (epidemiology, cohort and research)

CLINICAL SCENARIO



- Patient comes for an appointment and wants to know if Exposure resulted in disease?
 - ILER can provide exposure data through a web based portal
- ILER is a joint DoD/VA project developed by DoD

ILER: 5 YEARS IN THE MAKING



- **Problem:** There was No standardized practice or procedure to establish an individual's exposure history.
 - Need to put a person in a place at a time with an exposure
- **ILER Program:** Joint VA and DoD effort to create a technological framework and develop the systems necessary to meet the requirements of Presidential Review Directive-5* to create individual longitudinal exposure records.
- Post-Deployment Health Services (PDHS) at VA Central Office is the “VA ILER lead while DoD is the business owner.

Why ILER?



1 in 3
Veterans report “definite or probable exposure to environmental hazards”

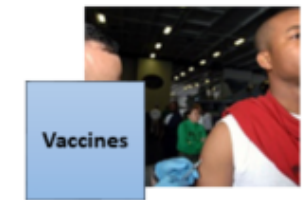
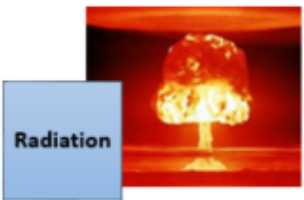
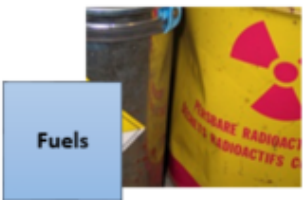
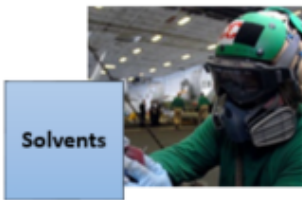
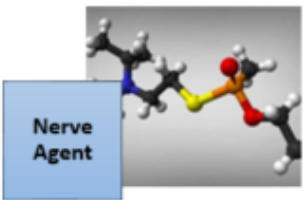
1 in 4
Veterans report “persistent major health concerns due to deployment exposures”

(WRIISC, 2010)



(googleusercontent.com, n.d.)

Problem: *There is no standardized practice or procedure to identify, track, and monitor exposed Service members and Veterans.*



(googleusercontent.com, n.d.)

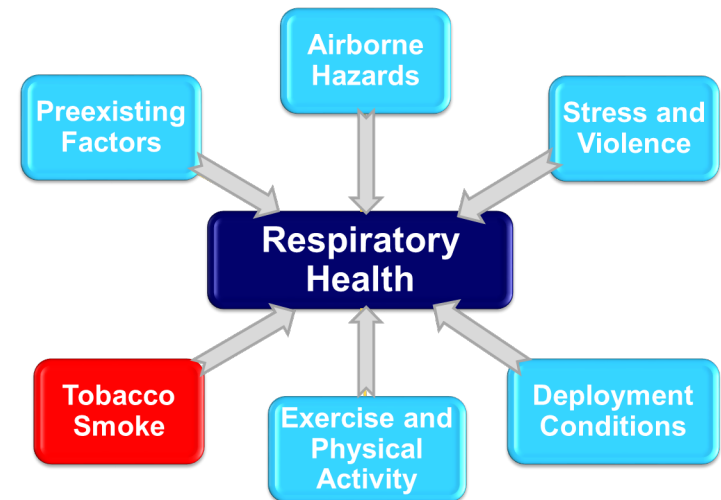
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Environmental Exposure and Disease

- Can have immediate effects depending on dose
- Disease can occur shortly after deployment
- Chronic disease/ Long latent period
- Causality / Multiple causes
- Variable exposures

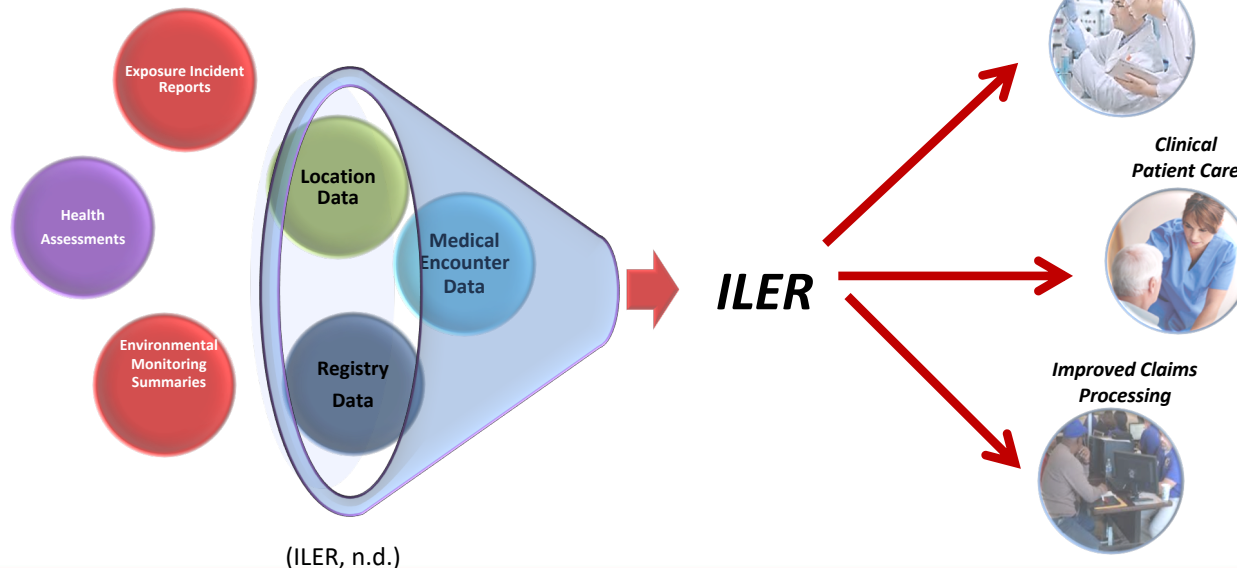


(googleusercontent.com, n.d.)



Population to Individual Level Exposures

- Data goes into a funnel
- 2 tables appear (exposure event & personnel location) match between the two to show exposure record representing ILER
- The data is compiled into ILER. As a web-based application, ILER provides the DoD and VA the ability to link an individual to exposures, improving the efficiency, and quality of health care.



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What Does ILER Do?

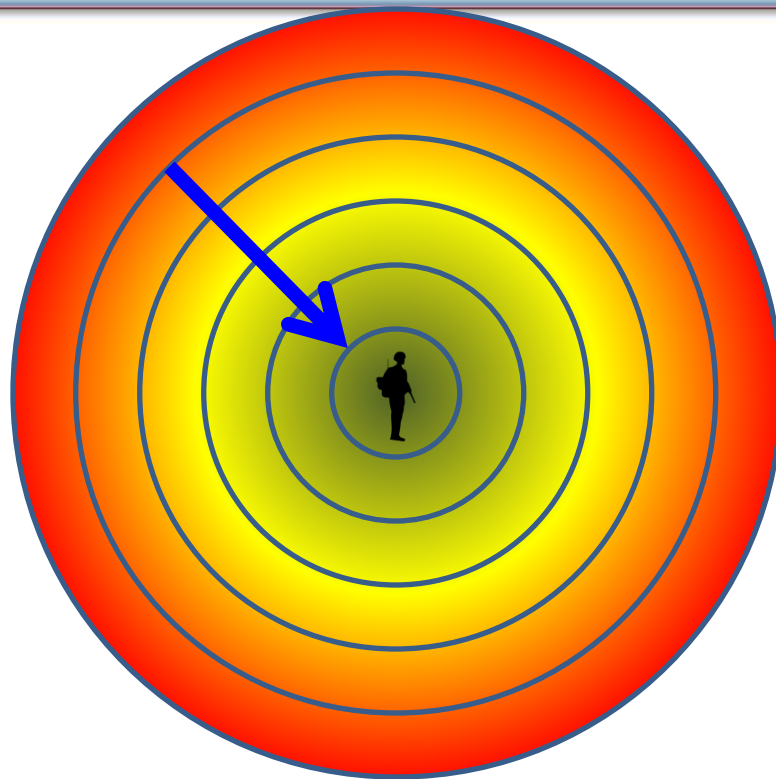
- **ILER** serves as the central portal for exposure-related data which compiles, collates, presents, and/or provides available occupational and environmental exposure information to support the needs of the Departments of Defense (DoD) and Veterans Affairs (VA).
- **ILER delivers the capability to:**
 - ❑ Create a longitudinal (historic) record of service-related exposures
 - ❑ Improve the medical care for those who have exposure-related health outcomes
 - ❑ Research and support epidemiologic study of exposed cohorts to determine whether deployment-related exposures are associated with post-deployment health outcomes
 - ❑ Create exposure cohorts based on location, date, time, and agents
 - ❑ Improve both medical surveillance and occupational and environmental health surveillance (OEHS) by detecting emerging (latent) health conditions on personnel returning from deployment
 - ❑ Assist Veteran disability evaluations and benefits determination

Additional Benefits of ILER

Enhance Exposure Science Research



- Individual Monitoring / Dosimeter (limited data available)
- Similar Exposure Group (SEG) - (IH)
- Occupational and Environmental Health Site Assessment (OEHSA)
- Potential Exposed Population (PEP)-(IR)
- Exposure Pathway -(EH)
- Periodic Occupational and Environmental Monitoring Summary (POEMS) - (EH)
- Location - (EH) (limited data available - OEHSA only)



***Note:** By adding and mapping individual location data our goal is to improve the confidence of exposure data available in Defense Occupational and Environmental Health Readiness System (DOEHRS).*

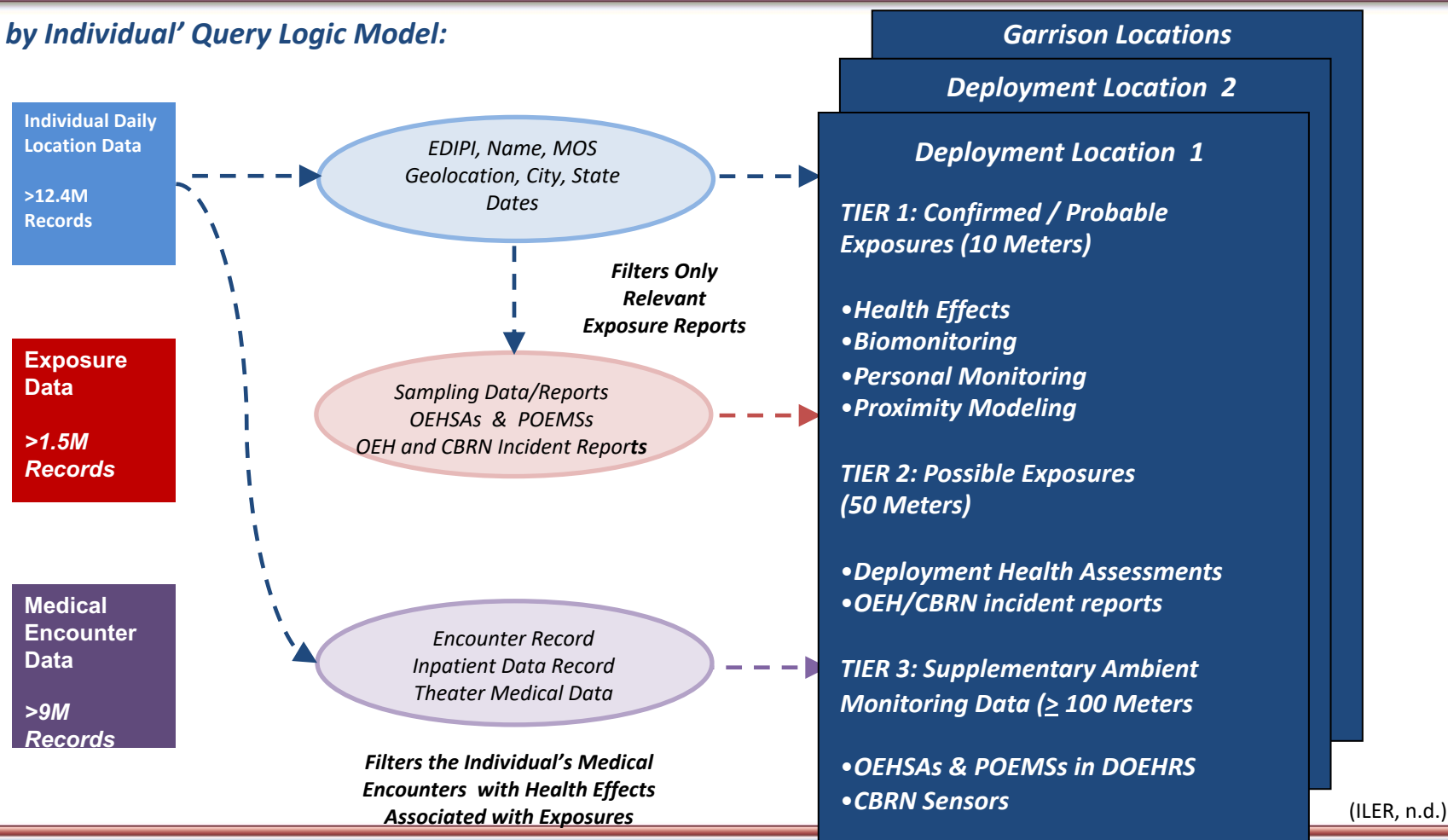
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ILER Conceptual View

'Search by Individual' Capability



'Search by Individual' Query Logic Model:



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Supporting Data by Release



v1.0 (IOC*)

- ☐ Defense Occupation and Environmental Health Readiness System - Industrial Hygiene (**DOEHRS-IH**)
- ☐ Military Exposure Surveillance Library (**MESL**)
- ☐ Defense Medical Surveillance System (**DMSS***)
 - Pre-Deployment Health Assessments
 - Post-Deployment Health Assessments
- ☐ Defense Manpower Data Center (**DMDC***)
 - Limited to 'Reid Memo' data elements
 - Deployment Start / Stop
 - Location Coordinates
- ☐ Medical Data Repository (**MDR**)

v1.1 (FY20)

- ☐ Expand IOC Data Feeds
- ☐ Defense Manpower Data Center (**DMDC***)
 - Location (Garrison and Theater) - Contingency Tracking System (CTS)
 - Incorporate all Individual Location Data Elements of the DoDI 6490.3, Deployment Health:
 - Military Occupational Specialty
 - Unit Identification Code (Assigned)
 - Unit Identification Code (Attached)
 - Operation Name
 - Marine Corp Data
- ☐ Present Read-only Individual Exposure Summaries in Joint Legacy Viewer (**JLV**) Phase 1
- ☐ Blast and Overpressure Pilot Data

v1.n (FY21-23)

- ☐ VA Airborne Hazards and Open Burn Pit Registry (**AHOBPR**)
- ☐ DOEHRS-Hearing Conservation (**HC**)
- ☐ Dosimetry Data
- ☐ Electronic Deployment Health Assessment (**eDHA**)
- ☐ Joint Legacy Viewer (**JLV**) Phase 2
- ☐ Electronic Health Record Data (**MHS GENESIS**)
- ☐ Health Artifact and Image Management System (**HAIMS**)
- ☐ VA Clinical Data Repositories (**VA-CDR**)
- ☐ VA Health Data Repository (**HDR**)
- ☐ VA Gulf War Registry (**GWR**)
- ☐ VA Ionizing Radiation Registry (**IRR**)
- ☐ VA Toxic Embedded Fragments (**TEF**)
- ☐ VA Depleted Uranium (**DU**)

* Initial Operating Capability

***Note: Initial data provided by on-time bulk upload*

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PDHS REGISTRIES



- ❑ VA has 6 exposure registries
- ❑ All are Congressionally-mandated
 - Agent Orange (AOR)
 - Gulf War Registry (GWR)
 - Ionizing Radiation Registry (IRR)
 - Toxic Embedded Fragments (TEF)
 - Depleted Uranium (DU)
 - Airborne Hazards and Open Burn Pit (AHOBPR)



(googleusercontent.com, n.d.)



(googleusercontent.com, n.d.)

ILER will be registry of the future

ILER LIMITATIONS



- Data will be missing
- Less data is available from the past
 - Don't assume lack of data means no exposure
 - Large concern of Veterans and Veterans Service Organizations (VSOs)
 - Veterans will request records
- Usual method of determining causation will be in place
- Will not replace scientific gaps in knowledge

ILER Account in VA



- Each facility will have one ILER super user
 - Provider or admin support
- Process
 - Go to TMS course #39963 to take training.
 - CME credit available (MD, NPs and PAs)
 - Log into ILER to request an account
 - Require HIPPA and Cybersecurity
 - <https://iler.csd.disa.mil/iler/>
- Need to log in every 35 days to keep access

VA ILER Way Forward



- About 75 VA clinical staff trained as of 1 August 2020
- 8 researchers with active accounts
 - Core who conduct research on EH
 - Team building epi capability for VA researchers
- COVID has been an impediment to training
 - Many detailed to other duties
- Memo through VA operations requiring
 - At least one user per facility by 1/1/2021

Live Demonstration



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Key Takeaways



- ILER will provide exposure data for research, clinical care and VA claims
- Exposures are a concern for Service members and Veterans
- ILER can search by person and by location

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Questions?

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1. Go to URL: <https://www.dhaj7-cepo.com/content/clinical-communities-speaker-series-military-health-care-select-promising-practices-24-sept>
2. Click on the REGISTER/TAKE COURSE tab.
 - a. If you have previously used the CEPO CMS, click login.
 - b. If you have not previously used the CEPO CMS click register to create a new account.
3. Follow the onscreen prompts to complete the post-activity assessments:
 - a. Read the Accreditation Statement
 - b. Complete the Evaluation
 - c. Take the Posttest
4. After completing the posttest at 80% or above, your certificate will be available for print or download.
5. You can return to the site at any time in the future to print your certificate and transcripts at <https://www.dhaj7-cepo.com/>
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