



**astdd**

Where oral health lives

# **BASIC SCREENING SURVEYS**

---

## Monitoring Community Oral Health

Kathy Phipps, MPH, DrPH

Data and Surveillance Coordinator

Association of State and Territorial Dental Directors

Morro Bay, CA

[khipps@astdd.org](mailto:khipps@astdd.org)

# TODAY'S AGENDA



Public health surveillance



Oral health surveillance



Basic Screening Survey methodology



Data dissemination

# INSTITUTE OF MEDICINE - 1988

## 3 CORE FUNCTIONS FOR PUBLIC HEALTH



**ASSESSMENT**



**POLICY  
DEVELOPMENT**



**ASSURANCE**

# THE ASSESSMENT FUNCTION



IOM recommends that every public health agency regularly and systematically collect, assemble, analyze, and disseminate information on community health status to carry out the assessment function.



Public health agencies accomplish this task through public health surveillance - the ongoing, systematic collection, analysis and interpretation of health data.

# PUBLIC HEALTH SURVEILLANCE



The purpose of public health surveillance is to provide actionable health information to guide public health policy and programs



The purpose of an oral health surveillance system is to **use data** to protect and promote population-wide oral health

### Local health jurisdictions (LHJ)

- Infectious disease surveillance because LHJs are the contact point for notifiable disease reporting, case investigations and control interventions

### State health departments

- Noninfectious disease surveillance because noninfectious disease interventions are often long-term, statewide and resource-intensive

### Federal government

- Monitoring national trends, maintaining national surveillance systems, coordinating multistate responses, supporting state-based surveys and interfacing with the World Health Organization on global health concerns

## HISTORIC SURVEILLANCE ROLES & RESPONSIBILITIES

# ORAL HEALTH SURVEILLANCE

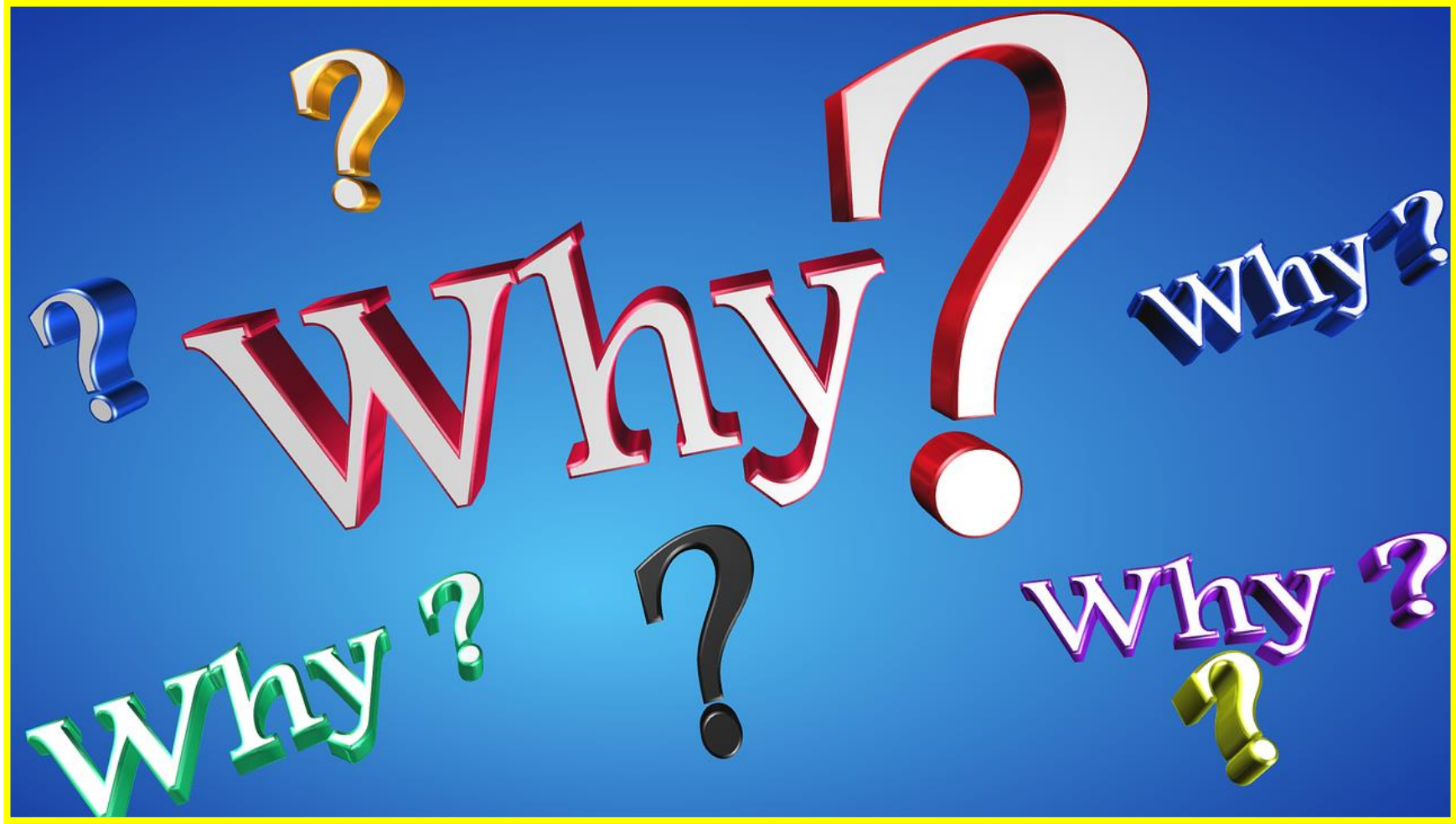


- Based on the non-communicable nature of oral health outcomes, *oral health monitoring generally falls within the domain of state agencies*, with federal agencies responsible for monitoring national trends
- Expanding role for local jurisdictions

Prior to the turn of the 21<sup>st</sup> century, however, state-based oral health surveillance systems were virtually nonexistent.

## ORAL HEALTH SURVEILLANCE





## TWO OVERARCHING REASONS

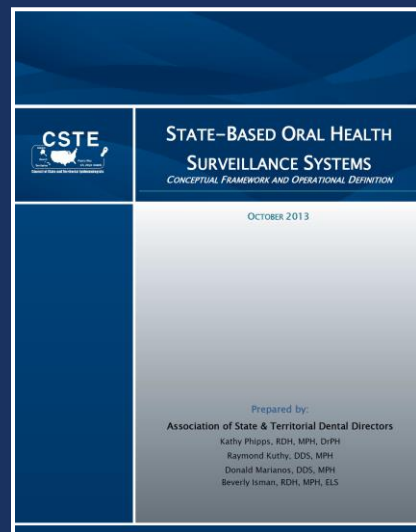
NO GUIDANCE ON  
WHAT AN OH  
SURVEILLANCE SYSTEM  
SHOULD INCLUDE

NO COST-EFFECTIVE  
WAY TO MONITOR  
ORAL DISEASE AT  
STATE/LOCAL LEVEL

# GUIDANCE ON ORAL HEALTH SURVEILLANCE SYSTEMS

Developed and approved by  
Council of State & Territorial  
Epidemiologists (CSTE)

October 2013



## Oral Health Surveillance Plan

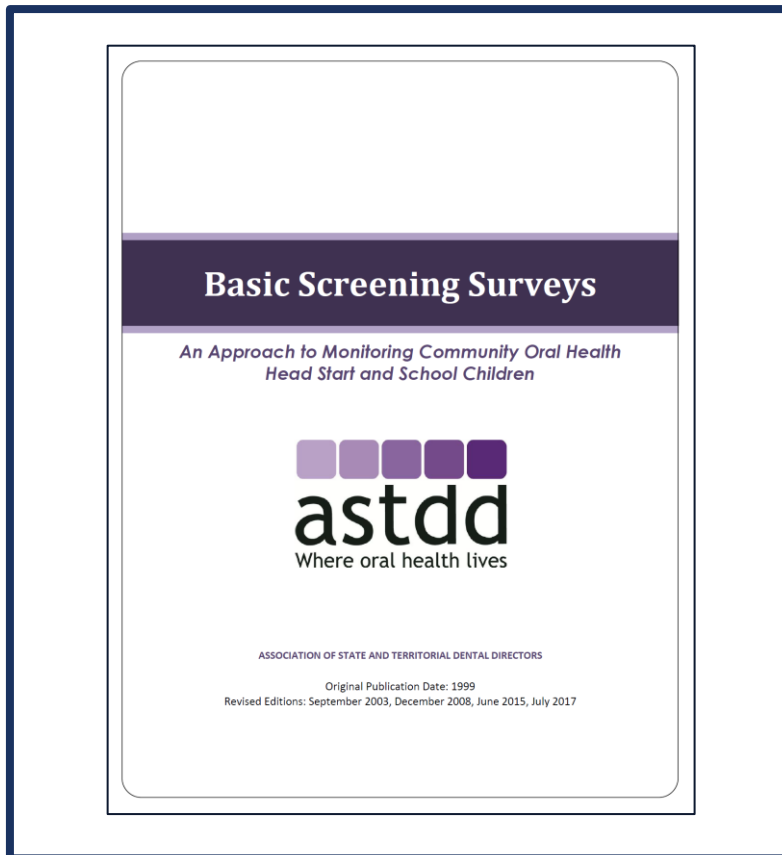
### Core Indicators

Oral Health Outcomes	Access to Care	Intervention Strategies	Workforce, Infrastructure, Policy
3 <sup>rd</sup> Grade Oral Health Status (every 5 years)	Annual Dental Visit for Medicaid/CHIP Children (every year)	Community Water Fluoridation (every 2 years)	Data from Synopses of State & Territorial Dental Public Health Programs (every year)
Permanent Tooth Loss for Adults (every 2 years)	Annual Dental Visit for Children 1-17 Years (every 4 years)		
Incidence of & Mortality from Oral and Pharyngeal Cancer (every year)	Annual Dental Visit for Adults & Adults with Diabetes (every 2 years)		

***Publicly Available Actionable Data to Guide Public Health Policy and Programs Disseminated in a Timely Manner***

<https://www.astdd.org/docs/state-based-oral-health-surveillance-systems-cste-whitepaper-oct-2013.pdf>

# COST-EFFECTIVE METHOD FOR MONITORING ORAL DISEASE



- Originally published in 1999
  - Collaborative effort
    - Ohio Department of Health
    - ASTDD
    - CDC
- BSS toolkit free to ASTDD members
  - \$25 for non-members

# HISTORICAL CONTEXT



- Prior to 1999, oral health was measured using DMFT/DMFS index
  - 100+ variables per person
  - Time consuming
  - Expensive
  - Difficult to analyze
  - Took years to publish results

# HISTORICAL CONTEXT

## The Problem

Need a better system for monitoring oral health at the state and local level

## To Address the Problem

Convened expert panel to develop new oral health monitoring system

## Created 2 New Systems

Panel created (1) Advanced Screening Survey and (2) Basic Screening Survey

## Adopted New System

ASTDD/CDC adopted and began supporting Basic Screening Survey

# THE BASIC SCREENING SURVEY (BSS)

## WHAT IT IS:

- A tool for oral health surveillance that monitors disease at the person (not the tooth) level
- Quick – 1 minute per child (longer for adults)
- Relatively easy to analyze
- Validated for surveillance

## WHAT IT ISN'T:

- A tool for research that monitors disease at the surface or tooth level
- Not designed to test hypotheses

# BASIC SCREENING SURVEY

## Target Populations for BSS

- Selected because of ability to have similar sampling strategies across states
  - Head Start
  - Kindergarten
  - 3rd Grade (ASTDD/CDC's top priority)
  - Vulnerable Older Adults

## Frequency





# SAMPLING FRAME FOR TARGET POPULATIONS

## Head Start

- Representative sample of Head Start centers

## Kindergarten and/or 3<sup>rd</sup> Grade

- Representative sample of public, public charter and Bureau of Indian Education schools

## Vulnerable Older Adults

- Representative sample of senior meal sites and/or
- Representative sample of long-term care facilities



### **HEAD START**

Untreated Decay  
Treated Decay  
Treatment Urgency



### **KINDERGARTEN & 3<sup>RD</sup> GRADE**

Untreated Decay  
Treated Decay  
Dental Sealants (3<sup>rd</sup>)  
Treatment Urgency



### **VULNERABLE OLDER ADULTS**

Dentures & Denture Use  
Number of Natural Teeth  
Untreated Decay  
Root Fragments  
Need for Periodontal Care  
Soft Tissue Lesions  
Treatment Urgency

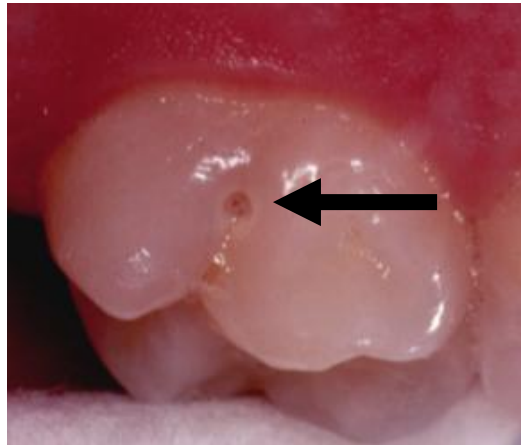
**RECOMMENDED BSS INDICATORS**



# CHILD INDICATOR OVERVIEW

## UNTREATED DECAY

- Does the child have any cavities that have not been treated (no/yes)?
- Untreated decay – must have breakdown of the enamel surface
- Only cavitated lesions are considered untreated decay



## TREATED DECAY

- Has the child had dental treatment because of decay (no/yes)?
- Includes
  - Amalgam and composite restorations
  - Glass ionomer restorations
  - Crowns placed because of decay
  - Teeth extracted because of decay

# DENTAL SEALANTS

- Does the child have a sealant on 1+ permanent molars (no/yes)?



Transparent



Opaque



Glass Ionomer

## TREATMENT URGENCY

- 3 levels based on how soon a child should visit the *dentist* for a clinical diagnosis and any necessary *restorative dental treatment*
  - Urgent need (pain or infection)
  - Early care needed
  - No obvious problem

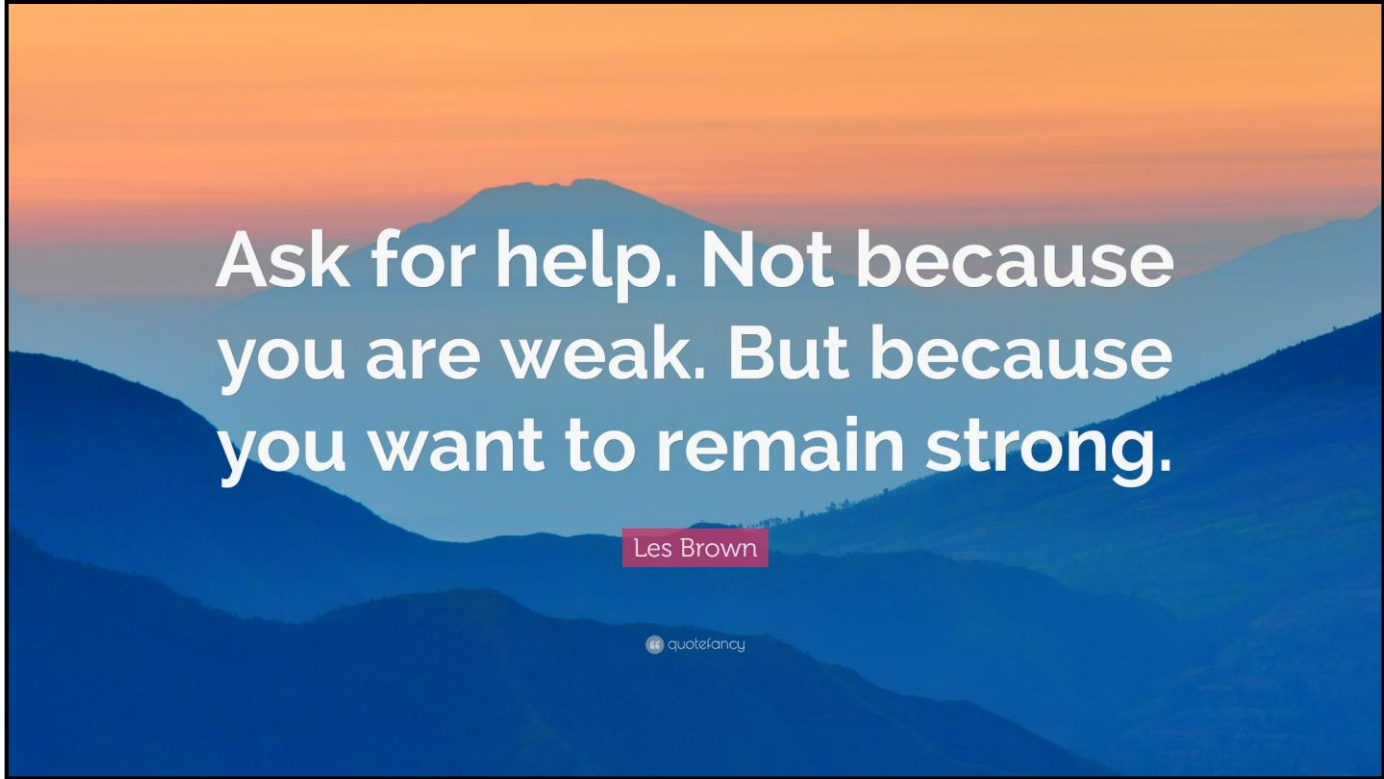
## IMPORTANT THINGS TO REMEMBER

- The BSS is a screening, not a clinical examination
  - May underestimate prevalence of disease – THIS IS NOT A PROBLEM
- BSS can be completed by dental professionals or school nurse (if trained)
- Must use appropriate methods for selecting a sample of schools/sites
- Must use appropriate methods for analyzing data



BASIC SCREENING SURVEY  
*TIPS, TRICKS AND A FEW  
UNFORTUNATE FACTS OF LIFE*

# BSS TIP #1 ASK FOR HELP



Ask for help. Not because  
you are weak. But because  
you want to remain strong.

Les Brown

quotefancy

# BSS TIP #1 ASK FOR HELP



Overall methods



Sample selection



Data collection  
forms, data entry  
software



Working with  
schools



Screener training



Data analysis

## BSS TIP #2

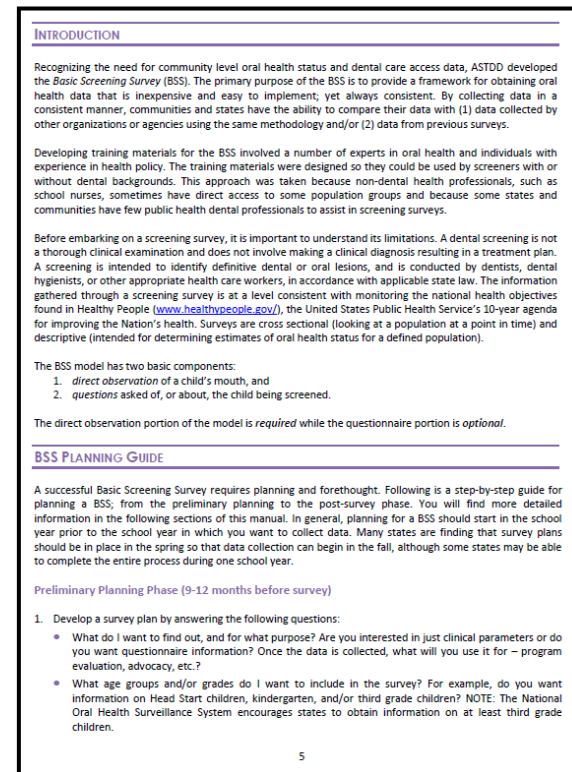
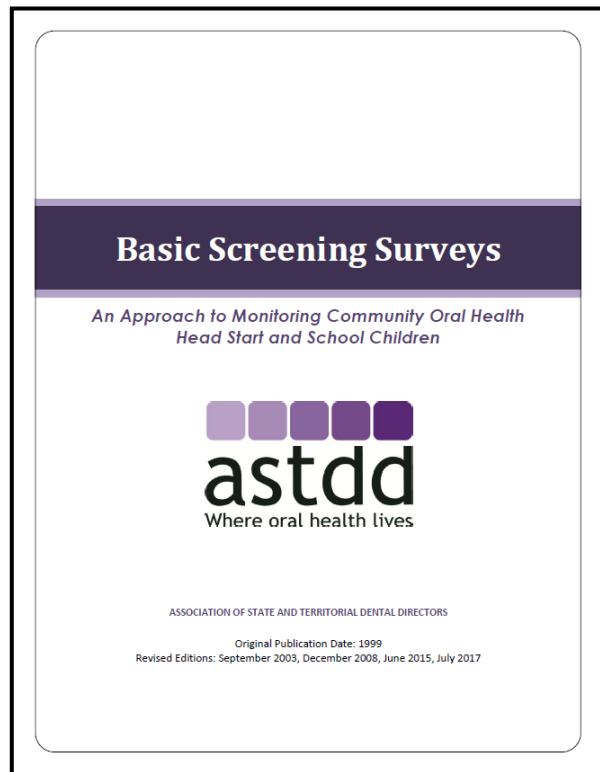
# SLOW DOWN, DON'T BE IN A HURRY

- Start planning 9-12 months in advance



# BSS TIP #2

## SLOW DOWN, DON'T BE IN A HURRY



BSS TIP #3  
COLLABORATE WITH YOUR DEPARTMENT OF EDUCATION



## A FEW BSS TRICKS

- Request waiver for IRB review – public health activity not research
- Passive (opt-out) consent works best
- Have DOE cosign letters to superintendents/principals
- Hire a coordinator with school experience (retired school nurse)
- Create MOU with DOE for data merge – best way to get demographics

# SOME UNFORTUNATE FACTS OF LIFE



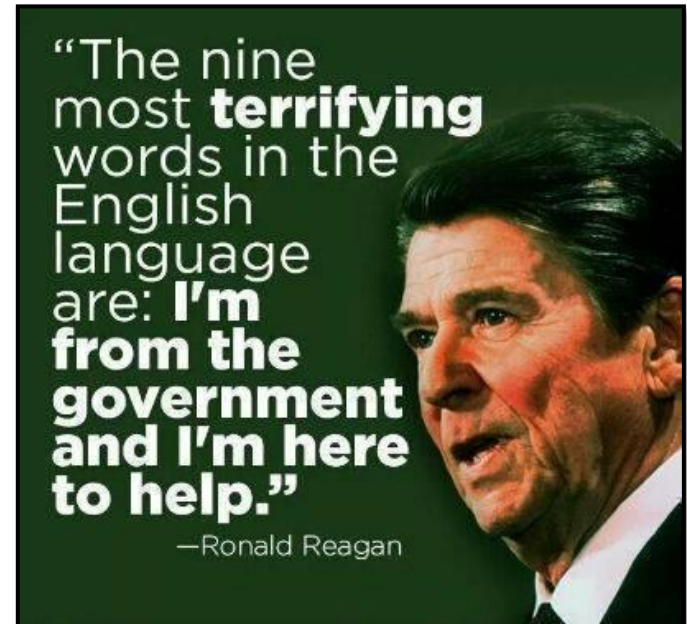


# UNFORTUNATE FACTS OF LIFE

## Third Grade BSS



## Older Adult BSS



# YOU HAVE DATA – NOW WHAT?





DATA



KNOWLEDGE

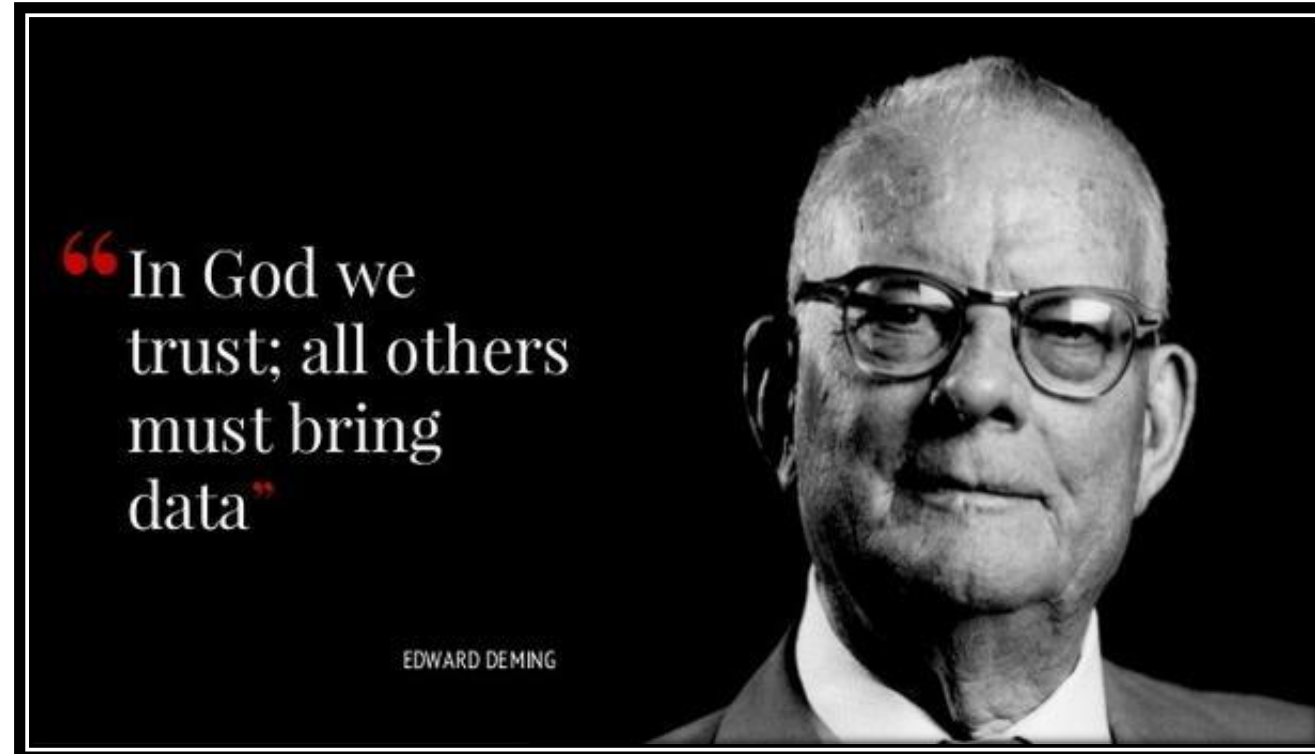


ACTION

# **DATA DISSEMINATION**

## ***TURNING DATA INTO ACTION***

# THE IMPORTANCE OF DATA



**William Edwards Deming, 1900-1993**  
**Engineer & Statistician**

# DATA SERVE MANY PURPOSES



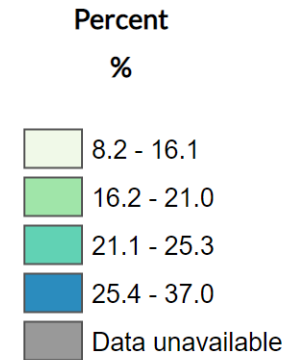
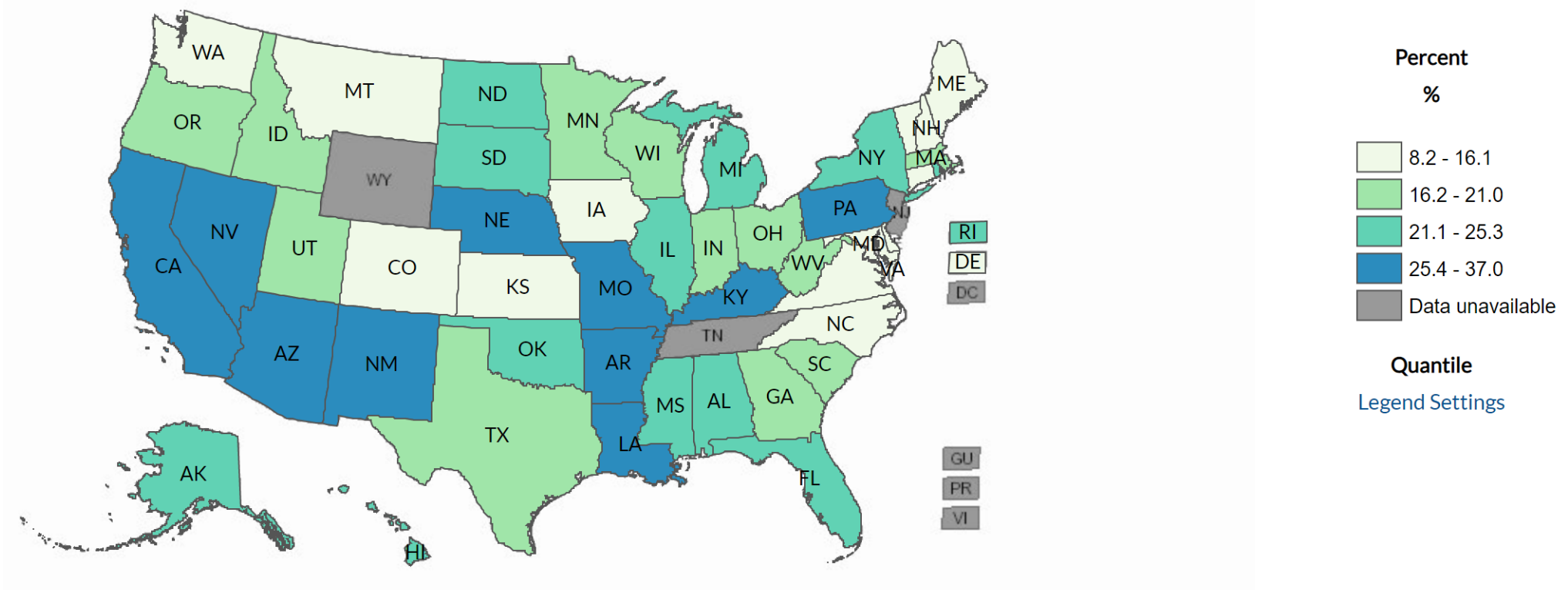
- To describe
- To inform
- To educate
- To persuade

# CDC'S ORAL HEALTH DATA PORTAL

## Latest data

Percentage of students with untreated tooth decay

Breakdown: Grade - Third Grade



Quantile  
[Legend Settings](#)



**CREATE A MESSAGE YOUR AUDIENCE WILL “BUY”**

## STEP 1 – MISSION

- ***Define the mission of your information campaign***
  - What change do you want?
    - Legislature expands Medicaid dental to include adults?
    - Head Start programs allow quarterly fluoride varnish visits?
    - More dentists provide care to pregnant women?



## STEP 2 – AUDIENCE

- ***Identify & understand your audience***
  - Who do you want your message to reach?
    - All people on earth?
    - Everyone in San Francisco?
    - All staff at a FQHC?
    - Primary care physicians at a FQHC?
  - Each audience requires its own messages, media and messengers

## STEP 3 – MESSAGE

- ***Craft a message for each specific audience***
  - Messages should answer three questions
    - Why should the audience care?
    - What are you offering?
    - What's the call to action?



## STEP 4 – MEDIA

- ***Select the “media” for your message***
  - May need to pick several media to reach each audience
  - Types of media
    - Formal written reports
    - Informal written data presentations
    - Fact sheets & data briefs
    - Infographics
    - Social media
    - On-line data platforms – Scoreboards/Dashboards

## STEP 5 – MESSENGER

- ***Select the messenger you want to carry your message***
  - Messengers are the well-placed and highly leveraged people who have influence over your audience
  - Messengers convey and amplify your message to your audience through the media you've chosen

# ASTDD RESOURCES

WWW.ASTDD.ORG/DATA-COLLECTION-ASSESSMENT-AND-SURVEILLANCE-COMMITTEE/

The screenshot shows the ASTDD website header with the logo and tagline "Where oral health lives". The main navigation menu includes Home, About ASTDD, ASTDD Brochure, ASTDD Publications, A-Z Topics, State Programs, and Territorial Programs. The page title is "Data Collection, Assessment and Surveillance Committee". The main content area contains a paragraph describing the committee's role in overseeing state-based oral health surveillance activities, including the National Oral Health Surveillance System (NOHSS), Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Surveillance System (YRBSS), Pregnancy Risk Assessment Monitoring System (PRAMS), and Synopses of State Dental Public Health Programs (State Synopses). The page also features a search bar and navigation icons for A-Z, Facebook, Login, Print, and Help.

astdd  
Where oral health lives

Association of State & Territorial Dental Directors  
3858 Cashill Blvd., Reno, NV 89509  
Phone 775-626-5008

Home  
About ASTDD  
ASTDD Brochure  
ASTDD Publications  
A-Z Topics  
State Programs  
Territorial Programs

Data Collection, Assessment and Surveillance Committee

The committee oversees all of the activities of the Association regarding state-based oral health surveillance, the National Oral Health Surveillance System (NOHSS), Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Surveillance System (YRBSS), Pregnancy Risk Assessment Monitoring System (PRAMS), Synopses of State Dental Public Health Programs (State Synopses), Basic Screening Survey (BSS) training and technical assistance, and any chronic disease or maternal and child health related data requests or technical assistance. A coordinator and various advisory groups work with committee members to accomplish all objectives. The coordinator and an additional consultant provide technical assistance and training to states on oral health assessment and surveillance.

Search Navigation Topics Facebook Login Print Help





ANY QUESTIONS?

