Ambulatory and Hospital Care
Statistics Branch Overview

NCHS Board of Scientific Counselors

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics
Topics

- Mission
- Surveys
- Data products
- Dissemination and uses of our data
- Key challenges and future plans
Role of AHCSB within the Division

• The Division’s Mission
  To collect, analyze, and disseminate data on the use, access, quality, and cost of health care provided in the United States, and the health care organizations who deliver that care.

• The Branch’s Role
  To collect, analyze, and disseminate those data that specifically relate to ambulatory and hospital care providers, their services, and the people they serve.
National Health Care Surveys

• Ambulatory and hospital care surveys
  – National Ambulatory Medical Care Survey (NAMCS)
  – National Hospital Ambulatory Medical Care Survey (NHAMCS)
  – National Survey of Ambulatory Surgery (NSAS)
  – National Hospital Discharge Survey (NHDS)

• Long-term care surveys
  – National Nursing Home Survey (NNHS)
  – National Home and Hospice Care Survey (NHHCS)
  – National Survey of Residential Care Facilities (NSRCF)
Distinctive Aspects of the Surveys

- Surveys of establishments (not households)
- Encounter-level data
- Some data collected through interview, particularly facility-level
- Patient-level data abstracted directly from medical records
Ambulatory Hospital Care Survey Data Collection, 1965 - 2008

Year

'65 '70 '75 '80 '85 '90 '95 '00 '05 '10

NHDS

NAMCS

NSAS
National Ambulatory Medical Care Survey (NAMCS)

- Visits to non-federal, office-based physicians primarily engaged in patient care
- Data at practice, clinician, and patient level
- Flexible content: questions added and deleted, with supplemental modules
NHAMCS and NSAS

- National Hospital Ambulatory Medical Care Survey (NHAMCS) parallels NAMCS with data from emergency and outpatient departments.
- National Survey of Ambulatory Surgery (NSAS) covers this growing segment of health care.

Incorporation into NHAMCS:
- Hospital based ambulatory surgery centers in 2009
- Free-standing ambulatory surgery centers in 2010
National Hospital Discharge Survey

- Inpatient visits to non-federal short-stay hospitals
- Need for an updated survey:
  - Incorporation of clinical data
  - More flexibility of content
  - Identifiers to link to other data sources
Steps in Redesign of NHDS

- Conceptual Framework development
  - Spring 2006
- Feasibility Study
  - Winter 2006-2007

- Pilot Study
  - Spring 2008
- Pre-test
  - Fall/Winter 2008-2009
- Redesigned National Survey
  - 2010?
Response Rates for NAMCS, NHAMCS, and NDHS

Note: ED & OPD response rates for the years 1992-96 were calculated as one rate. Response rates are unweighted.
Data Release

Public-Use Data Files (micro-data) (1973-2006)
Downloadable data files:
Notice: Currently, NAMCS and NHAMCS public-use files for 1993-
2006 contain sample design variables in masked form. The initial
release of the 2000-2006 public-use files included masked sample
design variables. We re-released the 1993-99 NAMCS and
NHAMCS files to include these variables. For re-released files, file
names and layouts are essentially the same, but the design
variables were appended to each file according to a generic file
layout that is available for downloading below. Public-use files
for previous years of data will be re-released with masked sample
design variables on an ongoing basis.

However, data users should note that, beginning with the 2002
public use files, two new masked design variables were added to
the file, for use with statistical software that assumes a
first stage of sampling. For the 2003 public use files and beyond
decision was made to include only these two masked design
variables for variance estimation. Therefore, data users who
to combine years of data from 2003 and beyond with years
up to 2002 will need to create those two variables for each file
NAMCS and NHAMCS Public Use Files, gives instructions.

- NAMCS, 1993-1992
- NHAMCS, 1992-2006
- Public Use Data File Updates
Downloadable documentation:
Notice: For data years 1993-99, be sure to download the original file documentation for each year, but also the
supplemental files that explain the new sample design variables that have been added to each file. The supplemental files include descriptions of any revisions that may have been in
the original data files.
- NAMCS, 1993-2006

EXAMPLE 1
In this example, data from the 2005 ED public use file are being used
to determine caseload percentages across emergency departments from
expected sources of payment. (See Figure 7 in Advance Data Report
No. 376 for a graphic display of similar results using 2003-04 data.)
This example assumes you have downloaded the 2005 ED public use
file and uncompressed it, downloaded the SAS input statement from
the Ambulatory Health Care Data website, and have placed them both
on your desktop in the folder 'c:\myfiles\nhamcs'.

`FILENAME ed05 'c:\myfiles\nhamcs\ed05';`
`FILENAME ed05inp 'c:\myfiles\nhamcs\ed05inp.txt';`
`FILENAME ed05for 'c:\myfiles\nhamcs\ed05for.txt';`
`FILENAME ed05lab 'c:\myfiles\nhamcs\ed05lab.txt';`

`%INC ed05for;`
`DATA edtest1;`
`INFILE ed05 MISSOVER LRECL=399;`
`%INC ed05inp;`
`%INC ed05lab;`
Preliminary Estimates of Electronic Medical Record Use by Office-based Physicians: United States, 2008

by Chun-Ju Hsiao, Ph.D.; Catharine W. Burt, Ed.D.; Elizabeth Rechtsteiner, M.S.; Esther Hing, M.P.H.; David Woodwell, B.A.; Jane E. Sisk, Ph.D., Division of Health Care Statistics

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Electronic medical record use by office-based physicians

Methods References Suggested citation

From April through August 2008, the National Center for Health Statistics (NCHS) conducted a mail survey of office-based physicians to obtain a preliminary estimate of their use of electronic medical records (EMRs). This estimate will supplement information from the core 2008 National Ambulatory Medical Care Survey (NAMCS), an annual nationally representative survey of patient visits to office-based physicians.

Electronic medical record use by office-based physicians

In the 2008 mail survey, 38.4% of the physicians reported using full or partial EMR systems, not including billing records, in their office-based practices. About 20.4% reported using a system described as minimally functional and including the following features: orders for prescriptions, orders for tests, viewing laboratory or imaging results, and clinical notes. Comparable figures for the 2006 NAMCS, the latest available for the full survey, were 29.2% and 12.4%, respectively (1).

EMR systems that conform to certain interoperability standards have been defined as electronic health records (2). Electronic health records in turn have been characterized as basic (patient demographics, problem lists, clinical notes, orders for prescription, and viewing laboratory and...
The Ambulatory Health Care Data Listserv

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- In the body of the e-mail message (after a blank line), type or paste: subscribe aclist your full name

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The Ambulatory Care list (ACLIST) provides a mechanism for dissemination of information regarding National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) activities.

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National Hospital Discharge and Ambulatory Surgery Data

HDAS-DATA List

The Hospital Discharge and Ambulatory Surgery Data (HDAS-DATA) list provides a forum for discussion and dissemination of data from the National Hospital Discharge Survey (NHDS) and from the National Survey of Ambulatory Surgery (NSAS). Both surveys are administered by the Centers for Disease Control and Prevention’s National Center for Health Statistics (CDC/NCHS).
Abstract

Objective—This report describes ambulatory care visits made to physicians in the United States. Statistics are presented on selected characteristics of the physicians’ practice, the patient, and the visit.

Methods—The data presented in this report were collected in the 2006 National Ambulatory Medical Care Survey (NAMCS), a national probability-sample survey designed to provide national estimates of the ambulatory care services provided by physicians. A 35% sample of all visits to office-based physicians in the United States is surveyed annually. Sample data are weighted to provide national estimates of physician visits.

Results—During 2006, an estimated 732 million visits were made to physicians’ offices in the United States, an overall rate of 20.6 visits per 100 persons. In over 85% of visits, charts were examined by physicians, while 64% of visits by adults 18 years and over were electronic visits. In 30% of visits, medications were administered to patients. Since 1996, the percentage of visits by adults 18 years and over that used electronic devices increased from 44% to 65%. During the same time period, health practices for diabetes improved (28%), and depression (27%). Among women by female, a Pap test was ordered or provided in 57% of office visits, which is similar to 2005. Among women by age, a Pap test was ordered or provided in 2005. Among women by age, a Pap test was ordered or provided in 2005.

Interventions—The national Ambulatory Medical Care Survey (NAMCS), which began in 1973, was implemented in hospitals, ambulatory care settings, and other outpatient settings. The data are collected annually to provide national estimates of ambulatory care services provided by physicians. The survey is designed to provide national estimates of ambulatory care services provided by physicians. The survey is designed to provide national estimates of ambulatory care services provided by physicians.
Use Of Medical Care For Chronic Conditions

The locus of care for chronic conditions is increasingly in the ambulatory sector.

by Sandra L. Decker, Susan M. Schappert, and Jane E. Sisk

ABSTRACT: We used Statistics to compare hospital discharge statistics of physicians' treatment of chronic conditions. Chronic care and disability are likely accounts for more.

Trends in Opioid Prescribing by Race/Ethnicity for Patients Seeking Care in US Emergency Departments

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Michael A. Kohn, MD, MPP
Ralph Gonzales, MD, MSPH

Context National quality improvement initiatives implemented in the late 1990s were followed by substantial increases in opioid prescribing in the United States, but it is unknown whether opioid prescribing for treatment of pain in the emergency department has increased and whether differences in opioid prescribing by race/ethnicity have diminished since 2000.

Objectives To determine whether opioid prescribing in emergency departments has increased, whether non-Hispanic white patients are more likely to receive an opioid than other racial/ethnic groups, and whether differential prescribing by race/ethnicity has diminished since 2000.

Design and Setting Pain-related visits to US emergency departments were identified using reason-for-visit and physician diagnosis codes from 13 years (1993-2005) of the National Hospital Ambulatory Medical Care Survey.

Main Outcome Measure Prescription of an opioid analgesic.

Results Pain-related visits accounted for 156,729 of 37,4891 (42%) emergency department visits. Opioid prescribing for pain-related visits increased from 23% (95% confidence interval [CI], 21%-24%) in 1993 to 37% (95% CI, 34%-39%) in 2005 (p < .001 for trend), and this trend was more pronounced in 2001-2005 (p < .001 for trend). Overall, both white patients with pain were more likely to receive an opioid than black (23%), Hispanic (24%), or Asian/other patients (28%) (p < .001 for trend), and differences did not diminish over
Institute of Medicine Report

“If we are struggling to deal with tonight's 911 calls in city after city across the United States, how in the world are we supposed to handle an epidemic of pandemic flu or a major terrorist attack or the next natural disaster?”

— Art Kellermann
Health Information Technology in the United States: The Information Base for Progress

Figure 2: Percent of physicians using electronic medical records and percent of physicians using electronic medical record system by practice size: United States, 2005

NOTES: Both trends are significant (p<.05). EMR is electronic medical record. General EMR is positive response to single question on full or partial EMR use. EMR system is a positive response to four minimal features: computerized orders for prescriptions, computerized orders for tests, test results and physician notes. Includes nonfederal, office-based physicians who see patients in an office setting. Excludes radiologists, anesthesiologists and pathologists.

SOURCE: National Ambulatory Medical Care Survey.
Reimbursable (Sponsorship) Funds, Fiscal Years 2004-2008

![Graph showing the funds from 2004 to 2008.]

- **2004**: $0.39
- **2005**: $1.04
- **2006**: $0.7
- **2007**: $2.31
- **2008**: $1.44

- **Legend**:
  - Yellow: NAMCS + NHAMCS
  - Green: Redesigned NHDS
Budget

Challenges

• NHDS 2009 and redesigned NHDS on hold
• Funding for improvements to ambulatory surveys uncertain

Future Plans

• Continued outreach to potential sponsors
• Strategic planning process underway to set priorities
Staffing

Challenges
• Filling vacancies from promotions, retirements, and resignations on hold
• More clinical expertise needed

Future Plans
• Survey operations priority over analyses
• Recruitment of physician or other clinician
• Investment in training current staff
Timeliness of Data Release

Challenges
• Time to data release lengthening
• Staff vacancies and survey changes

Future Plans
• Release of selected ambulatory provider-level estimates earlier
• Exploration of electronic data collection and transmission over time
Keeping Surveys Relevant

Challenges

• Continually updating survey design, content, and analyses to address policy and research needs
• Improving coverage of providers and clinical management

Future Plans

• Strategic planning process
• Continued outreach
• More emphasis on provider-level estimates
• Updating surveys as resources permit
Response Rates

Challenges

• NAMCS response rates falling
• Recruiting hospitals for redesigned NHDS

Future Plans

• Non-response follow-up studies
• Further outreach to provider associations
• Possible electronic data sampling and transmission to reduce hospital burden
Data Quality

Challenges

• No recent reabstraction to assess data quality because of funding constraints
• Infrequent training of field representatives

Future Plans

• Improvement in developing new survey items
• Reabstraction of redesigned NHCS sample
• Development of long-term methodological agenda
Electronic Medical Records

Challenges

• Data collection during providers’ transition from paper to electronic medical records
• Extracting data of acceptable quality from electronic systems

Future Plans

• Working with selected providers to gain experience with electronic systems
• Exploration of electronic data collection for redesigned NHDS
• Addition of HIT staff person when permitted
Questions and Comments?