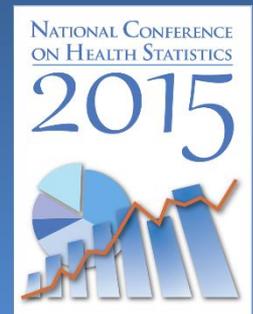


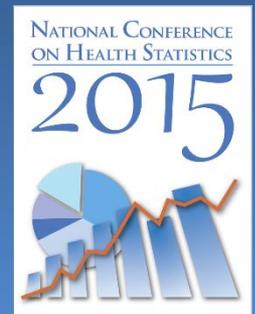
2015 National Conference on Health Statistics

Carol DeFrances, Ph.D.

National Center for Health Statistics



Electronic Health Record (EHR) Activities for the National Hospital Care Survey



NHCS Background

The National Hospital Care Survey (NHCS) integrates three long-standing surveys:

- NHDS - the longest continuously fielded sample of inpatient care from 1965-2010
- NHAMCS - surveying hospital EDs and OPDs since 1992, hospital ASLs since 2009, and freestanding ASCs since 2010
- DAWN – collected data on substance-involved ED visits since 1970s; conducted by SAMHSA from 1992-2011

Goal and Objectives of the NHCS

Goal:

- Provide reliable and timely healthcare utilization data.

Objectives:

- Move toward collection of electronic health record data.
- Permit special studies, as needed.
- Link episodes of care across hospital units as well as link to other data sources such as the National Death Index and Medicare data.

Sample Design

Target universe is inpatient discharges and in-person visits made to EDs, OPDs including ambulatory surgery in:

- Non-institutional hospitals
- Non-federal hospitals
- Hospital has six or more staffed inpatient beds

A base sample of 500 hospitals was drawn as well as a reserve sample of 500 hospitals.

Electronic Data Collected for NHCS

Hospitals have a choice for submitting electronic data for all inpatients and ambulatory visits:

- Electronic health record (EHR) data
- Uniform Bill (UB) 04 administrative claims data
- State data files

UB-04 Data

Uniform Bill (UB) 04 administrative claims data:

- Data specification/standard
- National Uniform Billing Committee (NUBC)
- Electronic counterpart is the 837 Claim Transaction
- 81 defined major fields and some sub-fields
 - Demographics (e.g., age and sex)
 - Diagnoses and procedures
 - Services billed (e.g., chemotherapy, ICU use, and physical therapy)

Benefits of UB-04 Data

Data are in a standard format and can be sent electronically.

Personal identifiable information is collected.

- Identify revisits
- Link across setting and to external data sets

Insurance payer information is more accurate.

Allows for special studies with oversampling of records.

- Identify substance-involved ED visits

Challenges with UB-04 Data

Some hospitals:

- Cannot output the claims data in 837 format
- Do not generate claims for self-pay patients, charity patients, or prisoners
- Do not send final adjudicated claims

No clinical information such as vital signs, labs, medications, or test results is available.

Difficult to accurately identify substance-involved ED visits using ICD-9-CM diagnoses codes.

EHR Data

Electronic health records (EHR) data

- System that pulls information from multiple sources
- Developed by commercial software vendors over time
- Interoperability issues
- Types of data that can be extracted:

Patient (e.g., race)

Active problems

Vital signs

Visit dates and times

Medications

Procedures

Diagnoses

Test results

Labs

Clinical notes

Benefits of EHR Data

Obtain all inpatients and ambulatory visits including self-pay, charity and prisoners.

Collect clinical information without need for medical record abstraction.

Obtain more information for some data elements such as disposition status.

Better identification of ED substance-involved visits because of lab and medication data.

Initial Approach with EHR Data

Ask hospitals to provide EHR data by one of the following:

- Data from existing standard reports hospital generates
- Continuity of Care Documents (CCDs)
- Extract data from their EHR system or data warehouse for inpatient, ED and OPD settings

Challenges with EHR Data

Providing EHR data is difficult for hospitals:

- Many of the standard reports created by vendors do not contain all the data elements needed.
- CCDs could not be batched easily.
- Extraction takes much time and resources, particularly across three settings.

Limited standardization of data elements across hospitals.

Census EHR Pilot Studies

Conducted two pilot studies:

- Convenience sample of 9 NHAMCS hospitals with 400+ staffed beds for each pilot
- ED EHR data only for one pilot and ED EHR and UB-04 data for the second pilot

Lessons learned:

- Hospitals want to participate but lack time and resources to extract data.
- CCDs are not easily modified and difficult to batch.
- Clinical notes are a stumbling block.

EHR Vendor Study

Goal:

- Build standard interfaces based on the HL7 CDA Implementation Guide so hospitals can easily extract data elements for the NHCS.

Focus:

- NHCS sampled hospitals with 300+ staffed inpatient beds.

According to the HIMSS Analytical Database:

- 147 of the 227 hospitals (64.8%) use some release of Epic, Cerner or Allscripts as their ED EHR system.

EHR Vendor Study Continued

Ongoing discussions with Epic, Cerner, and Allscripts about extracting EHR data from hospitals using the HL7 CDA Implementation Guide.

Epic

- A number of sampled NHCS hospitals have expressed interest in development of the interface.
- One hospital has requested a “change order” which is the next step in the interface development.

Allscripts and Cerner

- Several hospital networks have expressed interested about development of the interface with each vendor.

Leveraging Stage 3 MU

NHCS is included in the proposed rule for Stage 3 Meaningful Use (MU) credit.

- If adopted, hospitals can use submission of NHCS data as one of their options to fulfill the public health objective for Stage 3 MU.

The HL7 CDA Implementation Guide (IG) is listed in the 2015 Interoperability Standards Advisory.

- IG is named as the best available content/structure and standard for national health care surveys.

Moving Forward...

Next Steps:

- Continue to recruit sampled hospitals and obtain EHR data.
- Work with hospital networks to extract EHR data.
- Work with all vendors to test and improve the HL7 CDA IG.
- Develop and implement an onboarding system for hospitals and providers in preparation of Stage 3 MU.
- Prepare for integration of UB-04 and EHR data.

Thank you!!

More information about NHCS can be found
at <http://www.cdc.gov/nchs/nhcs.htm>

Next speaker: Brian Gugerty, DNS, RN

**The National Ambulatory
Medical Care Survey (NAMCS)
EHR Pilots**