Overview of the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey

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Overview

Background
Uses of data
Survey methodology
Data collection procedures
Accessing data

- Data on the web
- NCHS Research Data Center

Analytical considerations
National Ambulatory Medical Care Survey (NAMCS)

- National probability sample survey
- Patient visits to non-federal office-based physicians and community health centers (CHCs)

History
- Sample expanded in 2006 to include 104 community health centers (CHCs)
National Hospital Ambulatory Medical Care Survey (NHAMCS)

- National probability sample survey
- Patient visits to emergency departments (EDs), outpatient departments (OPDs), and ambulatory surgery centers (ASCs)

History
- Survey fielded 1992 – present
- Two major modifications in scope:
  - 2009, added hospital-based ambulatory surgery centers
  - 2010, added freestanding ambulatory surgery centers
USES OF DATA
NAMCS/ NHAMCS Survey Goals

- National statistics on ambulatory care utilization
- Provide data for health policy formulation
- Provide comparative data for medical practice management
Data Users

• Health professional associations
• State and federal policy makers
• Health services researchers
• Epidemiologists
• Universities and medical schools
• Broadcast and print media
How are NAMCS and NHAMCS Data Used?

Changes in utilization and practice
  • diagnoses, tests/procedures, prescribing

Quality of care
  • Impact of performance measures and educational campaigns
  • Healthy People 2010 objectives

Health disparities

Adoption of new technologies
  • Electronic health records
NAMCS AND NHAMCS METHODOLOGY
NAMCS Scope

In-scope providers:

- Traditional physicians
  - Primarily engaged in office-based patient care
  - Not Federally employed
  - Not in anesthesiology, radiology, or pathology
- Community Health Centers (CHCs)
  - Physicians and non-physician clinicians
  - Federally qualified health centers
  - Urban Indian Health Service outpatient clinics

Sample of 30 visits per provider over one week period
In-scope visits:
- Must occur in physician or CHC office
- Must be for medical purposes

Out of scope visits:
- Administrative visits
- House calls, emails, phone calls

2007 data
- 3,450 doctors sampled
- 104 CHCs sampled
- 32,778 total visits
NHAMCS Scope

In-scope hospitals
- Non-institutional general and short-stay
- Not Federal, military, or Veterans Administration facilities

Sample patient visits during a 4-week reporting period

2007 Data
- 482 hospitals sampled
  - 35,490 ED visits
  - 34,473 OPD visits
2007 NHAMCS Sample Design

Primary Sampling Unit (PSU)

Hospital

Emergency Department

Emergency Service Area

~100 ED Visits

Outpatient Department

Clinic 1

Clinic 2

Clinic 3

Clinic 4

Clinic 5

OPD Visits

OPD Visits

OPD Visits

OPD Visits

OPD Visits

Sample ~200 visits across sampled clinics
NAMCS AND NHAMCS DATA COLLECTION
Data Collection

Induction interview

• Determine eligibility
• Obtain data on facility characteristics
• Train facility staff on data abstraction

Office/hospital staff abstracts Patient Record forms (PRFs)

Induction forms and PRFs are keyed and coded by a contractor

Entered data are edited and analyzed at NCHS
Common Patient Record Form Items

- Patient demographic information
- Triage/Vital signs
- Reason for visit
- Injury/Poisoning/Adverse effects
- Provider’s diagnosis

- Diagnostic and screening services
- Treatment/procedures
- Medications
- Visit disposition
- Providers seen
Coding Systems Used

A Reason for Visit Classification (NCHS)
ICD-9-CM

• diagnoses
• external causes of injury
• procedures

Multum drug classification system
Drug Classification System

1985-2005, FDA’s National Drug Code therapeutic classification was used
- Discontinued by FDA
- Only one level of sub-classification

2006-present, Multum Lexicon
- Two levels of sub-classification
- Regular updates
Accessing NAMCS/ NHAMCS Data
On the Internet at:

http://www.cdc.gov/nchs/ahcd.htm
Microdata Files

Downloadable flat ASCII files
- NAMCS, 1973-2007
- NHAMCS, 1992-2007

CD-ROMs
- NAMCS, 1990-2005
- NHAMCS, 1992-2005
Anticipated Data Releases in Year 2010

2008 NAMCS public use file
2008 NHAMCS public use file
Combined 2006-2008 NAMCS community health center (CHC) visit file

- 2006 and 2007 NAMCS file only included CHC physician visits
- Combined file will include all 2006-2008 CHC visits (physicians, physician assistants, nurse practitioners, and nurse midwives)
NCHS
RESEARCH DATA CENTER (RDC)
Advantages of the RDC

Gain access to information not available on public use files

- Patient: ZIP code linked income, education, etc.
- Provider: sex and age, teaching hospital
- Geographic: FIPS state and county codes
- Full list of variables on website

Data from NAMCS/NHAMCS supplements
NAMCS/ NHAMCS Supplements

- Pandemic and Emergency Response Preparedness Supplement – 2008
- Upcoming: Cervical Cancer Screening Supplement - 2006-2010
USER CONSIDERATIONS
NAMCS/ NHAMCS Strengths

- Amount of utilization
- Health care users
- Treatment patterns
- Trends over time
- Springboard for future research
NAMCS/ NHAMCS Limitations

- Few outcome measures
- Lacks longitudinal view
- Documents single episode of illness
- Rare event estimation is difficult
Reminders

• NAMCS / NHAMCS sample visits, not patients
• No estimates of incidence or prevalence
• No state-level estimates
• Except for CHCs, we do not sample by setting or by non-physician providers
Sample Weight

Sample data **MUST** be weighted to produce national estimates

Estimation process

• Adjusts for survey and item nonresponse
• Makes several ratio adjustments within and across physician specialties and hospitals
Where to Get More Information

• **Website** - [http://www.cdc.gov/nchs/ahcd.htm](http://www.cdc.gov/nchs/ahcd.htm)

• **Ambulatory Care Listserv (ACLI ST)** - [http://www.cdc.gov/nchs/ahcd/ahcd_listserv.htm](http://www.cdc.gov/nchs/ahcd/ahcd_listserv.htm)

• **Call Ambulatory and Hospital Care Statistics Branch at (301) 458-4600**

• **Public Use Documentation**
Thank You

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