Retooling the National Health Care Surveys in an Electronic World

Denys T. Lau, Ph.D.
National Center for Health Statistics

National Committee on Vital and Health Statistics
June 14, 2016

CDC

NCHS's National Health Care Surveys

Produce accurate objective, nationally-representative statistics on health care to inform health care policy and serve a variety of research needs

National Health Care Surveys

- National Ambulatory Medical Care Survey
  - Physician Offices
  - Community Health Centers
- National Hospital Ambulatory Medical Care Survey
  - Emergency Departments
  - Outpatient Departments
  - Ambulatory Surgery Centers
- National Hospital Care Survey
  - Inpatient Departments
  - Emergency Departments
  - Outpatient Departments including Ambulatory Surgery
- National Study of Long Term Care Providers

Examples of the Data

Patients

- Demographics
- Insurance status
- Residential Zip
- Medical Conditions
- Smoking history
- Personal Identifiers for linkage (e.g. to the National Death Index)

ENCOUNTER

- Reason for Visit
- Diagnosis
- Procedures and services
- Medications or immunizations
- Laboratory and other diagnostic tests
- Types of providers seen

What is an EHR?

Electronic health records (EHR)

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

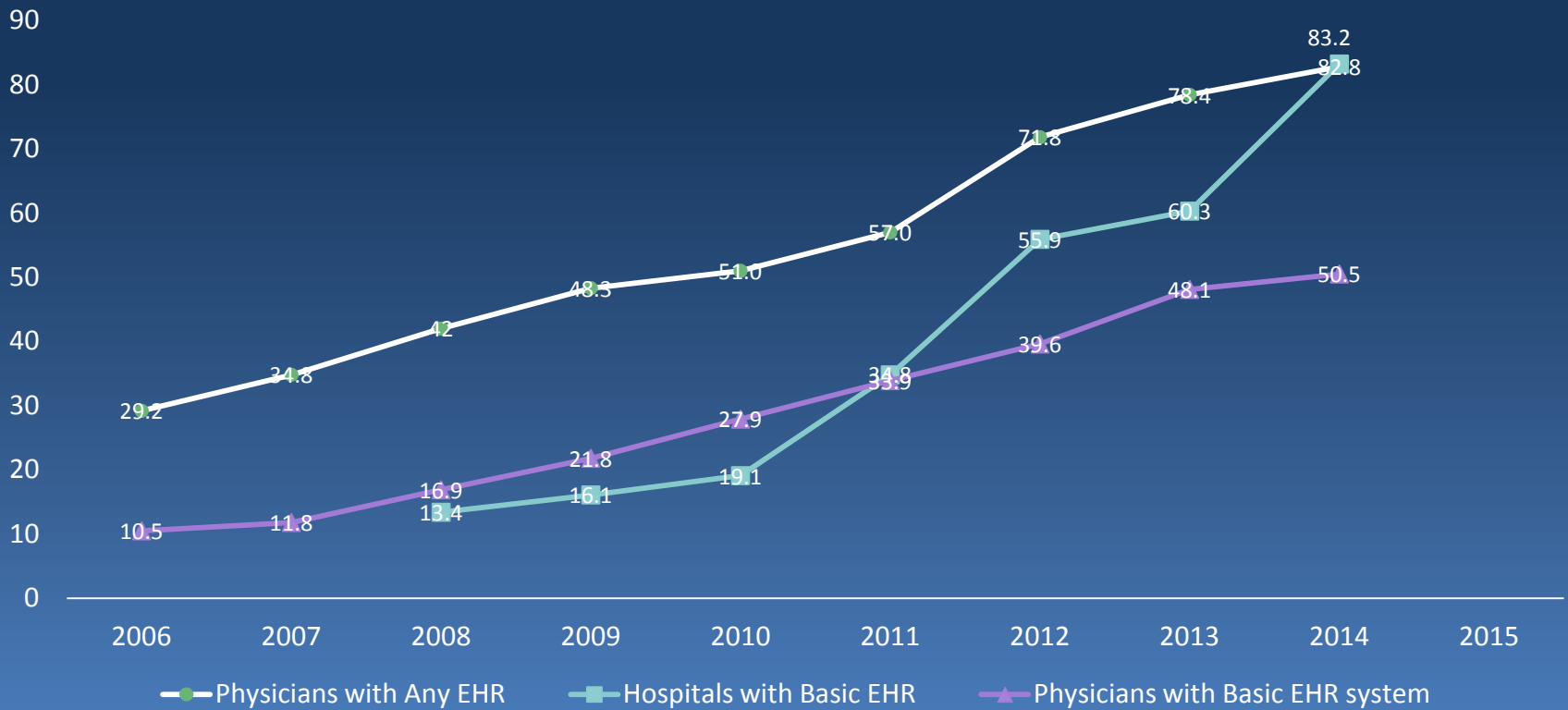| Patient demographics | Active problems |
Vital signs	Visit dates and times
Medications	Procedures
Diagnoses	Test results
Labs	Clinical notes

Why move to electronic health record data?

Potentially

- Less burden of the provider
- More secure
- More timely
- More clinical detail and depth
- Greater volume of data

Why now?

Adoption of Electronic Health Record Systems by office-based physicians and acute care hospitals: United States

Legend:
- Physicians with Any EHR
- Hospitals with Basic EHR
- Physicians with Basic EHR system

Physicians with Any EHR: 29.2 (2006), 34.8 (2007), 42 (2008), 48.3 (2009), 51.0 (2010), 57.0 (2011), 71.8 (2012), 78.4 (2013), 83.2 (2014)

Hospitals with Basic EHR: 13.4 (2008), 16.1 (2009), 19.1 (2010), 34.8 (2011), 55.9 (2012), 60.3 (2013), 82.8 (2014)

Physicians with Basic EHR system: 10.5 (2006), 11.8 (2007), 16.9 (2008), 21.8 (2009), 27.9 (2010), 33.9 (2011), 39.6 (2012), 48.1 (2013), 50.5 (2014)

What will it take to move to EHR data collection?

Research

- ASPE-sponsored Pilot Studies

Data Standards

- HL7 Implementation Guide for the National Health Care Surveys

Incentives to change

- Medicare and Medicaid Electronic Health Record Incentive Programs
- 2015 Edition of Health IT Certification Criteria

ASPE-Sponsored Pilot Studies

2 Pilots

- Comparison of 3 ways to collect NAMCS data at a large medical group
  - Census FR abstraction (ABSTRACTION)
  - IT dept. extraction from an EHR (EXTRACTION)
  - Continuity of Care Document directly from EHR (CCD)
- Overall findings
  - EXTRACTED (P1 and P2) and CCD (P2) data had high matching scores across different NAMCS variables compared to ABSTRACTED data
    - AB vs EX: Comparability between AB and EX was better than in 2nd pilot & AB vs CCD was higher still
  - High confidence to expect comparable EXTRACTED and CCD data for NAMCS purposes

HL7 Implementation Guide for CDA Release 2: National Health Care Surveys (NHCS)

Draft Standard for Trial Use

Provides a standardized format to submit data to fulfill the requirements of National Health Care Surveys

Automates the survey process via
- Streamlines the collection of data
- enabling increased sample pool allowing providers who want to participate in the surveys to do so

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.

Leveraging Meaningful Use Incentive Program

National Health Care Surveys are included in the recently published final rule for Meaningful Use (MU) (October 2015)

- Hospitals and Eligible providers (physicians) can use submission of NHCS data as one of their options to fulfill the public health objective for Meaningful Use Incentive Program.

Leveraging Meaningful Use EHR Incentive Program

Declaration of Readiness for Public Health Reporting

The Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) is currently asking for data for the National Health Care Surveys from Eligible Professionals (EP), Eligible Hospitals (EH), and Critical Access Hospitals (CAH) to fulfill the Meaningful Use Electronic Health Records (EHR) Incentive Programs Public Health Objective, Measure 3, submission of data for specialized registry reporting.

To meet this objective, EPs, EHs, and CAHs are requested to electronically submit data from Certified Electronic Health Record Technology (CEHRT) to NCHS.

To register, please call 301–458–4321 or E-mail NCHSMUInfo@cdc.gov.

MU Registration Statistics: June 9, 2016

Number of EPs registered:	127,926
Number in 2016 NAMCS	535
Number of EHs/CAHs registered:	811
Number in 2016 NHAMCS	43
Number in 2016 NHCS	93

What will the National Health Care Surveys look like when we're done?

Clinical Depth/Richness

- Collect clinical information objectively without need for medical record abstraction.
- Medications, laboratory tests, Imaging, Results

Volume

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

Linkage to Other Data

- National Death Index (30, 60, 90 day mortality)
- Medicare and Medicaid Claims

Volume

Number of records collected, 2014

Setting	Sample based	Electronic (UB-04 data)
Inpatient discharges	151,551* (n=200 hospitals)	1,653,622 (n=94 hospitals)
ED visits	23,909 (n=375 hospitals)	4,530,360 (n=83 hospitals)
OPD visits	26,259 (n=294 hospitals)	19,005,777 (n=86 hospitals)

*=2010 NHDS

What are the challenges?

File size

- Where and how to store

Processing

- Prioritization of 'data cleaning' efforts
- No manual review

Public use files

- To protect confidentiality create a sample?

Moving Forward

Work with EHR vendors to test and improve the HL7 CDA IG.

National Hospital Care Survey:

- Continue to recruit and register sampled hospitals and obtain EHR data.
- Begin Testing and Validation and move to Production
- Prepare for integration of claims data with the EHR data from hospitals.

National Ambulatory Medical Care Survey:

- Continue to register physicians for MU credit.
- Begin Testing and Validation and move to Production to obtain EHR data from sampled physicians.
- Prepare for integration of abstracted data and EHR data.
- Planning for 2017 NAMCS sample by " oversampling" registered physicians.

Acknowledgements

Thank You!!

More information on the National Health Care Surveys and MU can be found at: http://www.cdc.gov/ehrmeaningfuluse/national_health_care_surveys.html