

**Presentation 13 – Denise Hynes**

**Overview of VHA  
Information Systems  
Available for Research**

**Presentation to the Research  
Advisory Committee for Gulf  
War Veterans' Illnesses**

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1

**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

2

**Multiple Health Data  
Sources**

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

3

**Uses of VA Data**

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

4

### Examples of Health Measures

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

5

### 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

6

### 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

7

### Sources of Data Available for Research

- > Administrative data
- > Hospital/facility-level data
- > Medical record information
- > Patient-derived data

8

## Comprehensive Listing of VA Databases Corporate Database Monograph

- Produced by VHA OI Information Assurance National Data Systems
- Last updated in 2003
- [http://va.ww.ia.med.va.gov/nds/Corporate\\_Database\\_Inventory.htm](http://va.ww.ia.med.va.gov/nds/Corporate_Database_Inventory.htm)

9

Below is a copy of the introduction section from *VHA Corporate Database Monograph (2000-2001)* produced by VHA Office of Information System Design & Development (OSDD), March 2001. For a copy of complete documentation, please visit the VHA Information Assurance Service Intranet Website: [http://va.ww.ia.med.va.gov/nds/Corporate\\_Database\\_Inventory.htm](http://va.ww.ia.med.va.gov/nds/Corporate_Database_Inventory.htm)

### Introduction

The delivery of quality health care services to eligible veterans is one of the primary missions of the Department of Veterans Affairs (VA). Within the Department, Veterans Health Administration (VHA) operates the largest centrally directed health care system in the United States. In 172 Medical Centers, approximately 551 ambulatory and community-based clinics, 131 nursing homes, and 40 domiciliarys, electronic information systems provide vital support to the delivery of health care to veterans. During fiscal year 1998, these facilities treated approximately 617,121 inpatients and recorded 34,971,951 outpatient visits.

### Background

Year 2000 analysis and renovation efforts within the Department of Veterans Affairs identified numerous databases used by both limited and broad user groups. Following the establishment of the initial inventory of databases in late 1998, an intense research process was undertaken to determine more about these databases to profile where and how Veterans Health Administration has constructed and actively uses enterprise-wide databases. As a result of this research, this volume provides introduction, overview, and features of each actively used VHA corporate database.

## 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

11

## 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

12

## New Databases

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

13

## Highlights of Selected Databases

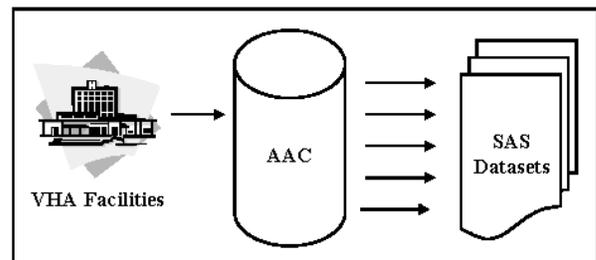
14

## 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

15

## Local to National Data Flow



16

## 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)

17

## 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

18

## Common Data Elements

- Means Test Indicator
- Patient eligibility code (Separate vet and non-vet categories)
- Agent Orange exposure claimed
- Radiation exposure claimed

19

The screenshot shows the VA Medicare Data for Research website. The page title is "VA-Medicare Datasets for Research". It includes a navigation menu with "DATA SOURCES" and "SUPPORT". The main content area contains a section titled "Datasets Available" with a table listing the types of data, files, and years.

Type of Data	Files	Years
Part A. Claims	MedPAR (Medicare Provider and Analysis Review) File	1999-2001
	Skilled Nursing Facility SAF	1999-2001
	Home Health Agency SAF	1999-2001
	Hospice SAF	1999-2001

## VHA Clinical Data: Local and Corporate Level

21

## 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

22

## 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

23

## VistA Limitations

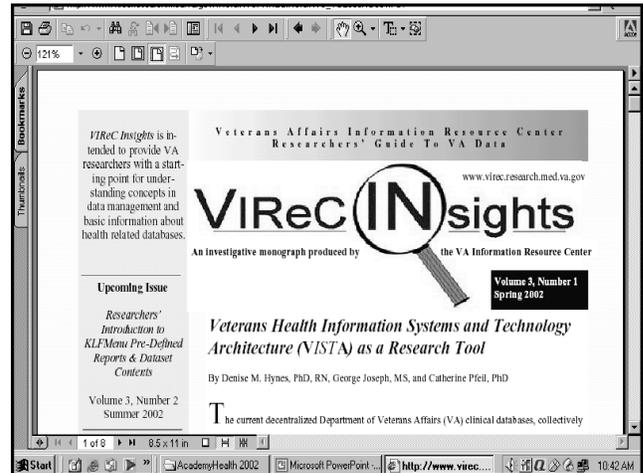
- Some clinical software outside of VistA system (eg. Some cardiac cath lab)
- Some software may be implemented differently at sites
- Text-based data not easily extracted
  - (e.g., EKG, radiology interpretation, H&P)
- Some clinical data are not entered
  - (e.g., smoking hx, alcohol use)

24

## 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)

25



## Corporate-Level Registries: Examples

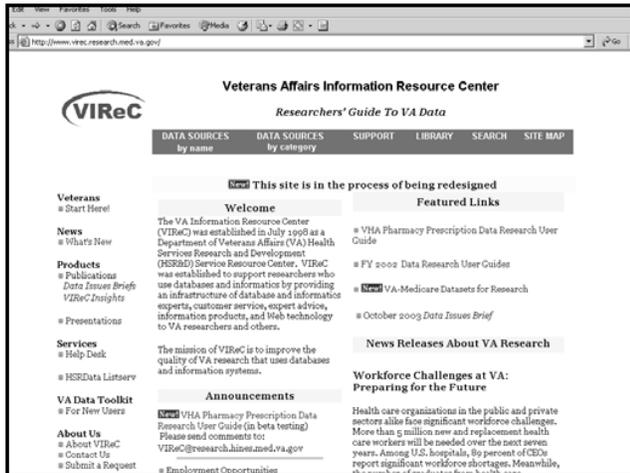
- Immunology Case Registry
  - AIDS Service
- Ionizing Radiation Registry
  - Env Agents Svc
- VA National Clozapine Registry
  - Mental Health & Behav Sciences Svc
- VA Central Cancer Registry
  - Acute Care, Med Svc

27

## 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

28



## VIREC Mission/Purpose

- To Promote an Environment of Information Sharing About Using Data
- To Serve the Research Community With Their Health Data Information Needs

30

## About VIREC

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

31