Overview of VHA Information Systems Available for Research

Presentation to the Research Advisory Committee for Gulf War Veterans’ Illnesses

October 28, 2003
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VHA Information Systems

- Local Facility Level: Information May Only Reside At Local Facility
- Corporate (National) Level: Some Local Data Are Mandated And May Include Uploading To A Central Location
- VA Network Level: VISN Warehouses
- Above local level, below corporate level

Multiple Health Data Sources

- Administrative data
- Medical record information
- Patient-derived data
- Provider and facility data
- Pharmaceutical data

Uses of VA Data

- Patient, employee and provider satisfaction
- Quality of care
- Access to care
- Resource use
- Operational efficiency
- Cost of care
Examples of Health Measures

- Post-discharge mortality
- Functional status
- Rates of complication and/or readmission
- Length of stay, length of recovery
- Cost effectiveness

Highlights of VA Data

- Centralized resources for many databases
- Readily available for VA researchers
- Available for large groups of patients
- Given good coding, reflective of general clinical status
- Common identifiers allows linking across care continuum and over time

Caveats About VA Data

- Limitations of ICD-9-CM coding
- Incomplete picture of all care dimensions
- Incentives to coding
- Retrospective nature of discharge abstracts and diagnoses
- Limited access to data
- No public use files

Sources of Data Available for Research

- Administrative data
- Hospital/facility-level data
- Medical record information
- Patient-derived data
Comprehensive Listing of VA Databases

Corporate Database Monograph

- Produced by VHA OI Information Assurance National Data Systems
- Last updated in 2003
- http://www.ai.med.va.gov/nds/Corporate_Database_Inventory.htm

VA Databases Often Used in HSR

- National Patient Care Data (NPCD) Files
  - Outpatient Medical SAS Files
  - Inpatient Medical SAS Files or Patient Treatment Files (PTF)

- Veterans Health Information System Architecture (VistA)
  - Patient Level Clinical Data

VA Databases Often Used in HSR

- Prescription Use – Pharmacy Benefits Management Data
- Decision Support System (dSS) Data
- Beneficiary Identification Record Locator System (BIRLS)
- Survey Data Files
  - National Survey of Veterans
  - Census 2000
New Databases

- DSS Clinical data Extracts
  - Fact of Lab
  - Lab results
  - Prescription Fills
  - Fact of Radiology
- HERC Average cost datasets
- VA-Medicare Linked Data

Highlights of Selected Databases

NPCD Overview

- Local facilities transmit data to the Austin Automation Center
- Data stored in relational database, Oracle
- Generates SAS system files for inpatient and outpatient data and other “specialty” areas

Local to National Data Flow

- VHA Facilities → AAC → SAS Datasets
Data Elements In All Inpatient Datasets

- Patient identifier (SCRSSN)
- Facility & VISN identifiers of where care provided
- Admission & Discharge Date & Time
- Discharge Type (e.g., Regular, Death-Autopsy, Non-bed Care)
- Primary Diagnosis for stay (DXLSF)

Data Elements Common In Outpatient Datasets

- Patient identifier (SCRSSN)
- Patient demographics (Age, date of birth, race, marital status)
- Patient Zip Code, County, & State of Residence
- Date of encounter

Common Data Elements

- Means Test Indicator
- Patient eligibility code (Separate vet and non-vet categories)
- Agent Orange exposure claimed
- Radiation exposure claimed
VHA Clinical Data: Local and Corporate Level

Locally Available Clinical Data
Clinical management info entered in the local point of care information system
- Examples at point of care:
  - Computerized Patient Record System (CPRS)
  - VistA (Formerly DHCP)
  - Clinical Reminders

VistA Limitations
- Includes only services provided at that facility
- For a multi-site study, requires extracting data from multiple local sites
- Difficult to link patient data across VistA software packages covering different units, e.g., pharmacy, lab, radiology

VistA Limitations
- Some clinical software outside of VistA system (e.g., Some cardiac cath lab)
- Some software may be implemented differently at sites
- Text-based data not easily extracted
  - (e.g., EKG, radiology interpretation, H&P)
- Some clinical data are not entered
  - (e.g., smoking hx, alcohol use)
VistA 5-Year Plan

- Increased use of standard coding systems
- Plans for new data entry (e.g., images, results from clinical procedures such as ECG, etc.)
- Improved numeric identifier that serves as an enterprise-wide identifier for patients and providers
- Plans for a Health Data Repository will support extracting of data for both corporate reporting and research (2005)

Corporate-Level Registries: Examples

- Immunology Case Registry
- AIDS Service
- Ionizing Radiation Registry
- Env Agents Svc
- VA National Clozapine Registry
- Mental Health & Behav Sciences Svc
- VA Central Cancer Registry
- Acute Care, Med Svc

Other Corporate Examples

- Functional Status and Outcome Database
- PM&R Svc
- Emerging Pathogens Initiative
- Acute Care, Med Svc
- Home Based Primary Care
- G&EC
- External Peer Review Program Data
- OQP
VIReC
Mission/Purpose

➢ To Promote an Environment of Information Sharing About Using Data

➢ To Serve the Research Community With Their Health Data Information Needs

About VIReC

➢ Provides research assistance to VA data users
➢ Established in 1998
➢ Funded by VA HSR&D Service
➢ Located at Hines VA Hospital