

An Overview of VA Pharmacy Data

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Topics

Overview of Data Sources

Access & File Names

Highlights of Contents

Guidance for Use

Non-VA Pharmacy Data

Abbreviations

AITC: Austin Information Technology Center

BPA: Blanket Purchase Agreement

CMOP: Centralized Mail-Order Pharmacy

DSS: Decision Support System

MCCR: Medical Care Cost Recovery program

NDE: National Data Extract

PBM: Pharmacy Benefits Management

VAMC: Veterans Affairs Medical Center

VISTA: Veterans Health Information Systems and
Technical Architecture

Overview - VISTA

Primary repository of clinical data

- Clinicians enter data directly into CPRS
- Pharmacy order system guides prescription process

Many files comprise pharmacy data “package”

Separate VISTA system at each VAMC

Overview - PBM

Name: PBM V3.0 Database

Contents: selected VISTA data fields + new elements

Scope: national

Years: Outpatient data available for 10+ years, inpatient for the last few years only

Overview – DSS Pharmacy Extract

Name: DSS National Pharmacy Extract
(or “Pharmacy NDE”)

Contents: selected VISTA data fields + new elements

Scope: national

Years: both inpatient and outpatient available since FY2003

Overview – DSS Encounter-Level NDEs

Name: DSS NDEs for Inpatient and Outpatient Care

Contents: selected VISTA data fields + new elements

** all pharmacy in the stay (inpatient) or day (outpatient)
rolled up – no prescription-level data **

Scope: national

Years: both inpatient and outpatient available since FY1999

Overview – DSS Production Data

Name: DSS production data

Contents: Components of each encounter, including individual prescriptions

Scope: local VISTA system only

Years: available since FY1999



Fee Basis Files

Data from non-VA pharmacies paid by VA

Contents: total monthly payments to pharmacy vendors;
individual pharmacy records only for medications injected
during a clinic visit (HCPCS “J codes”)

Scope: national

Years: Available since FY1999 or earlier

What Does a Record Represent?

- In VISTA, PBM, and DSS Pharmacy Extract, a record represents a single prescription or supply
 - - for one person
 - - on one day

Note that inpatient medications are typically dispensed every day. Thus 7 days of a medication is often 1 outpatient prescription or 7 inpatient prescriptions.



What Does a Record Represent?

- DSS NDEs for Inpatient and Outpatient Care:
 - all prescriptions and supplies
 - for one person
 - on one day
 - Exception: medications injected in clinic (HCPCS “J codes”): these are outpatient procedures and only sometimes appear in prescription files.
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What Does a Record Represent?

- DSS Production Data:
 - a single prescription or supply
 - for one person
 - on one day
 - in one production unit
- Examples of production units: on-site pharmacy, CMOP



Data Format

- VISTA: ASCII
 - PBM: SAS, MS Access, or Visual FoxPro
 - DSS NDEs at AITC: SAS
 - DSS data via VSSC website (KLFMenu):
Spreadsheet
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Access -- Summary

- VISTA
 - Difficult to obtain direct access
 - Easier to request data from local IRMS.
- N.B.: IRMS staff cannot accept research funds. Making extracts is extra work.



Access -- Summary

- PBM data
 - Extracts made by PBM staff
 - Must submit documentation of research approvals

 - DSS Pharmacy Extract and NDEs
 - User accesses AITC files via timeshare accounts
 - Summary data available for free via KLFMenu, the VISN Support Services Center (VSSC) web site
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Cost of Obtaining Data

■ PBM

- Managerial & oversight projects: no charge
- Unfunded pilot studies: usually no charge
- Funded studies: charges for programmer time + optional consulting on study design
- Ask PBM staff ahead of time

■ Other Sources

- No charge to user; AITC charges billed to VAMC
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Uses of KLFMenu

- VA intranet web page (klfmenu.med.va.gov)
 - No documentation exists
 - Some examples of available data:
 - Use: # prescriptions, # 30-day-equivalent prescriptions
 - Cost: total spending, average spending per prescription
 - Categories: VA drug class and certain sub-categories
 - Other: fiscal year, location (station, VISN, nation)
 - Results can be downloaded to an Excel spreadsheet.
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Data Fields - 1

- Medication
drug name, NDC, formulary indicators
 - Dispensing
fill date, quantity dispensed, days supplied
 - Cost
purchase price (PBM, VISTA) or VA cost including overhead (DSS NDEs, DSS Pharmacy Extract)
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Data Fields – 2

- Patient
SCRSSN, date of birth, gender, age
 - Provider
provider ID, provider treating specialty
 - Note: Clinical information on related visits/stays can be linked to Rx data using SCRSSN.
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Copayments

- VA charges some copayments.
 - Depends on income, disability percentage
 - Rules & eligibility levels change year to year
 - Rules available on VA internet
 - Data sources do not show copayments; they show VA's expense.
 - MCCR files could show reimbursement from private insurance, if collected
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Dispensing Cost

- Contains direct labor, indirect costs of the pharmacy department, and supplies
- Only estimated in DSS NDEs



Unit Costs

- There may be a contract purchase price:
 - Federal Supply Schedule (FSS)
 - FSS Tier Schedule
 - Federal ceiling price (“Big 4”) schedule
 - VA Blanket Purchase Agreement (BPA)

 - To find prices and formulary, visit www.pbm.va.gov.
 - Drug prices: click on Drug Prices, Contracts & Agreements
 - Formulary: click on National Formulary
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Unit Costs - 2

- Keep in mind:
 - The purchase price does not include overhead or direct dispensing costs.
 - Sites are able to purchase off-contract.



Unit Costs - 3

- There will be discrepancies across sites.
 - Correct pricing requires daily updating of a VISTA price file at each VAMC, which does not occur
 - Blanket Purchase Agreements are specific to individual VAMCs.



Choosing a Source: VISTA

- Advantages

- Greatest detail on costs, use of care
- Access to data not available in extracts

- Disadvantages

- Can access data from only the local VAMC
 - Most often, extracts must be made by IRMS staff using specialized programs
 - Requires caution in interpreting differences across sites
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Choosing a Source: PBM

- Advantages
 - National coverage in one extract
 - Only source that provides purchase price
 - Optional fee-based consulting on pharmacy data needs & use



Choosing a Source: PBM

- Disadvantages
 - PBM staff must create the extract
 - Does not show pharmacy clinic costs beyond purchase price
 - Limited clinical and demographic information



Choosing a Source: DSS National Pharmacy Extract

- Advantages

- National coverage
- Detailed cost data

- Disadvantages

- Limited prescription characteristics
 - Cost data do not show purchase price
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Choosing a Source: DSS Inpatient/Outpatient NDEs

- Advantages
 - National coverage
 - Convenient summary cost data by treating specialty or overall

 - Disadvantages
 - Limited prescription characteristics
 - Only summary data: no data on individual prescriptions or supplies
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Choosing a Source: DSS Data via KLFMenu

■ Advantages

- National coverage
- Convenient summary cost data
- Ease of access and use

■ Disadvantages

- Only summary data: no data on individual prescriptions or supplies
 - Cannot select cases by SCRSSN
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Validation Studies: PBM vs. DSS NDEs

Study #1

- 1,600 patients with hernias in CSP 456
 - PBM and DSS Pharmacy Extract have >95% concordance in drug names, # scripts, # units dispensed.
 - Source: VIREC Technical Report #1
(<http://www.virec.research.va.gov/References/TechnicalReports/VIRECTechnicalReport1.pdf>)
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Validation Studies: PBM vs. DSS NDEs

Study #2

- >300 patients with heart disease in CSP 424.
 - Result: PBM and DSS NDE daily summary have very poor concordance in monthly or annual pharmacy costs.
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Discussion

- You want to study patterns in prescribing of nicotine replacement therapy over a five-year period in VA. Which data sets would be good options?
 - VISTA
 - DSS NDE for inpatient/outpatient care
 - DSS pharmacy NDE
 - PBM database
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Comparison: PBM vs. DSS NDEs

Study #3 (HERC Technical Report #22)

- All medications for 894 people enrolled in CSP #424

Results:

- 95% of DSS Pharmacy extract records can be matched to PBM records within +/- 10 days.
 - PBM cost and DSS variable VS_Cost differ by less than \$0.80 on average.
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Grouping Prescriptions

- DSS sometimes groups two prescriptions into one record if they are for the same NDC and the same person on the same day

→ PBM does not group prescriptions in this way.



Other Notes on Pharmacy Data

- Pharmacy use patterns affect contract negotiations.
- Drug manufacturers seek these data to aid in negotiations with VA.
- **Consult PBM staff before allowing private firms to see recent VA pharmacy data.**



Other Notes on Pharmacy Data

- Example of a problematic request from a drug company:

“Among VA patients newly diagnosed with schizophrenia in the last 12 months, how does the use of antipsychotic Vacoquel relate to total healthcare spending in the following year?”

Two Examples of Rx Publications

Summary of medication use patterns

Sernyak MJ, Rosenheck RA. Antipsychotic use in the treatment of outpatients with schizophrenia in the VA from fiscal years 1999 to 2006. *Psychiatric Services* 2008;59(5):567-569.

Comparative effectiveness of medications

Swartz MS, Stroup TS, McEvoy JP, et al. What CATIE found: results from the schizophrenia trial. *Psychiatric Services* 2008;59(5):500-506.

Cautions

- OTC medications dispensed from ward stock during often do not appear in pharmacy databases.
- Outpatient medications dispensed outside a pharmacy may appear any of these ways:
 - as procedures only (HCPCS “J code” or other)
 - as prescription only
 - as both procedure and prescription



Cautions

- Data elements change. Crosscheck data elements against printed information: do you know what each field means?
 - E.g.: fill date vs. release date



Validity Checks

- Check data for erroneous values
- Missing values
 - If possible, fill in values based on consistency checks (e.g., for gender, age)
 - Imputing values adds statistical uncertainty: should account for it (or at least mention if used rarely)
- Inconsistent units
 - One 50ml bottle could be “50 units” in one record but “1 unit” in another record



Non-VA Pharmacy Use

- We typically do not ask patients about non-VA pharmacy
 - Some VA users get all prescriptions through VA, but Medicare Part D enrollees most likely use both Medicare and VA
 - VA is likely to be used for most expensive meds
 - Over-the-counter use is unlikely to affect total Rx spending much
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Dual Use of VA and Non-VA Pharmacy

Johnson ML, Petersen LA, Sundaravaradan R, et al. The association of Medicare drug coverage with use of evidence-based medications in the Veterans Health Administration. *Ann Pharmacother*. 2009 Oct;43(10):1565-75.

Morgan RO, Petersen LA, Hasche JC, et al. VHA pharmacy use in veterans with Medicare drug coverage. *Am J Manag Care*. 2009 Mar 16;15(3):e1-8.

French DD, Campbell RR, Rubenstein LZ, Spehar AM. Acquisition costs and use of Medicare Part D-excluded drugs in Veterans Health Administration long-stay nursing home residents: a national, descriptive, secondary data analysis. *Drugs Aging*. 2008;25(10):855-60.

Non-VA Pharmacy Sources

- Drug Topics “Red Book”
 - Published annually
 - Offers “Average Wholesale Price” (AWP), the starting point for Medicaid drug payments
- Private-sector claims data
 - Proprietary: must pay for access



Non-VA Pharmacy Cost

Thought exercise: What would outpatient VA pharmacy cost if it were provided in the private sector?

See:

ML Render, J Nowak, et al. Methods for estimating and comparing VA outpatient drug benefits with the private sector. *Medical Care* 2003;41(6 Suppl): II-61 – II-69.

VIReC Resources

1. Research User Guide: VHA Pharmacy Prescription Data
 - documents PBM and DSS prescription-level data
2. VIReC Technical Report #1
 - contrasts coverage in PBM and DSS datasets for people in one trial
3. Research User Guide: Medical SAS Outpatient Datasets
 - documents OPC which has HCPCS/CPT procedure codes for injections

HERC Resources

1. Guidebooks for DSS inpatient and outpatient encounter-level National Data Extracts
 - contain pharmacy totals within encounters or bedsection segments, but not prescription-level data
 2. Guidebook on Fee Basis data
 - contains pharmacy totals per month and, for injectibles, procedure codes
 3. Technical Report #22 (Smith and King, 2007)
 - “Comparing Outpatient Cost Data in the DSS National Pharmacy Extract and the Pharmacy Benefits Management V3.0 Database”
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Questions?

