How to Use Medicare Claims Data in Your Research

Data.Medicare.gov

PETER B. SMULOWITZ, MD, MPH
LAURA G. BURKE, MD, MPH
MAY 17, 2019

BETH ISRAEL DEACONESS MEDICAL CENTER
DEPARTMENT OF EMERGENCY MEDICINE, HARVARD MEDICAL SCHOOL
Objectives

- Understand **benefits and limitations of Medicare data** for ED HSR

- How to **identify ED visits**, patterns of care and patient outcomes

- Understand how to use **supporting datasets** to supplement Medicare data
Why health services research?

April 19, 2019 11:00 AM

ACA has not reduced ED visits, study finds
STEVEN ROSS JOHNSON

Rural emergency department visits jumped more than 50% in about a decade: study

ANALYSIS

IF ANTHEM'S POLICY SPREADS, 1 IN 6 ER VISITS COULD BE DENIED COVERAGE

BY ALEXANDRA WILSON PECCI | OCTOBER 30, 2018
What types of datasets?

- Claims Data
- Survey Data
- Registry Data
- Other
How do you choose?

- Claims Data
- Survey Data
- Registry Data
- Other
Advantages of Medicare

- National sample of over 50 million people
- Population of interest
- Data beyond the ED visit/hospital stay
- Can identify individual hospitals and link to other datasets
- Community of researchers using this dataset
Advantages of Medicare

- Can see what happens after they leave the hospital

Early death after discharge from emergency departments: analysis of national US insurance claims data

Ziad Obermeyer,1,2,3 Brent Cohn,3 Michael Wilson,1,3 Anupam B Jena,2 David M Cutler4

Measuring “healthy days at home”
Identify Healthcare Costs

ED Costs
Total Costs
Disadvantages of Medicare

- Only one payer
- It’s expensive
- There’s a learning curve
Disadvantages of Medicare

- Other limitations are shared by most claims datasets
  - Limited clinical data
  - Relatively little ED data for admitted patients
What if you really need all payers or the uninsured?

Association Between Insurance Status and Access to Hospital Care in Emergency Department Disposition

Arjun K. Venkatesh, MD, MBA, MHS; Shih-Chuan Chou, MD, MPH; Shu-Xia Li, PhD; Jennie Choi, BS; Joseph S. Ross, MD, MHS; Gail D’Onofrio, MD; Harlan M. Krumholz, MD, SM; Kumar Dharmarajan, MD, MBA
What if you really need all payers or the uninsured?

April 19, 2019

US Emergency Department Visits and Hospital Discharges Among Uninsured Patients Before and After Implementation of the Affordable Care Act

Adam J. Singer, MD¹; Henry C. Thode Jr, PhD¹; Jesse M. Pines, MD²

Author Affiliations | Article Information


NHAMCS
What if you really need all payers or the uninsured?

By Renee Y. Hsia, Nandita Sarkar, and Yu-Chu Shen

Impact Of Ambulance Diversion: Black Patients With Acute Myocardial Infarction Had Higher Mortality Than Whites

State Databases
What if you really need greater clinical detail?

Ischemic Stroke Transfer Patterns in the Northeast United States

Kori S. Zachrison, MD, MSc, * Jukka-Pekka Onnela, PhD, †
Adrian Hernandez, MD, MHS, ‡ Mathew J. Reeves, PhD, ††
Carlos A. Camargo Jr., MD, DrPH, * Margueritte Cox, MS, MGIST, ‡
Roland A. Matsouaka, PhD, ‡§ Joshua P. Metlay, MD, PhD, ‡
Joshua N. Goldstein, MD, PhD, * and Lee H. Schwamm, MD #

Registry Data
What if you really need greater clinical detail?

Comparison of Presenting Complaint vs Discharge Diagnosis for Identifying “Nonemergency” Emergency Department Visits

Maria C. Raven, MD, MPH, MSc
Robert A. Lowe, MD, MPH
Judith Maselli, MSPH
Renee Y. Hsia, MD, MSc

Importance Reduction in emergency department (ED) use is frequently viewed as a potential source for cost savings. One consideration has been to deny payment if the patient’s diagnosis upon ED discharge appears to reflect a “nonemergency” condition. This approach does not incorporate other clinical factors such as chief complaint that may inform necessity for ED care.

NHAMCS

JAMA, March 20, 2013—Vol 309, No. 11
What if you really need greater clinical detail?


CME Hours: 0.25

Presenting Author:
Rama Salhi, MD, MHS
University of Michigan

NHAMCS
Summary
So you’ve decided to use Medicare claims...
How to access the data

1. Purchase individual claims files
2. CMS VRDC (Virtual Research Data Center)

A virtual research environment that provides timelier access to Medicare and Medicaid program data in a more efficient and cost effective manner. Researchers...will have direct access to approved data files and be able to conduct their analysis within the CMS secure environment.
Quick overview of claims files

- **Beneficiary summary file:**
  - Also for identification of chronic conditions (CCW)

- **Carrier file:** provider identifier

- **Outpatient:** discharges

- **Inpatient:** admissions (including observation)
  - Can’t track testing performed in the ED on patients ultimately admitted
Things you (your analyst) may need to do

1. **Identify ED visits**: provider (HCPCS codes) vs facility (revenue center)
2. **Identify clinical conditions**: AHRQ Clinical Classifications Software
3. **Identify measures of comorbidity**: Chronic Conditions Warehouse, Hierarchical Condition Category (HCC) scores
4. **Link to other data sources**: AHA, Doximity, HRR

*Identifying ED visits: 99281 – 99285, 99291, 99292, 99234-6, 99217-9, 99220, 99224-6 and Place of Service coded 23

One example of what you can do
Ask us!

- lgburke@bidmc.harvard.edu
- psmulowi@bidmc.harvard.edu