OUTCOMES IN PATIENTS WITH NON-DIALYSIS DEPENDENT CKD: LESSONS LEARNED FROM A NATIONALLY REPRESENTATIVE STUDY OF US VETERANS

Csaba P Kovesdy, MD FASN
Memphis VA Medical Center, Memphis TN
University of Tennessee Health Science Center, Memphis TN
Conflicts of interest

- None
Projected Veteran Population

22,234,000

Department of Veterans Affairs: Veteran Period of Service Statistics at a Glance
(as of 9/30/2011)

- Vietnam Era: 7.4 million
- Gulf War: 5.9 million
- Peacetime only: 5.7 million
- Korean Conflict: 2.3 million
- World War II: 1.7 million

Numbers shown in Millions

NOTE: Categories are not mutually exclusive. Veterans may serve in multiple periods.

Projected Female Veteran Population 17 Years and Older: 2000 to 2036

In Percent

Fiscal Year


Source: Department of Veterans Affairs, Office of the Actuary, Veteran Population Projections Model (VetPop), 2007, Table 5L.
Projected Minority Veteran Population 17 years and Older: 2000 to 2036

Note: Categories are mutually exclusive. ‘Black’ and ‘All other races’ are not Hispanic. ‘All other races’ includes American Indian/Alaska Native, Asian, Pacific Islander, and Other.

Source: Department of Veterans Affairs, Office of the Actuary, Veteran Population Projections Model (VetPop), 2007, Table 5L.
Levels of Data

- **Local Facility Level**
  - Information may reside only at local facility

- **VA Network Level: VISN Warehouses**
  - Above local level, below corporate level

- **Corporate (National) Level**
  - Mandate for some local data may include uploading a standardized component to a central location
VA Inpatient Data Flow to the MedSAS Datasets

VHA Medical Centers (Local VistA system)

NPCD data at AITC monitored by NDS

Medical SAS® Inpatient Care Setting and Datasets

- Acute Care: Main, Procedure, Bed Section, Surgery Datasets
- Extended Care: Main, Procedure, Bed Section, Surgery Datasets
- Observation Care: Main, Procedure, Bed Section Datasets
- Non-VA Care: Main, Procedure, Bed Section, Surgery Datasets
Multiple different VA data sources are available nationally.

These can be combined with each other and with non-VA data sources in a large variety of different ways. Thus there is no single “VA database”.

There are parallel national sources for some types of data (e.g. pharmacy, utilization).

Dates for which data are available nationally vary by source.

Available data sources and the process of accessing these data are constantly evolving and changing.
Data Sources

The VA maintains numerous national, VISN-level, and local facility data sources.

- ADUSH Enrollment File
- BIRLS Death File
- Corporate Data Warehouse (CDW)
- DSS National Data Extracts (NDEs)
- Medical SAS Datasets
- National Patient Care Database (NPCD)
- National Prosthetics Patient Database (NPPD)
- OEF/OIF/OND Roster
- Pharmacy Benefits Management Database (PBM)
- RAI-MDS
- VA/CMS Data for Research
- VETSNET
- VHA Vital Status File (VSF)
- VISTA
VIRReC

- Acquires information on VA data and information systems and disseminates this knowledge base to the VA research community.
- Provides Medicare and Medicaid data to researchers through the VA/CMS Data for Research Project.
- Provides educational programs on data and clinical informatics topics through cyber seminars.
- Answers questions about VA data through HelpDesk.
- Apprises the VA research community of new developments in VA data through a monthly newsletter, Data Issues Brief.
- Sponsors/ maintains an online discussion forum (HSRData-L Listserv) to encourage the exchange of information and collaboration among novice and experienced VA researchers.
- Works with VA data stewards and experts in data security and privacy to address researcher data needs, concerns, and priorities.
Types of data

- **Utilization**
  - Outpatient visits: NPCD (Outpatient care file) and Fee Basis
  - Inpatient admissions: NPCD (Patient Treatment File) and Fee Basis

- **Clinical**
  - Laboratory results: Decision Support System (DSS)
  - Vital signs: Corporate Data Warehouse (CDW)
  - Radiology: DSS
  - Pharmacy: Pharmacy Benefits Management, DSS, CDW

- **Quality Improvement Efforts (proprietary):**
  - HIV registry, Inpatient Evaluation Center (IEC), Diabetes QUERI, CHD QUERI, Colorectal Cancer QUERI, NSQIP, Minimum Patient Dataset (MDS)

- **Mortality data (VSF)**

- **Online resource:** [http://www.virec.research.va.gov/](http://www.virec.research.va.gov/)
Many veterans use non-VA healthcare (primarily but not exclusively Medicare), leading to under-ascertainment of comorbidity and some outcomes if relying solely on VA data (e.g., ESRD).

VA race data are incomplete and may be less accurate than Medicare.

VA obtained Medicare and USRDS data for veterans.
Strengths and weaknesses

- **Strengths:**
  - Large cohort size
  - Representation of the entire US
  - Access to healthcare not limited by sociodemographic factors

- **Weaknesses:**
  - Race data unreliable and incomplete
  - Many veterans use outside healthcare
  - ~92% of patients are men (as of 2010)
  - Complex and redundant approval process for some data sources
  - Limitations of “real world” data