Monitoring Emergency Department Use for Dental Problems

Laurie Barker, MSPH
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A little background about CDC

- **Division of Oral Health** [http://www.cdc.gov/oralhealth](http://www.cdc.gov/oralhealth)
  - Funds 20 state health departments to develop infrastructure for oral health
    - State dental director
    - **Surveillance System, epidemiologist**
    - Evaluation capacity
    - Coalition, Water Fluoridation, school-based sealant programs, etc.
  - Cooperative agreement with Association of State and Territorial Dental Directors
    - Many areas of collaboration
    - Surveillance system, technical assistance to state oral health programs
  - Collaboration with other agencies, national partners

* Citations, references, and credits – Myriad Pro, 11pt
A little background about CDC

- **BioSense** [http://www.cdc.gov/biosense](http://www.cdc.gov/biosense)
  - Mandated in the Public Health Security and Bioterrorism Preparedness and Response Act of 2002
  - Integrated national system for early detection and rapid assessment of potential bioterrorism-related illness
  - Funds 16 states, 4 cities, more participate without funding

- **National Center for Health Statistics (NCSH)**
  - Many national and state-based surveys, random samples

- **National Center for Injury Prevention and Control (NCIPC)**
  - Monitors intentional and unintentional injuries
  - Morbidity and mortality from opioid analgesics (unintentional)

* Citations, references, and credits – Myriad Pro, 11pt
A little background about oral health surveillance

- Major national health surveys included oral health at points – 1970s-1990s
- Also separate national surveys for oral health (1980s)
- Mid-1990s – greater focus on need for state data, comparable across states
- Need to compare burden of oral diseases to other diseases, using the same population and risk data
  - Greater integration of oral health into existing major national and state-based surveys
- Need for local data recognized, improving, not fully realized yet

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CDC BioSense – interested in “secondary use” of biosurveillance data system

ADA – interest in more substantial information on ED use and hospital admissions for aspiration pneumonia associated with poor oral health among frail elders

States – analyses of cost of hospital OR treatment for caries among young children (NY), some assessing variation by fluoridation status (LA)
Initial Steps

- Are there enough visits for dental problems in BioSense to proceed with the project?
- What other data sources are available?
Initial Steps

- Are there enough visits for dental problems in BioSense to proceed with the project?

- **Result**
  - *Small, but visible proportion of visits included ICD-9 codes for dental problems*
  - *Similar to proportion for some other chronic diseases*

- **Enough to proceed with BioSense analysis**
  - *BioSense main mission took priority – Gulf oil disaster, fires, etc.*
  - *Transitions in BioSense organization*

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Initial Steps

- Are there enough visits for dental problems in BioSense to proceed with the project?
- What other data sources are available?
  - Medical Expenditure Panel Survey
  - Health Cost and Utilization Project
  - National Hospital Ambulatory Medical Care Survey
  - National Emergency Department Sample
  - State Emergency Department Samples (for purchase)
    - Not every state every year
  - Medicaid, possibly Medicare claims data
  - Data sets from insurance data aggregators (for fee, usually)

* Citations, references, and credits – Myriad Pro, 11pt
Current activities with CDC and ADA/CAPIR

- Coordination with ADA projects (Roundtable #19)
- Development of surveillance measure for BioSense
  - Review of refereed journal articles (Poster #1)
  - Measure testing – Chief Complaint and ICD-9 Final Diagnosis
  - Not complete national coverage, growing ~13% of all visits
- Description of ED use for dental problems among patients reporting Medicaid as expected form of payment (NC)
  - Overall estimates and by payor will also be presented
  - Description of multiple visits, county rates, trends
  - NC has ~100% coverage, can estimate visit and population rates

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Current activities with CDC and ADA

- **Manuscript accepted Journal of Public Health Dentistry**
  - *Recent Trends in Dental Emergency Departments in the U.S. – 1997/98 to 2007/08 (Tom Wall)*
  - *National Hospital Ambulatory Medical Care Survey (NHAMCS)*

* Citations, references, and credits – Myriad Pro, 11pt
Upcoming, future developments

- **BioSense is transitioning to BioSense 2.0 (in the cloud)**
  - Initial focus is on primary mission, data accuracy, functionality for participating facilities for outbreak/disaster response

- **CDC/CMS data sharing**
  - NCHS has linked Medicaid and Medicare data to NHANES
    - No state or local estimation, but linkage between exam and claims, longitudinal to some extent
  - Work is underway to support CDC access to CMS data, primarily again for outbreak/disaster response, but with potential for chronic disease program use

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Upcoming, future developments

- Need inventory of measures used with emergency department data that may not be in peer-reviewed literature
  - Measures from hospital administration reports, legislative reports, state offices

- Quality measurement
  - Although the main focus of quality measurement development for oral health is not in this area, there may be potential for development of hospital-based quality measures related to oral health

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CDC’s National Center for Injury Prevention and Control (NCIPC)

- CDC and American College of Emergency Physicians (ACEP) are collaborating on a clinical policy regarding opioid analgesic prescribing in emergency departments for acute and chronic pain.
  - The draft is in clearance now, with anticipated publication in late 2012.
- CDC/NCIPC has funded two-year randomized controlled trials (NC, WA) to study the use of consistent care plans for frequent emergency department users.

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CDC’s National Center for Injury Prevention and Control (NCIPC)

- Although at least 40 states have operational Prescription Monitoring Programs (PMPs), the policies governing data use for public health or epidemiological studies vary among the programs.
  - PMP data cannot identify the kind of pain being treated or whether the prescription was written in an ED.
  - Prescription Behavior Surveillance System will link de-identified data from 5 states beginning July 2012.
Take away messages

- National level data exist to monitor emergency department use for dental problems
- Need for standard surveillance measures
  - Not to replace existing useful ones, but to allow comparison across states, local areas, local-state-national comparisons
- Centralized and federated data sources are in development
  - Will support both nationally or state coordinated reporting and local area monitoring
- State and local data exist and are being used now
  - Collaboration with those data programs could be useful at state and local levels, earlier than national efforts
BioSense 2.0 Redesign

Welcome to the BioSense Redesign Collaboration Site! We invite you to participate in the redesign effort through a variety of ways provided below. Also, please feel free to reach us at info.AT.biosense.DOT.se.

ASPR’s 2012 Public Health Challenge is now available! Check it out here: Now Trending - #Health In My Community.

BioSense 2.0 is open for business! For more information on how to join, email: info.AT.biosense.DOT.se. Twenty-first century surveillance is here!

To view a video about BioSense 2.0, click HERE.
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Questions?
Laurie Barker
lub2@cdc.gov
(770) 488-5961

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

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