

# Assessing Inpatient and Outpatient VA Health Care Use

December 1, 2014

Presented by:

Tom Weichle, MS

VA Information Resource Center



# Thanks to:

- **VIReC colleagues**

# Poll #1: About you

- **What is your role in VA?**
  - **Research investigator/PI**
  - **Data manager/analyst**
  - **Project coordinator**
  - **Other – please describe via the Q&A function**

# Assessing Health Care Use in the VA

- Data about inpatient and outpatient events are available in a variety of sources
  - Veterans Health Information Systems and Technology Architecture (VistA)
  - Managerial Cost Accounting (MCA, formerly DSS) National Data Extracts
  - Corporate Data Warehouse (CDW)
  - Medical SAS datasets

## By the end of this talk, you will:

- **Understand what are the Medical SAS datasets**
- **See which Medical SAS datasets are created and where to obtain them**
- **Be able to find information in the Medical SAS datasets**
- **Know where to go for help regarding the Medical SAS datasets**

# Topics for Today

- Overview of Medical SAS datasets
- Inpatient datasets
- Outpatient datasets
- Examples of VA research that have used Medical SAS datasets
- Learning more about Medical SAS datasets

## Poll #2:

- How would you rate your overall knowledge of the VA Medical SAS datasets?
  - 1 (Never Used);
  - 2;
  - 3;
  - 4;
  - 5 (Used Frequently, Very familiar)

# Overview of Medical SAS datasets

# What are the MedSAS datasets?

- Comprehensive, administrative datasets for national VHA healthcare delivery
- Inpatient discharge and outpatient encounter information from the electronic health record
- Care given to patients at all VA facilities and some non-VA facilities paid for by VA
  - Contains very small percentage of non-Veterans who received care in a VA facility

# Technical Details

- Data steward: National Data Systems
- Hosted on mainframe computer at the Austin Information Technology Center (AITC)
- Fiscal year files; also available on a quarterly basis
  - Researchers advised to use annual, closed-out datasets
- Common element: patient identifier (scrambled SSN)

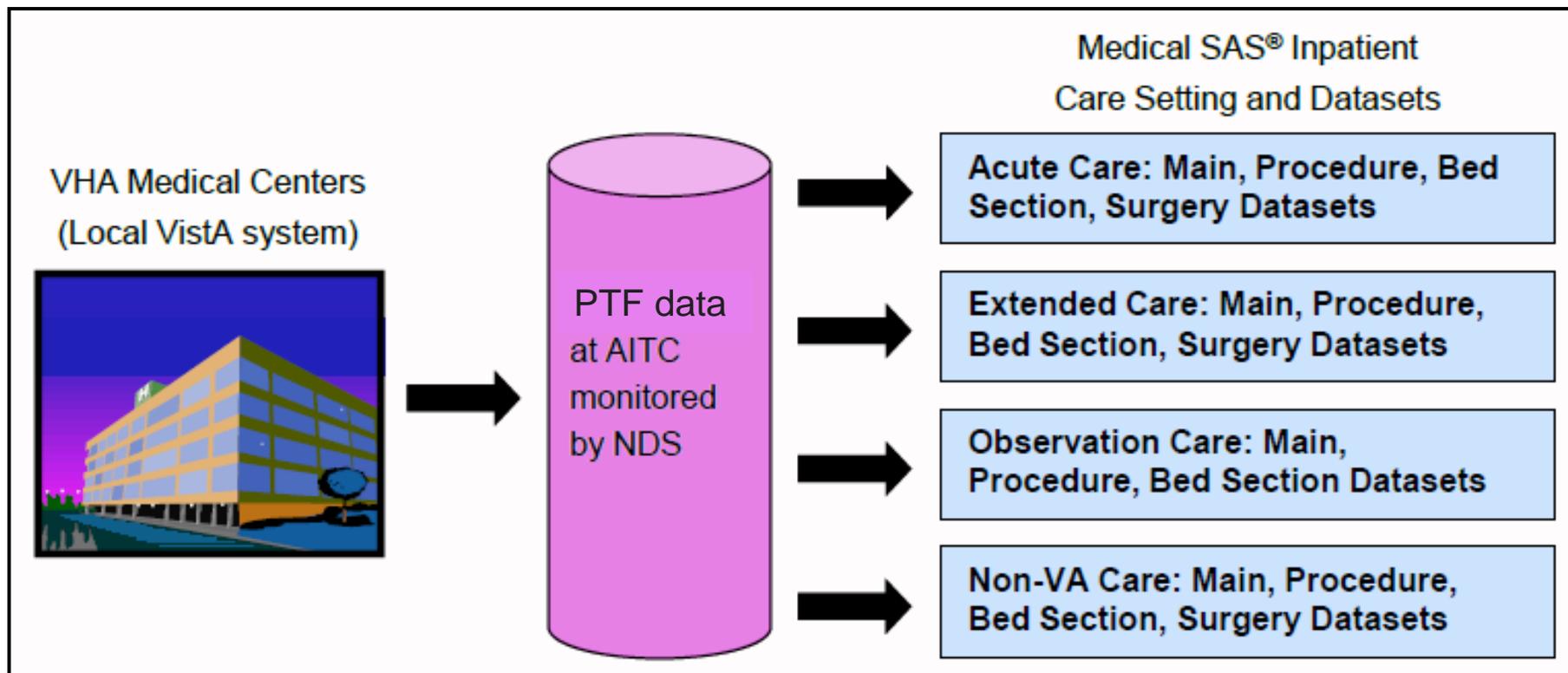
# Inpatient datasets

Data flow

Organization

Measures

# VA Data Flow to the Inpatient Datasets



Patient Treatment File (PTF)  
 Austin Information Technology Center (AITC)  
 National Data Systems (NDS)

# Inpatient Care Setting Summary

Setting	Information Provided
Acute Care	Stays for acute care at a medical center bed section lasting $\geq 24$ hours
Extended Care	Stays in VA community living centers, domiciliaries, and contracted care in CNHs
Observation Care	Hospital stays (generally lasting $< 24$ hours) for monitoring, evaluation, or assessment
Non-VA Care	Care funded by the VA but provided in non-VA facilities

# Inpatient Datasets Summary

<b>File</b>	<b>Information Provided</b>
Main	Summary of entire stay (episode of care) and demographic information
Bed Section	Data for segment of stay defined by specialty of physician managing patient's care
Procedure	Information on up to 5 procedures on a given day
Surgery*	Information on up to 5 surgeries on a given day

\* Observation Care setting has no associated Surgery detail dataset.

# Inpatient Datasets Naming Convention

## ➤ Acute Care

File	Reference	Dates
Main	PM	FY1984 – present
Bed Section	PB	FY1984 – present
Procedure	PP	FY1988 – present
Surgery	PS	FY1984 – present

# Finding Information in Inpatient Datasets

- Inpatient datasets can be used to assess:
  - Admission and Discharge
  - Physician Specialty
  - Diagnoses
  - Procedures
  - Length of Stay



# Assessing Admission and Discharge

- All inpatient datasets include:
  - Admission Date and Time
  - VISN and Station Number (facility)
  - Discharge Date and Time
  - Discharge Status
  - Discharge Type



# Assessing Physician Specialty

- **BEDSECN** variable identifies specialty of physician managing patient's care
  - Found in Bed Section and Procedure datasets
  - Contains treating specialty code
  - One inpatient stay may have many bed sections



# Assessing Diagnoses

- **DXLSF: Primary Diagnosis Responsible for Full LOS**
  - Diagnosis initially assigned at admission
  - May be different than DXPRIME if diagnosis changes
  - Not coded by professional coders
- **DXPRIME: Principal Admitting Diagnosis**
  - Condition which determined to be chiefly responsible for the admission to the hospital
  - Codes assigned by professional coders
  - Leads to the calculation of the DRG

# Assessing Diagnoses (cont'd)

- **DXF2 – DXF13\***
  - Secondary diagnosis codes for full hospital stay
  - Main data sets only
- **DXLSB, DXB2-DXB5**
  - Diagnoses related to the Bed Section diagnosis and stay
  - Bed Section data sets only

\* Number of secondary diagnoses code variables changed from 9 to 12 in FY2005

# Assessing Procedures

- Procedure datasets contain:
  - Procedures not performed in an operating room  
e.g., dialysis type & number of dialysis treatments
- Surgery datasets contain:
  - Surgeries performed in operating room
- A “procedure” in one facility may be considered “surgery” in another facility. Check both datasets.



# Diagnosis and Procedure Codes

- ICD-9-CM system of codes currently used in MedSAS datasets
- ICD-10 Transition:
  - Compliance date October 1, 2015
  - VHA continues to prepare software for ICD-10 implementation

# Assessing Length of Stay

- Records are created at discharge for the full stay, even if the admission was in a prior year
  - **Exception:** Claims for Non-VA Care included in dataset for year paid, not for year of care
- Includes length of stay defined with:
  - **Minimum of 1 day**



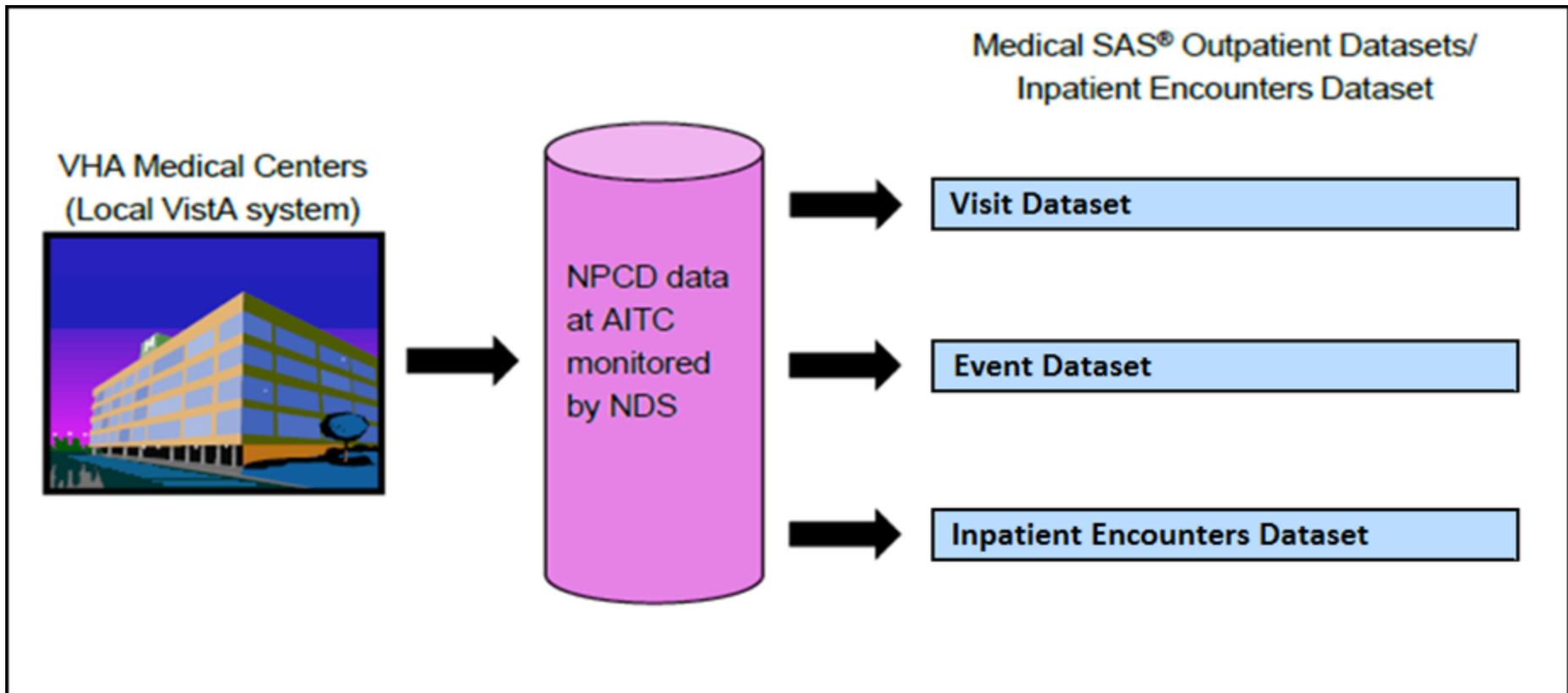
# Outpatient datasets

Data flow

Organization

Measures

# VA Data Flow to the Outpatient Datasets



National Patient Care Database (NPCD)

# NPCD Retirement

- End of FY2015
  - MedSAS Outpatient data will no longer be produced
- Users will transition to Corporate Data Warehouse (CDW)
  - Data will contain same content as the MedSAS Outpatient datasets
  - Different format for FY2016
- MedSAS data created through FY2015
  - Existing MedSAS datasets will remain available

# Outpatient Datasets Summary

<b>File</b>	<b>Information Provided</b>
Visit	Reports services provided to a patient in a 24-hour period at a single facility
Event	Provides information about individual outpatient encounters
Inpatient Encounters	Provides information about professional services received during inpatient stay

# Outpatient Datasets Naming Convention

<b>File</b>	<b>Reference</b>	<b>Dates</b>
Visit	SF	FY1991 – present
Event	SE	FY1997 – present
Inpatient Encounters	IE	FY2005 – present

# Visit vs. Event File

## Patient's Outpatient Clinic Stops



During One  
Day at One  
Facility

Primary  
Care Clinic  
Stop

Ophthalmology  
Clinic Stop

Physical  
Therapy  
Clinic Stop

Event

Event

Event

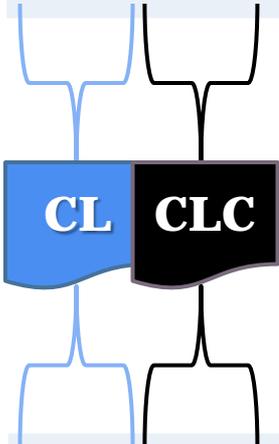
Visit

# Stop Codes

- **Workgroups or clinics are identified using Stop Codes (also known as Clinic Stops and formerly DSS Identifiers)**
  - **Primary Stop Code (CL)**
    - Identifies production units or revenue centers responsible for outpatient care
  - **Secondary (Credit) Stop Code (CLC)**
    - Further defines the team, service, funding

# Stop Code Examples

<b>216203</b>	Telephone Audiology Rehab Support Service
<b>216204</b>	Telephone Speech Rehab Support Service
<b>216210</b>	Spinal Cord Injury Telephone Support



# Outpatient Visit (SF) File

- One record per visit
  - All events at a facility in a given day
- Demographic information
- Up to 15 primary stop codes
- Common Primary Stop Codes:
  - Laboratory
  - Primary care medicine
  - Telephone primary care
- No diagnosis or procedure information



# Outpatient Event (SE) File

- One primary stop code per record
  - Can also include one secondary stop code per record
  - More than half have no secondary stop code
  - Only primary stop codes are required
- No limit on number of records per day
- Diagnosis & procedure information in one dataset

# Inpatient Encounters (IE) File

- Professional service encounters during inpatient stay
  - Services not recorded as encounters in Outpatient Event file
- Shares same structure as the Outpatient Event file
  - Many records may be generated during one inpatient stay
  - Contains:
    - Primary and secondary stop codes
    - Diagnosis and procedure codes
- Common Primary Stop Codes:
  - Recreation therapy service
  - Respiratory therapy
  - Physical therapy
  - X-ray



# Finding Information in Outpatient Datasets

- Outpatient datasets can be used to assess:
  - Diagnoses
  - Procedures
  - Provider Type



# Assessing Diagnoses

- **Outpatient Event & Inpatient Encounters files:**
  - Up to 10 diagnoses per record
  - ICD-9-CM system of codes
- **DXLSF:**
  - Primary Diagnosis for Encounter
- **DXF2-DXF10:**
  - Secondary Diagnoses

# Assessing Procedures

- Outpatient Event & Inpatient Encounters files:
  - Up to 20 procedures per record
  - CPT-4 system of codes
- **CPT1-CPT20\***:
  - Services and procedures performed by a provider
  - Repetition allowed



\* Number of procedure code variables changed from 15 to 20 in FY2005

# Assessing Provider Type

- Outpatient Event & Inpatient Encounters files:
  - Up to 10 provider types per record
  - CMS Provider Classification System
- **PROV1-PROV10:**
  - Provider types and areas of specialization
  - Providers not extracted in any particular order
    - PROV1 not necessarily the primary provider

# Examples of VA research that have used Medical SAS datasets

# Research Example I:

## Ramanathan, Johnson, Burns, et al., *Am J Infect Control* 2014; 42(2): 168-73

American Journal of Infection Control 42 (2014) 168–73

Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.elsevier.com/locate/ajic

Major article

### Recurrence of *Clostridium difficile* infection among veterans with spinal cord injury and disorder

Swetha Ramanathan MPH<sup>a,b,c,\*</sup>, Stuart Johnson MD<sup>c,d</sup>, Stephen P. Burns MD<sup>e,f</sup>, Stephen M. Kralovic MD, MPH<sup>g</sup>, Barry Goldstein MD, PhD<sup>h</sup>, Bridget Smith PhD, MPA<sup>a,i</sup>, Dale N. Gerding MD<sup>j,k</sup>, Charfennika T. Evans PhD, MPH<sup>a,h</sup>

<sup>a</sup>Department of Veterans Affairs, Center of Excellence for Complex Chronic Healthcare and Spinal Cord Injury Quality Enhancement Research Initiative (CEI QERI), Edward Hines Jr VA Hospital, Hines, IL

<sup>b</sup>School of Public Health, University of Illinois, Chicago, IL

<sup>c</sup>Department of Veterans Affairs, Research Service, Edward Hines Jr VA Hospital, Hines, IL

<sup>d</sup>Department of Medicine, Loyola University Medical Center, Maywood, IL

<sup>e</sup>VA Puget Sound Health Care System, VA Medical Center, Seattle, WA

<sup>f</sup>Department of Rehabilitation Medicine, University of Washington, Seattle, WA

<sup>g</sup>Department of Medical Center and University of Cincinnati College of Medicine, Cincinnati, OH

<sup>h</sup>Department of Preventive Medicine and Center for Healthcare Studies, Northwestern University, Chicago, IL

**Key Words:**  
*C. difficile* infection  
 First recurrence  
 Veterans Affairs  
 Concomitant antibiotic use  
 Length of stay

**Background:** Recurrent *Clostridium difficile* (CDI) infection is a growing concern; however, there are little data on recurrent CDI in those with spinal cord injury and disorder (SCI/D). Therefore, the objective of this study was to identify risk factors associated with recurrence of CDI among Veterans with SCI/D.

**Methods:** This was a retrospective cohort study with data from outpatient, inpatient, and extended care settings at 83 Department of Veterans Affairs facilities from 2002 to 2009.

**Results:** Of 1,844 cases of CDI analyzed, 315 cases (17.1%) had a first recurrence of CDI. Multivariable regression demonstrated that risk factors significantly associated with increased recurrence were concomitant fluoroquinolone use (odds ratio [OR], 1.39; 95% confidence interval [CI], 1.08–1.80), whereas concomitant tetracycline use (OR, 0.25; 95% CI, 0.14–0.50), and cardiovascular accident (OR, 0.40; 95% CI, 0.25–0.65) were associated with decreased recurrence. A subanalysis in those with health care facility-onset CDI showed that length of stay postinitial CDI was a significant risk factor for recurrence as was concomitant use of fluoroquinolones and that tetracycline remained protective for recurrence.

**Conclusion:** Concomitant fluoroquinolone use was a risk factor for the recurrence of CDI. In contrast, tetracyclines and cardiovascular accident were protective. Length of stay greater than 90 days from the initial CDI episode was also a risk factor for recurrence among those with health care facility-onset CDI. Future studies should focus on effective strategies to prevent these risk factors among the SCI/D population.

Published by Elsevier Inc. on behalf of the Association for Professionals in Infection Control and Epidemiology, Inc.

*Clostridium difficile* infection (CDI) is a significant cause of health care-associated infections (HAIs) but can be acquired from community settings as well.<sup>1</sup> Data from the Centers for Disease Control and Prevention (CDC) Emerging Infections Program in 2000 determined that 94% of cases overall were health care associated despite 75% of those having onset outside of the hospital setting.<sup>2</sup> CDI has been associated with increased rates of morbidity and mortality, longer length of stay (LOS), and increased health care costs.<sup>3,4</sup> A growing concern is the rate of recurrent infections associated with CDI. Recent studies have shown that recurrence of CDI ranges anywhere from 13% to 45%.<sup>5,6</sup> Recurrent CDI can be due to relapse of the original infection or reinfection because of a new strain of *C. difficile*.<sup>7,8</sup> Recurrent CDI is associated with further recurrence episodes and results in increased hospitalizations.<sup>9</sup>

\* Address correspondence to Swetha Ramanathan, MPH, Edward Hines Jr VA Hospital, 505 and Research Blvd, Hines, IL 60140, Hines, IL 60140. E-mail address: swetha.ramanathan@va.gov (S. Ramanathan).

Supported by VA Health Services Research and Development Service (10-01-140). The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs, Office of Research, Hines or report.

0196-4513/\$36.00 - Published by Elsevier Inc. on behalf of the Association for Professionals in Infection Control and Epidemiology, Inc.  
<http://dx.doi.org/10.1016/j.ajic.2013.08.003>

**Objective:** To identify risk factors associated with recurrence of CDI among Veterans with SCI/D

**Study Design:** Retrospective cohort study with data from outpatient, inpatient, and extended care settings at 83 Department of Veterans Affairs facilities from 2002 to 2009

**Data Sources:** VA Inpatient and Outpatient MedSAS datasets, among others

**Healthcare Use Construct:**  
 Length of stay

## Research Example II:

Wang, Maciejewski, Patel, et al., *BMC Health Serv Res* 2013; 13:26

Wang et al. *BMC Health Services Research* 2013, 13:26  
<http://www.biomedcentral.com/1471-2901/13/26>

 BMC Health Services Research

**RESEARCH ARTICLE** Open Access

### Comparison of outcomes for veterans receiving dialysis care from VA and non-VA providers

Virginia Wang<sup>1,2\*</sup>, Matthew I. Maciejewski<sup>1,2</sup>, Uptal D. Patel<sup>1,3</sup>, Karen M. Stuchlik<sup>1</sup>, Denise M. Hynes<sup>4,5</sup> and Morris Weinberger<sup>1,2</sup>

**Abstract**

**Background:** Demand for dialysis treatment exceeds its supply within the Veterans Health Administration (VA), requiring VA to outsource dialysis care by purchasing private sector dialysis for veterans on a fee-for-service basis. It is unclear whether outcomes are similar for veterans receiving dialysis from VA versus non-VA providers. We assessed the extent of chronic dialysis treatment utilization and differences in all-cause hospitalizations and mortality between veterans receiving dialysis from VA versus VA-outsourced providers.

**Methods:** We constructed a retrospective cohort of veterans in 2 VA regions who received chronic dialysis treatment financed by VA between January 2007 and December 2008. From VA administrative data, we identified veterans who received outpatient dialysis in (1) VA, (2) VA-outsourced settings, or (3) both ("dual") settings. In adjusted analyses, we used two-part and logistic regression to examine associations between dialysis setting and all-cause hospitalization and mortality one-year from veterans' baseline dialysis date.

**Results:** Of 1,388 veterans, 27% received dialysis exclusively in VA, 47% in VA-outsourced settings, and 26% in dual settings. Overall, half (48%) were hospitalized and 12% died. In adjusted analysis, veterans in VA-outsourced settings incurred fewer hospitalizations and shorter hospital stays than users of VA due to favorable selection. Dual-system dialysis patients had lower one-year mortality than veterans receiving VA dialysis.

**Conclusions:** VA expenditures for "buying" outsourced dialysis are high and increasing relative to "making" dialysis treatment within its own system. Outcomes comparisons inform future make-or-buy decisions and suggest the need for VA to consider veterans' access to care, long-term VA savings, and optimal patient outcomes in its placement decisions for dialysis services.

**Keywords:** Veterans, Dialysis, Hospitalization, Mortality

**Background**

Approximately 35,000 veterans enrolled in the Veterans Health Administration (VA) have end-stage renal disease (ESRD), reflecting a higher prevalence in the VA population than in the general US population (604 vs. 387 per 100,000) [1,2] that is likely due to veterans' older age and greater disease prevalence of diabetes and hypertension. The organization of chronic dialysis services for veterans with ESRD is complex because many are eligible for dialysis care through either the VA, the largest integrated healthcare system in the US, or the Medicare program.<sup>\*</sup> VA finances roughly 60% of ESRD dialysis services for these veterans and Medicare finances approximately 30% of dialysis services [3-5]. Veterans are likely to favor dialysis care through VA because the VA's integrated care system provides a continuum of care and patients' out-of-pocket cost-sharing is lower in VA than Medicare.<sup>†</sup> To serve its ESRD veterans seeking dialysis care, the VA operates 74 hospital-based VA dialysis units that provide acute (inpatient) and chronic (outpatient) treatments. When the VA is not capable of meeting all veterans' demand for chronic outpatient dialysis or providing steady geographic access to these weekly dialysis care at VA medical centers (VAMCs), the VA outsources dialysis care by purchasing services from non-VA providers in the private sector on a fee-for-service basis.

\*Compendium: [www.va.gov/medicare](http://www.va.gov/medicare).  
 †Health Services Research and Development, Durham VA Medical Clinic, Durham, NC 27705, USA  
 ‡Division of General Internal Medicine, Department of Medicine, Duke University, Durham, NC 27705, USA  
 Full list of author information is available at the end of the article

 © 2013 Wang et al.; licensee BioMed Central Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Objective:** To assess the extent of chronic dialysis treatment utilization and differences in all-cause hospitalizations and mortality between veterans receiving dialysis from VA versus VA-outsourced providers

**Study Design:** Retrospective cohort of veterans in 2 VA regions who received chronic dialysis treatment financed by VA between January 2007 and December 2008

**Data Sources:** VA Inpatient and Outpatient MedSAS Datasets, Fee Basis Files, among others

**Healthcare Use Construct:**  
 Chronic dialysis treatment

## Research Example II:

Wang, Maciejewski, Patel, et al., *BMC Health Serv Res* 2013; 13:26

- **Exclusion criteria:**
  - **Death within a 90 day period prior to the first treatment**
  
  - **Dialysis treatment:**
    - 1) Only acute dialysis or chronic dialysis exclusively as inpatients;
    - 2) Any home-based dialysis; or
    - 3) Received the majority of their outpatient dialysis treatments outside the two study regions

## Research Example II:

Wang, Maciejewski, Patel, et al., *BMC Health Serv Res* 2013; 13:26

**Table 2 Adjusted all-cause hospitalization 1-year after baseline**

Variables	Any Hospitalization (n=1,388)
	OR (95% CI)
Dialysis setting: Non-VA (ref: VA)	0.35*** (0.24, 0.51)
Dual	0.99 (0.70, 1.40)
Age	1.00 (0.99, 1.01)
Male	0.96 (0.36, 2.57)
Race: Non-White (ref: White)	0.90 (0.68, 1.18)
DCG risk score	1.22*** (1.17, 1.27)
Region: VISN B (ref: VISN A)	1.59** (1.18, 2.13)

\* p < .05    \*\* p < .01    \*\*\* p < .001

# Research Example III:

Luther, Neumayer, Henderson, et al., *Am J Surg* 2013; 206: 72-79

**Objective:** To conduct stage-adjusted analyses of the utilization rates of breast-conserving surgery

**Study Design:** Retrospective cohort study of women Veterans diagnosed or receiving their initial treatment for breast cancer in 2000-2006 at VHA facilities

**Data Sources:** VA Inpatient and Outpatient MedSAS Datasets, VA Central Cancer Registry, among others

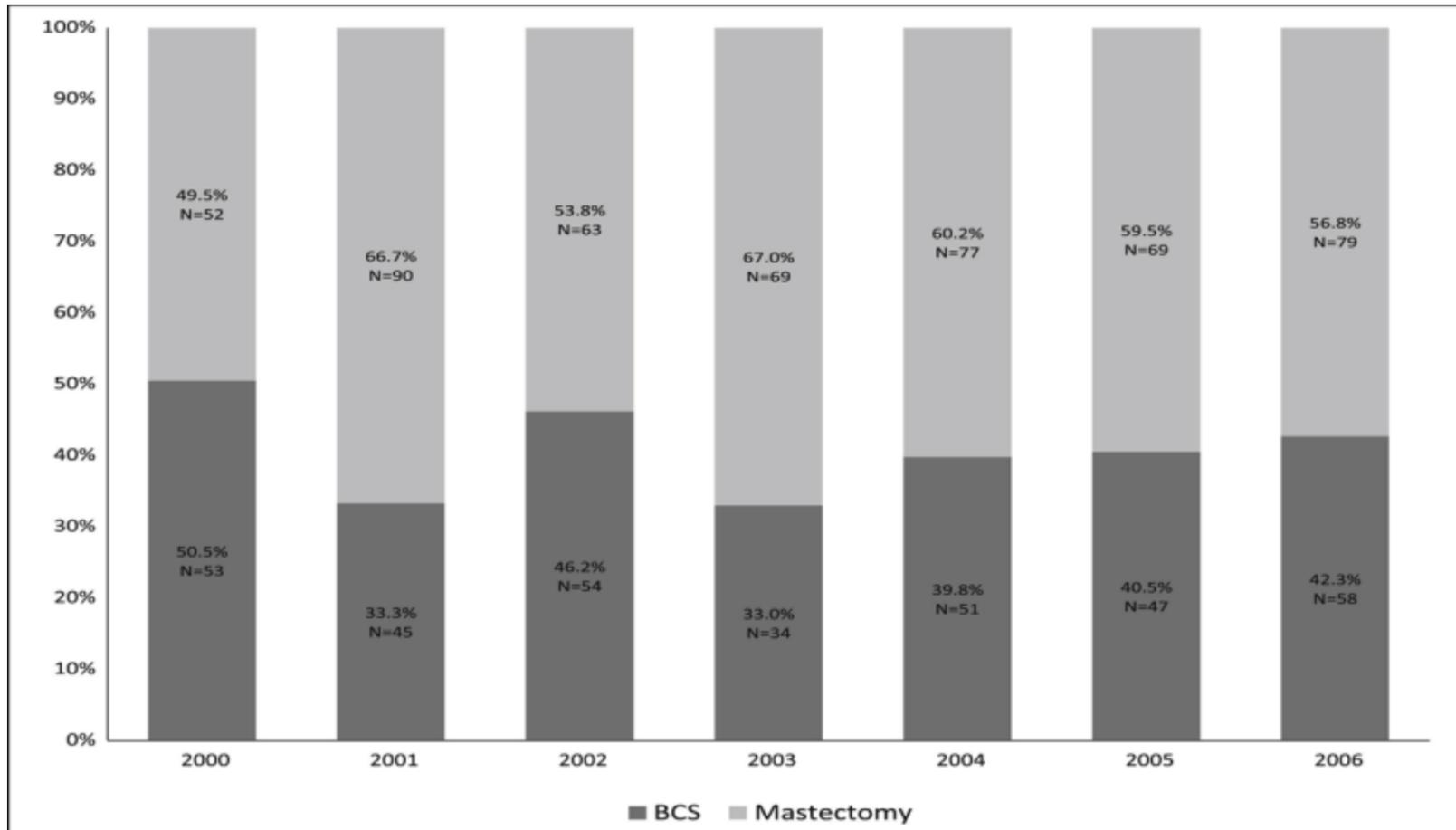
**Healthcare Use Construct:**  
Surgical procedures



## Research Example III:

Luther, Neumayer, Henderson, et al., *Am J Surg* 2013; 206: 72-79

**Figure 1. The use of BCS and mastectomy in the Veterans Health Administration from 2000 to 2006.**



# Where to go for more help

Documentation

Other assistance

# VIReC MedSAS Documentation

**VIReC INTRANET**

Search All VA Web Pages   [Open Advanced Search](#)

**VA INFORMATION RESOURCE CENTER (VIReC)**

VIReC Home  
VA/CMS Home  
About Us  
New Users of VA Data  
FAQs  
Acronyms  
HelpDesk

Delivering current news right to your inbox.  
[Learn More...](#)

**Data Issues Brief, September 2014**

Upcoming Cyberseminars

Real SSN Data Request Process

VA REDCap Project

Data Tip of the Month

**CONVERSATIONS ABOUT VA DATA**  
HSRData Listserv

**CURRENT VA DATA NEWS**  
Data Issues Brief

**GATEWAY TO DATA RESOURCES**  
VHA Data Portal

**Data News**

[Changes to Real SSN Data Request Process](#)  
Researchers requesting real SSN data access will now complete the Real SSN Access Request form and upload it to DART.

[New CMS Data for VA Researchers](#)

- 2012 Medicare data
- 2011 Medicare Part D Slim File
- 2011 MCBS Access to Care data
- 2010 MCBS Cost and Use data

[Updated CDW Domains](#)  
CDW released new views for each of

**VIReC Highlights**

[Seeing Data When You Can't See the Data: A Tour of CDW Documentation](#)  
Join VIReC on October 27 for a demonstration of how to use available metadata to get a glimpse of CDW data. [Register...](#)

[Consult 2.0 Domain Factbook](#)  
Learn about tables, columns, and values in this CDW domain.

[The Researcher's Notebook](#)  
This issue outlines steps for identifying results of microbiological tests in the CDW.

**VIReC Resources**

[Working with VA Data](#): Guide to VA data sources, topics, tools, and access.

[VA/CMS Data for Research Project](#): Data custodian for CMS and USRDS data for VA research.

[Research User Guides](#): Detailed information on select data sources, including variable descriptions.

[Data Reports](#): Technical reports, data investigations, and data quality updates.

# MedSAS Research User Guides (RUGs)

## Research User Guides

---

### ADUSH Enrollment Files

[VIReC Research User Guide: VHA Assistant Deputy Under Secretary for Health \(ADUSH\) Enrollment Files, 2nd Edition](#)

Released: September 2013

- [Abstract](#)
  - [Archive](#)
- 

### MCA (formerly DSS) Clinical NDEs

**Note:** Although the Decision Support System (DSS) is now known as the Managerial Cost Accounting (MCA) System, these guides still use the DSS name.

**New!** [Variable Descriptions SAS-SQL XWalk: VHA Managerial Cost Accounting System \(MCAS\) Clinical National Data Extracts](#)

Released: September 2014

- [Abstract](#)
- 

[VIReC Research User Guide VHA DSS Clinical National Data Extracts, 2nd Edition](#)

Released: September 2009

- [Abstract](#)
  - [Archive](#)
- 

### Medical SAS Datasets

[VIReC Research User Guide: Fiscal Year 2009 VHA Medical SAS<sup>®</sup> Inpatient Datasets](#)

Released: February 2011

- [Abstract](#)
- 

[VIReC Research User Guide: Fiscal Year 2009 VHA Medical SAS<sup>®</sup> Outpatient Datasets & Inpatient Encounters Dataset](#)

Released: April 2011

- [Abstract](#)
  - [Archive](#)
-

The image shows a PDF viewer interface. At the top, there is a toolbar with various icons for navigation and printing, and a status bar showing '1 / 267' pages and '113%' zoom. On the right side of the toolbar, there are 'Sign' and 'Comment' buttons. On the left side, there is a 'Bookmarks' panel with a tree view of the document's contents. The main content area displays the title page of the document.

**VIREC Research User Guide:**  
Fiscal Year 2009 VHA Medical SAS<sup>®</sup> Inpatient Datasets

**Bookmarks:**

- VIREC
  - Research User Guide:
    - FY2009 VHA Medical
      - Contents
      - Acknowledgements
      - Part 1. About this Guide
      - Part 2. Dataset Information
      - Part 3. Dataset Variable Information
      - Part 4. References
      - Appendix A

# Information in the MedSAS RUGs

## 3.1 List of Variables and their Dataset Locations

This section lists variables and their dataset locations for the fiscal year (FY) 2009 VHA Medical SAS<sup>®</sup> Inpatient Acute Care Main, Bed Section, Procedure and Surgery datasets. An X in the frequency column indicates VIREC provides additional summary information for this variable in *VIREC Select Variable Frequencies: Medical SAS<sup>®</sup> Datasets* [18].

Table 5. FY09 VHA Medical SAS<sup>®</sup> Inpatient Variables and their Dataset Locations

Name	Definition	Main	Bed Section	Surgery	Procedure	Frequency
ABO	Number of days a patient was out of the hospital on pass during an inpatient stay	X				
ADMITDAY	Date of admission of the inpatient stay	X	X	X	X	
ADMITMO	Month of admission of the inpatient stay	X				
ADMITYR	Year of admission of the inpatient stay	X				
ADTIME	Time of admission of the inpatient stay	X	X	X	X	
AFIX	Indication of whether the admission was to a substation of the parent hospital	X				
AG15Y	Categorical recoding of AGE (Age In Years) into 15 groupings	X				X
AG8R	Categorical recoding of AGE (Patient age in years at discharge) into 8 groupings	X				X
AG9R (Note 1)	Categorical recoding of AGE (patient age in years at the time of visit) into 9 groupings	X				

## List of Variables and Their Dataset Locations

### Variable Name: DXLSF

Variable Name: DXLSF

Definition: Primary ICD-9-CM diagnostic code responsible for the patient's full length of stay in the hospital.

Remarks: DXLSF is the "primary" diagnosis, rather than the "principal" diagnosis (DXPRIME, the diagnosis determined to be the reason for admission) used in many other facilities (for a domiciliary, it is the diagnosis of "greatest clinical significance"). Until FY1981, ICD-8-A was used, and only the first four digits were defined except in special cases. Until FY1986, admitting diagnosis, DXAFULL, was also in the SAS<sup>®</sup> datasets. DXAFULL was eliminated since it was usually identical to primary diagnosis at discharge. In FY1997, the admitting diagnosis was reestablished as DXPRIME. Currently, DRG codes (see DRG) are based on DXPRIME. This is consistent with coding recommended by the Department of Health and Human Services (DHHS) through its SAS<sup>®</sup> dataset subcommittee definitions.

Data Type	Character
Print Format	None
Label	DX LOS-FULL STAY (ICD9) (6-digit) FY1999-FY2005 PRIMARY DX LOS - FULL STAY (ICD9) (6-DIGIT), FY06-to date

# VIReC Intranet

- Resources
  - Documentation:
    - Variable Frequencies
    - Historical Variable Attributes
    - Data Contents
- Monthly *Data Issues Briefs* (DIBs)
- HelpDesk
  - [virec@va.gov](mailto:virec@va.gov)

# HSRData-L Listserv

- Join at VIREC's Intranet Website
- Exchange of current information, ideas, questions, and answers about **data** and **information systems** issues affecting VA research
- Discussion among > 1,000 VA-only researchers, operations, data stewards, managers, and other users
- Searchable archive of past discussions

# VHA Data Portal

➤ Intranet only

• Data Access

• Data Sources

• Resources

Department of Veterans Affairs  
VHA Data Portal

Home Data Sources Data Access Tools Resources Training About Us Support

Welcome to the VHA Data Portal!

*The one-stop-shop for data users' needs.*

The VHA Data Portal is a collaborative effort among the following to provide a central gateway to information about VHA data:

- VHA National Data Systems (NDS)
- VA Information Resource Center (VIReC)
- VA Informatics and Computing Infrastructure
- VHA Data Quality Program

Our mission is to promote a knowledge-sharing culture that supports VHA data users. The portal integrates information from multiple common format and single location to promote a comprehensive and to facilitate a positive end-user experience.

Data Sources Overview

- AITC Mainframe
- BIRLS Death File
- CDW
- HERC Average Cost Data
- MCA (formerly DSS) NDEs
- MCA (formerly DSS) Web Reports
- Medical SAS Inpatient & Outpatient Data Sets
- NPCU
- DEF/OIF/OND Roster
- PTF
- VA/CMS Data
- VETSNET
- Vital Status File
- VSSC Web Reports

Data Access:  
Visit the Access Section to learn about requesting access to VHA Data

News

Popular Links

# Contact Information

**Tom Weichle, MS**

VA Information Resource Center

Edward Hines, Jr. VA Hospital

**[virec@va.gov](mailto:virec@va.gov)**

708-202-2413



*Questions?*

Next session:  
January 12, 2015

---

# **Measuring Veterans' Medicare Health Services Use**

Kristin de Groot, MPH