Building Analytic Capacity through
Sharing Analytic Information:
One example

Dental, Oral, and Craniofacial Data Resource Center:

Code Library

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This talk is not just for the geeks!

- **Dental directors and program managers**
  - ◆ **Some of the resources are very accessible to the non-geek**
  - ◆ **Refer your favorite data geeks to these resources**
  - ◆ **Consider developing similar information resources internal to program**

Overview

- **How information sharing can support development and maintenance of analytic capacity for oral health**

- **An example of publicly available analytic information sharing from the NIDCR/CDC Data Resource Center**

Analytic capacity – more than Epi

- **Program evaluation**
- **Economic analyses**
- **Epidemiology and surveillance**

- **Others**
  - ◆ **Workforce**
  - ◆ **Administrative data**
  - ◆ **…**

Analytic capacity-building tasks

- **Orient a new, non-oral health** analyst to oral health data sources and indices

- Orient an oral health analyst to **key data sources or indices**

- **Shorten the learning curve** for students and residents in oral health

- Facilitate replication of results and productive discussion by **documenting key analyses**

- Create **continuity** – the person who does the analysis today may not be the one who will do the next survey or analysis in 3, 5 or 10 years

Common questions from analysts

- **When did BRFSS ask that question?**
- **What questions have states added to BRFSS?**
- **Did that question change from 1999 to 2002?**
- **Is the same question asked on both the national and state survey?**
- **How do you calculate DMFT?**
- **So, how did you get that number? I got a different one…**
- **What's the variable name? How is it coded?**

Information to answer these questions Challenges to obtaining it

- **Documentation for**
  - **Surveys**
    - **Many surveys, lots of documentation to read**
    - **Not all documentation is readily available in a central place**
    - **Surveys change over time**
    - **Lots of data other than oral health**
  - **Procedures and analytic methods used in surveys**
    - **Method section in journal articles is notoriously short**
    - **Appropriate methods vary from survey to survey**
  - **Specific analyses**
    - **Sometimes, you have to read the code.**
    - **But the code is not always available**

Common tasks in data analysis

- **Review literature, existing data, reports, previous analyses**

- **Compare content of available data sources**

- **Identify analysis issues**
  - ◆ **Weighting, sample design, sample sizes**

- **Identify data issues**
  - ◆ **Variable name changes, special codes**

Surveillance for Dental Caries, Dental Sealants, Tooth Retention, Edentulism, and Enamel Fluorosis --- United States, 1988--1994 and 1999--2002

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How to reduce barriers to analytic information?

- **How to make information on oral health components of surveys more readily available**
  - ◆ **Abstract oral health sections of survey documentation and put in one place**

- **How to avoid duplication of effort by oral health analysts doing similar tasks**
  - ◆ **Document and share**
    - ★ **survey comparisons**
    - ★ **variable name and coding changes (crosswalks)**
    - ★ **calculation of common indices**

NIDCR/CDC DRC

Welcome to the

NIDCR/CDC Dental, Oral and Craniofacial Data Resource Center (DRC)

What's New?

2006 Events Calendar
2007 Events Calendar

DRC Home

About the DRC

Catalog/Archive

Annual Report

Data Tables

Data Query System

NIDR Survey Data

The Dental, Oral and Craniofacial Data Resource Center (DRC), co-sponsored by the National Institute of Dental and Craniofacial Research (NIDCR) and the Division of Oral Health, Centers for Disease Control and Prevention (CDC), serves as a resource on dental, oral and craniofacial data for the oral health research community, clinical practitioners, public health planners and policy makers, advocates and the general public.

- **About the DRC** — Learn about the purpose of the DRC.

- **Catalog/Archive** — The *Catalog of Surveys and Archive of Procedures Related to Oral Health*. Search the Catalog for oral health surveys. Search the Archive for procedures used in oral health surveys. Link surveys to procedures used. Create reports of search results.

- **Annual Report** — View, print, or download *Oral Health U.S., 2002*, the annual chartbook of statistics on dental, oral and craniofacial health.

- **New Report** — Link to the new MMWR report on the oral health of Americans, *Surveillance for Dental Caries, Dental Sealants, Tooth Retention, Edentulism, and Enamel Fluorosis— United States 1988-1994 and 1999-2002*.

- **Data Tables** — View, print, or download data tables from *Oral Health U.S., 2002* and recent updates.

- **Data Query System** — Generate rapid statistical analyses of selected dental and oral health data using the NIDCR/CDC Dental, Oral and

Trusted sites

NIDCR/CDC Dental, Oral, and Craniofacial Data Resource Center

- **Shares analytic information to support analytic capacity building**
  - ◆ **Survey Question Inventory**
  - ◆ **Catalog of Surveys and Archive of Procedures Related to Oral Health**
  - ◆ **Data Quick Tables and Data Query System**
  - ◆ **Code Library**

What's in the Code Library?

- **Documentation of oral health components of surveys**
- **Comparisons of content from different surveys**
- **Variable crosswalks**
  - ◆ **Compares variable names and response codes for same item across data sets**
- **Statistical programming code for analyses**

State-added questions

- **ASTDD 2006 Synopses**
  - ◆ **Included questions about state-added oral health questions on BRFSS, YRBSS and PRAMS**
  - ◆ **This information will be added to the DRC Code Library when available from ASTDD**

People who made this possible

- **MMWR NHANES programming**
  - ◆ **Keith Heller**
  - ◆ **Mark Macek**
  - ◆ **Jeff Hyman, Al Kingman, Tianxia Wu, Richard Oldakowski, Rob Selwitz (NIDCR)**
  - ◆ **Eugenio Beltran, Bruce Dye, Susan Griffin, Paul Eke (CDC)**
  - ◆ **Charles Li (DRC)**

People who made this possible

- **BRFSS programming**
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  - **Ranjitha Krishna (CDC Fellow)**
  - **Paul Eke (CDC)**
  - **Scott Tomar (U Florida)**
  - **Clemencia Vargas (U Maryland-Baltimore)**
  - **Amy Zlot (CDC informatics fellow and epidemiologist, now in Oregon State Health Department)**

Data Resource Center

- **Functional area expertise**
  - ◆ **Susan Drilea**
  - ◆ **Pam Martinez**
  - ◆ **Charles Li**
  - ◆ **Shellie Kolavic-Gray**
- **Project leads, consultants**
  - ◆ **Jeff Hyman**
  - ◆ **Britt Reid**

- **Web and Applications Development team**
  - ◆ **Holly Morton**
  - ◆ **Erica Newcomb**
  - ◆ **Prabhu Krishnadas**
  - ◆ **ZW Liu**
  - ◆ **Ramesh Thalluru**
  - ◆ **Claudia Hudson**

Building Analytical Capacity

■ **Questions?**

Example SUDAAN code block to produce estimates for past year dental visits for all states, by several demographic groupings

```
*Table for 2004 Dental visits: 18 and older - Not age adjusted;
Proc crosstab Data = Brf04ss.BRFDOHO4 design=wr filetype=sas
CONF_LIM=95;
Nest _ststr _psu/missunit;
Weight _finalwt;
Subpopn agegrp >= 1 and _finalwt>0;
Class _state;
Subgroup visit sex agegrp racegrp income educat ;
Levels      2    2    6      5        5       4    ;
Tables _state*visit
(sex income educat racegrp agegrp)*_state*visit;
Print nsum rowper lowrow uprow/ rowperfmt=f5.1 lowrowfmt=f5.1
uprowfmt=f5.1 style=nchs;
output nsum rowper lowrow uprow/ filename=brf04ss.vis04 REPLACE
filetype=SAS;
rtitle "NOHSS 2005 release - BRFSS 2004 Estimates for Dental
Visits - not age adjusted";
Run;
```