



THE BASIC SCREENING SURVEY: A TOOL FOR ORAL HEALTH SURVEILLANCE NOT RESEARCH FEBRUARY 2011, UPDATED JUNE 2015 AND JULY 2017

What is public health surveillance?

Public health surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health.¹⁻³ Data disseminated by a public health surveillance system can be used for immediate public health action, program planning and evaluation, and formulating research hypotheses. For example, data from a public health surveillance system can be used to:

- guide immediate action for cases of public health importance
- measure the burden of a disease, the identification of populations at high risk, and the identification of new or emerging health concerns
- monitor trends in the burden of a disease
- guide the planning, implementation, and evaluation of programs to prevent and control disease
- evaluate public policy
- detect changes in health practices and the effects of these changes
- prioritize the allocation of health resources
- develop hypotheses for epidemiologic research⁴

Public health surveillance activities are generally carried out by public health officials and address a range of public health needs including, but not limited to, oral health. Surveillance systems vary from a simple system collecting data from a single source, to electronic systems that receive data from many sources in multiple formats, to more complex surveys.

The fundamental principle of public health surveillance is that the surveillance should be designed and implemented to provide accurate information to decision makers in a timely manner at the lowest possible cost. Because public health program managers are unlikely to need to tailor interventions to address small differences between areas, sacrificing precision at the state level makes sense to improve timeliness and save resources that can be used for public health interventions.

Oral health surveillance: monitoring oral health at the state and local level

At the state and local level, most oral health surveillance systems are designed to measure and monitor the burden of oral disease at a level consistent with the Healthy People oral health objectives including the prevalence of dental caries experience, untreated dental decay, dental sealants, permanent tooth loss, oral and pharyngeal cancer, destructive periodontal disease, and use of the dental care system.

One of the key elements of any surveillance system is a simple and consistent case definition for the disease of interest. In 1999, the Association of State and Territorial Dental Directors (ASTDD) in collaboration with the Ohio Department of Health and the Centers for Disease Control and Prevention, released *Basic Screening Survey: An Approach to Monitoring Community Oral Health*. The primary purpose of the Basic Screening Survey (BSS) tool is to provide state and local health jurisdictions with a consistent model for monitoring oral disease in a timely

manner, at the lowest possible cost, with minimum burden on survey participants, and that will support comparisons within and between states. The BSS provides guidance to states on population groups to monitor, indicators to collect and case definitions that, to some degree, sacrifice precision in order to improve timeliness and save resources.

The Basic Screening Survey is a tool for obtaining data for an oral health surveillance system; therefore, it may not be appropriate for use in an oral health research setting where greater precision is more important than timeliness and resources.

Because oral disease patterns differ between preschool children, school children and older adults, ASTDD has developed BSS models specific to each age group. The following table lists the **recommended** oral health indicators for each age group.

Preschool Children	School Children	Older Adults
<ul style="list-style-type: none"> • Untreated decay • Treated decay • Urgency of need for dental care 	<ul style="list-style-type: none"> • Untreated decay • Treated decay • Dental sealants on permanent molars • Urgency of need for dental care 	<ul style="list-style-type: none"> • Dentures and denture use • Number of natural teeth • Untreated decay • Root fragments • Need for periodontal care • Suspicious soft tissue lesions • Urgency of need for dental care

Oral health surveillance vs. oral health research

While data from surveillance systems can be used to generate research hypotheses, public health surveillance systems are generally not designed to test research hypotheses. In most cases, hypothesis testing is classified as human subjects research, defined in the federal Common Rule as a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge that involves living human subjects.⁵ Unlike surveillance, human subjects research is subject to the protections and procedures pursuant to the Federal Policy for the Protection of Human Subjects, known as the Common Rule.

In most cases, oral health research is designed to measure small differences in oral health over a relatively short period of time; therefore, the oral health measures used in research activities need to be more precise than those used by surveillance systems. For example, a dental caries clinical trial may collect tooth surface specific data at the D1 (initial caries) level while most state-level oral health surveillance systems monitor the presence of cavitated carious lesions at the person level (percent of persons with one or more cavitated lesions).

Consistent and easily applied methods are necessary to collect and share findings in meeting Healthy People objectives. Oral surveillance methods such as BSS strive to monitor the burden of oral disease while not overtaxing limited human resources in collecting such data.

Summary

The Basic Screening Survey tools were developed by the Association of State and Territorial Dental Directors to assist state and local public health agencies monitor the burden of oral disease at a level consistent with the Healthy People objectives. The BSS tools were not designed to measure small changes in disease levels and are probably not appropriate for use in oral health research. Likewise, many of the tools used to evaluate and measure oral health in the research setting are too costly and not appropriate for oral health surveillance activities.

For information on the impact of the Common Rule and the Health Insurance Portability and Accountability Act (HIPAA) on oral health surveillance activities refer to the ASTDD monograph *IRB Review, HIPAA and Oral Health Surveys* (www.astdd.org/basic-screening-survey-tool/).

References

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