

ASSESSING ORAL HEALTH NEEDS: ASTDD SEVEN-STEP MODEL

THE ASSOCIATION OF STATE AND TERRITORIAL DENTAL DIRECTORS

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INTRODUCTION

WHY NEEDS ASSESSMENT?

Your dental health program will best meet the needs of your community when it is tailored to match current needs and to solve current health problems. Resources are best used when targeted to populations currently at risk, rather than toward established programs or localities with a past incidence or prevalence of disease.

Many state health agencies have avoided large-scale data collection projects, considering them to be expensive and overwhelming tasks; but that is not necessarily so. This document has been created to make needs assessment simpler and more manageable. It serves as a step-by-step guide that can be adapted to specific community resources and objectives.

Needs assessment is not an end in itself, but the initial step in the development of a comprehensive oral health program plan. When used effectively, the process provides integrated information about health status, the existing health system and health resources. Implicit in needs assessment is the incorporation of risk assessment methods to assist in identifying individuals or groups who are at risk for poor health.

If carried out properly, needs assessment will also help to educate communities about the importance of oral health.

FEDERAL REQUIREMENTS FOR STATE NEEDS ASSESSMENTS

Since the late 1980s, the federal government has renewed efforts to build the capacity of oral health programs for Maternal and Child Health (MCH) populations. Title V Maternal and Child Health Block Grant legislation requires that needs assessment and planning be integrated into annual state applications. Additionally, states are required to adopt or adapt National MCH Objectives, drawn from *Healthy People 2010* goals and to report

annually on their progress toward accomplishing those goals.

Some state and local dental programs have conducted and documented well-designed oral health needs assessments. The Association of State and Territorial Dental Directors has developed the following model to assist states in conducting oral health needs assessments. Most importantly, the model has been designed with the flexibility necessary to be adaptable to each individual health department's needs, resources and level of expertise.

ABOUT THE ASTDD NEEDS ASSESSMENT MODEL

Just as you don't need to read the entire cookbook to prepare a meal, you don't have to use this entire document to conduct a community oral health needs assessment. After you review the initial set of options, the instructions allow you to easily select those sections that most effectively match your program's capabilities and goals.

Historically, open-mouth oral health studies have provided useful information about oral health status, but they are not the only way to assess the status of a population. Studies that rely on dental examination are expensive, time consuming and often unwieldy. Sometimes such programs are completely unworkable in the context of a state or locality's resources.

The oral health needs assessment model offers various options for data collection. While this model may yield less or different data than an open-mouth dental health study, its results may be reliable, valid and acceptable, and are certainly preferable to gathering no information at all.

... open-mouth oral health studies ... are not the only way to assess the status of a population... The oral health needs assessment model offers alternative methods for data collection.

Using a series of worksheets, charts, tables and tested survey instruments, this needs assessment model provides a tool for state and local health departments to measure the needs of their communities, satisfy federal reporting requirements and eventually formulate appropriate responses to populations and localities identified as trouble spots.

The model relies on a systematic data collection, analysis, and prioritization process that is translatable to an action plan. Easily personalized for each user, the model provides a comprehensive process that will identify:

- ⇒ the extent and types of existing and potential problems in a community,
- ⇒ the current system of services available in a community, and
- ⇒ the extent of unmet needs, underutilized resources or shortcomings of the current system to help plan appropriate system and service changes.

Needs assessment in your community will provide valuable data that can help determine, establish and adapt services and programs to best serve community needs.

STEP-BY-STEP WITH THE ASTDD MODEL

This model provides a step-by-step, logical approach to help you conduct an oral health needs assessment (illustrated in *Figure 1*). Because the model is action oriented, information not directly related to carrying out the process has been placed in the *Appendix* rather than in the body of the model.

The model is based on a large-scale consensus building process that involved a number

of state and local dental directors and other public health experts. It is structured around a **core** set of information that **all** oral health programs should include, as well as **optional** information items. A brief background section reviews the concept and importance of needs assessment in oral health program planning. The seven steps of the oral health needs assessment model are described in detail in subsequent sections.

RECOMMENDATIONS FOR PREPARING AN ABBREVIATED HANDOUT TO SHARE

It may be necessary to orient advisory committee members, needs assessment staff, or other colleagues to the use of the needs assessment model. Because it is neither practical nor necessary to reproduce this entire document, we suggest that the following pages and worksheets be photocopied to capture the essence of the model. Armed with this abbreviated “primer”, most individuals will grasp the purpose of what you hope to achieve and understand the model you will use.

Introduction, pages 1-5

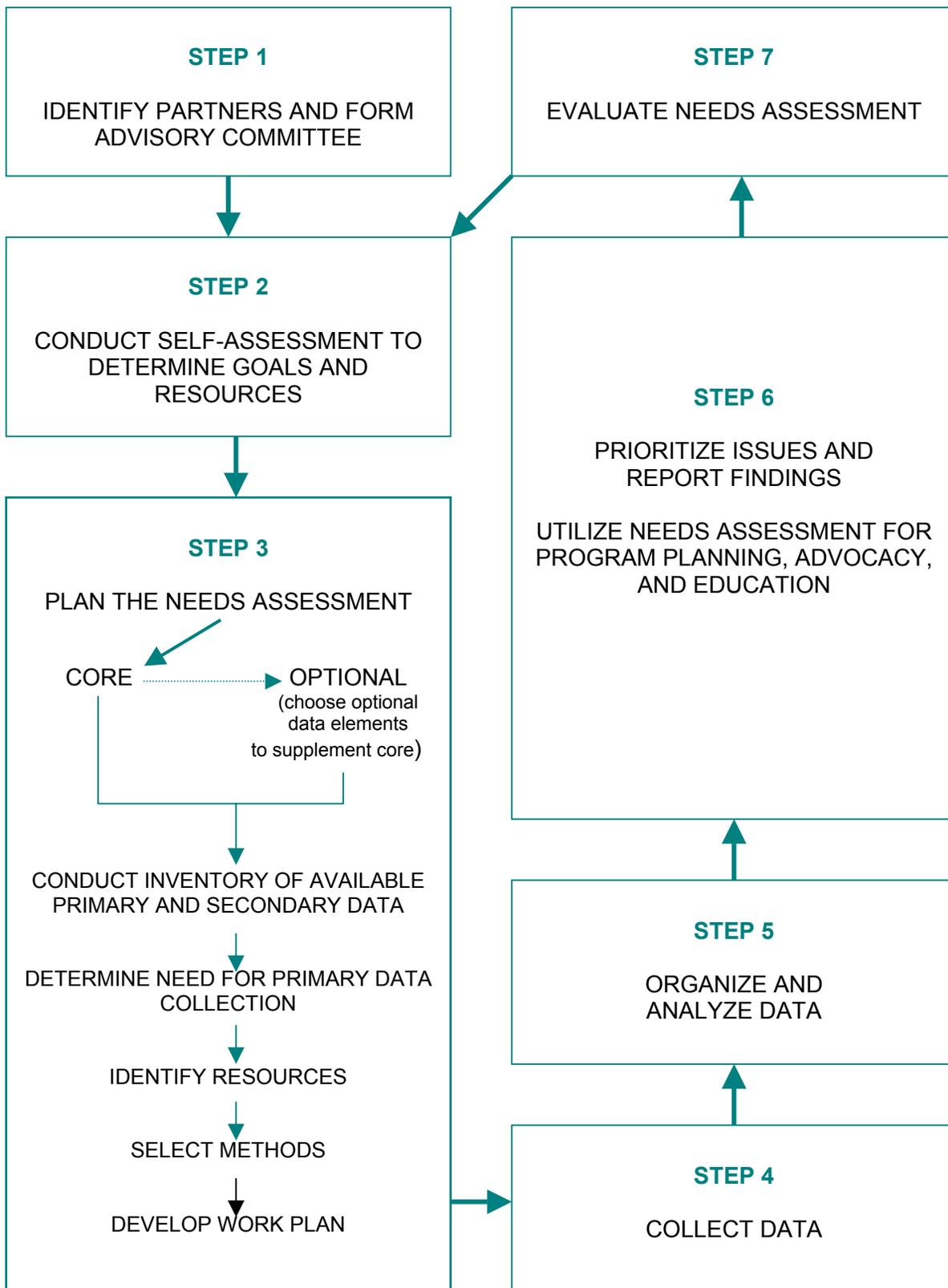
Background, pages 6-8

Worksheets 1-4

Table 2: Summary of Needs Assessment Methods

The worksheets, tables and other descriptions in the model will guide you through the needs assessment process. The best needs assessment will result from following all the steps in sequence.

Figure 1
Seven-Step Needs Assessment Model



STEP 1: Identify Partners/Form an Advisory Committee

Needs assessment and program planning are not effective if they are conducted in isolation. The first step is to decide which people or organizations can give you the variety of perspectives you need to accomplish your goals and secure "buy-in" from key constituencies. These key constituency groups may later become not only sources of additional resources, but also political support. This oral health needs assessment model strongly favors the formation of an advisory committee to help plan and conduct the needs assessment. In addition, the state MCH director is identified as an important partner in needs assessment planning. *Worksheet 1* aids you in identifying committee members.

STEP 2: Conduct a Self-Assessment

The model provides *Worksheet 2* to help identify the goals of your needs assessment. At various points in the model you will refer to this worksheet to remind you of the designated goals.

STEP 3: Plan the Needs Assessment

Once you have completed the self-assessment and determined your goals and resources, the model provides a worksheet (*Worksheet 3*) to help you decide what information you need to make program planning decisions. It will help you determine what information you lack, what information you need to collect and a structured format to select the methods of data collection.

The first part of the worksheet is a core set of needs assessment information along with a brief statement of the rationale for each item. It is important to include all core items in your needs assessment. If you do not already have all the core information on hand, acceptable methods are provided for collecting it. Generally, methods are listed in increasing order of the resources needed. Of course, when available, the simplest and least costly method is to use existing data. Summaries of

all acceptable alternative methods for data collection also are presented. These summaries will help you select methods for gathering missing elements from the core information set. If you want your needs assessment to go beyond the core set, continue with the second part of the worksheet, the list of optional data items. The only additional step in the optional section is to decide which data item(s) to add to the core set and then select methods to obtain the information. The third part of the worksheet allows you to add data items not listed in the core and optional data sets.

Worksheet 4 helps organize your plan by converting the list of data items you selected on *Worksheet 3* into actual data collection activities. You will be led through a step-by-step process to identify the resources necessary for needs assessment and the organizations/individuals responsible for providing those resources. A timeline and calendar are included for your convenience.

STEP 4: Collect Data

Detailed instructions, useful examples of survey instruments and other aids are provided to help you effectively plan your data collection. An entire manual for conducting an oral health screening survey (Basic Screening Survey) is available if you select this survey method.

STEP 5: Organize and Analyze Data

This section describes methods for tabulating descriptive statistics and guidance for some basic inferential statistics. If the first steps have been followed, carefully analyzing quantitative data for several of the methods will be straightforward. A set of *data summary sheets* are provided to help you organize data according to topic.

STEP 6: Prioritize Issues and Report Findings

Since there may be many different purposes for needs assessment, it is important to prioritize issues, and present findings that are tailored to the intended audience. This section highlights key elements in presenting data to various audiences.

STEP 7: Evaluate the Needs Assessment

Evaluation and a final review allow you to determine whether you have accomplished what you intended. This section highlights the fact that needs assessment is continuous.

ADDITIONAL INFORMATION

Where appropriate, supplemental readings for more detail are cited. Additional references for needs assessment documents are located in the *Appendix*. A hypothetical example demonstrating the seven-step process is also included in the manual.

CORE AND OPTIONAL DATA ITEMS

The seven-step model includes a **core set of information (data) items** that all oral health programs should include and a **selection of optional information items** from which program managers can choose to expand the scope of their needs assessments. Some users may complete only the core section while others will complete the optional section as well. Data items not listed in the worksheets can be added during the planning step.

HOW THE CORE AND OPTIONAL DATA ITEMS WERE DETERMINED

In the fall of 1992, more than 60 state and local dental directors and advisory committee members were asked to participate in a consensus-building Delphi Technique series of mailed questionnaires. Approximately 70 percent responded.

Responses to the questionnaires helped determine what information a state or local dental program manager wished to have when assessing the need for oral health services and systems of care for a population of mothers and children. The items that most respondents ranked as critical after two rounds of questionnaires were categorized as core items, while those that were ranked as important were categorized as optional. Items that were ranked as less than important were not included in the model.

After the core and optional data items were determined, another Delphi Technique effort was conducted with a group of three oral epidemiologists, one state dental director and two MCH dental services experts. This time the Delphi Technique was used to help determine which data collection methods were appropriate for each data item. Worksheet 3 is the product of these two consensus development processes and additional reviews in 2003.

BACKGROUND

WHAT IS NEED AND NEEDS ASSESSMENT?

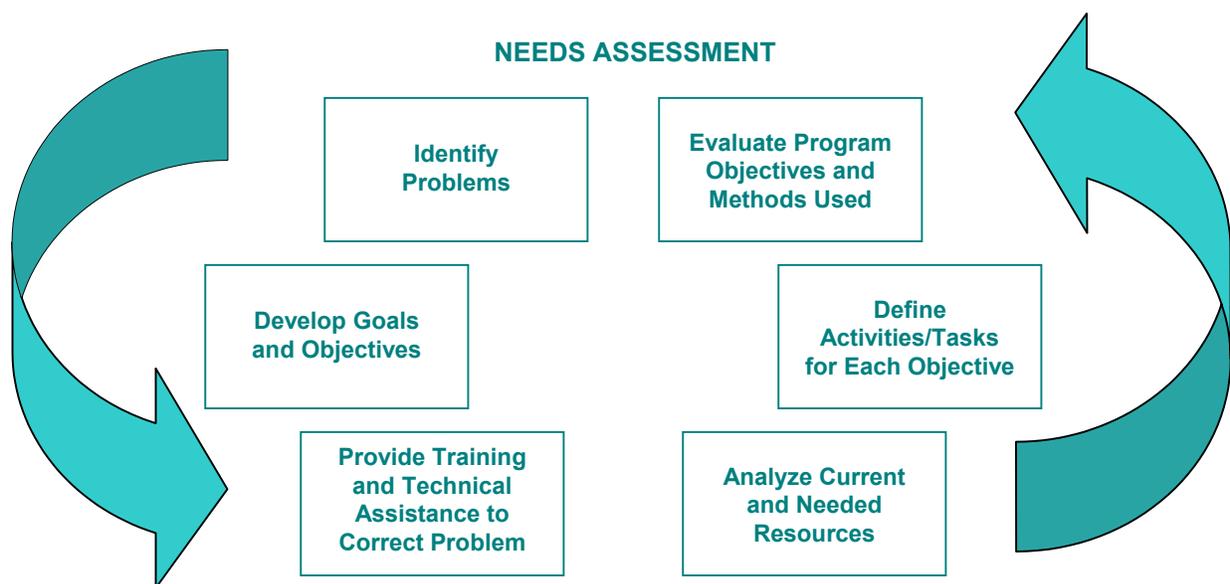
Need is a concept shaped by the social environment, involving values and judgments. It is influenced by (1) communal agreement on what is an accepted standard; (2) the social and political environment; and (3) the availability of resources and technology to meet these concerns. Thus, **need** is a condition judged to be undesirable by public consensus. Need may vary from place to place and at different times because it is subject to the social forces which affect the allocation of resources.

For **need** to have practical meaning it must be defined in a specific context. For example, **normative need** compares health indicators to a desired standard (e.g., a *Healthy People 2010* objective); **perceived need** asks potential consumers what issues are problematic; **expressed need**, sometimes known as utilization, is the number of people who actually seek a service; and **relative need** concerns the equity of services (e.g., comparing state oral health status with a region or another state).

Needs assessment in the health field is not a one-dimensional, tidy package of rules and procedures, but rather a "work in progress." There are many definitions as well as several general approaches for assessing needs. Some experts even substitute the term "problem" for "need" (which suggests the lack of something) because many problems are quantifiable, while others avoid the term "problem" because of its negative connotation.

As used in this model, **needs assessment** is a process that seeks to identify: (1) the extent and types of existing and potential problems in a community, (2) the current system of services available and (3) the extent of unmet needs, underutilized resources or shortcomings of the service delivery system. Needs assessment is not an end in itself, but the initial step in the development of a comprehensive program plan (Figure 2). The information gained from this preliminary step will then be used to plan appropriate systems and services. When used effectively, needs assessment serves to integrate information about health status, the existing health system and health resources.

Figure 2
Program Plan Cycle



Needs assessment is not an end in itself, but the initial step in the development of a comprehensive program plan.

Needs assessment relies on a systematic data collection and analysis process translated into an action plan. Once a problem is identified, the program manager (e.g., the state or local dental director) should relate it to those who make resource allocation decisions. The importance of setting priorities among programs is critical. Since resources are limited, public oral health programs generally cannot investigate all potential oral health problems. Needs assessment provides information to help decision makers know which problems are the most critical. While needs assessment addresses many important issues, it is not a hard science. Some types of need, especially those with qualitative dimensions, are difficult to pinpoint, and subject to shift in scale over time. What may be a current high priority may not be so in the future. This becomes particularly evident in written questionnaires or telephone polling.

When undertaking a needs assessment, it is important to use methods that will identify individuals or groups of individuals who are at high risk for poor health. Ideally, resources will then be targeted to 'populations' currently at risk rather than simply to established programs or to 'localities' with a past history of high incidence or prevalence of disease.

If carried out properly, needs assessment will help to educate the community about the importance of oral health. Incorporating community leaders and potential consumers of oral health services into the planning process helps establish the basis for "ownership" of a resulting program plan. And, of course, the information obtained can be

useful in justifying existing funds and/or program expansion. Furthermore, needs assessment responds to the public's increasing demand for accountability in the allocation of limited resources.

The needs assessment process can foster constituency building.

HISTORY OF ORAL HEALTH IN MCH AND OTHER HEALTH NEEDS ASSESSMENT

Staffs and resources in state and local² oral health programs vary greatly, with some having no oral health programs at all. In some states and many localities, oral health programs are linked to maternal and child health services.

Many oral health programs are unable to document, demonstrate or evaluate their effectiveness because of lack of data. For instance, little is known about the oral condition of women of childbearing age, particularly those who are not gainfully employed; children younger than five years of age; and children with special health care needs. Clearly, local, state and national programs must use the needs assessment process to establish strong preventive and primary oral health care systems integrated with other health services.

The 1989 amendments to the Title V MCH Block Grant legislation (OBRA 89, PL 101-239) required that needs assessment and planning be integrated into annual state applications. In addition, HRSA designated an oral health objective (to increase sealant prevalence among 8- and 14- year-old children) among the National MCH Objectives, drawn from Healthy People objectives. States are **required** to adopt or adapt all of the national objectives in their Title V MCH Block Grant applications/state MCH plans and, each year,

² The term "local" includes the county level as well as city or other municipalities. Health departments and other community agencies (e.g., community health centers) are examples of local agencies.

to report on progress toward accomplishing them. Additional oral health objectives may be included in state applications as guided by state and locally identified needs.

In the years immediately following the changes brought about by the OBRA 89 amendments to the Title V legislation, a review of several MCH Block Grant applications suggested that little, if any, oral health needs assessment was being conducted and reported by the states. When an oral health needs assessment (or a plan for assessment) appeared in an MCH Block Grant application, it generally was limited to school-age children and adolescents. Most often, oral health plans related only to the sealant objective included in the National MCH Objectives.

State and local agencies must collaborate on periodic needs assessment to keep a pulse on the population they serve.

Because of sampling design, existing national studies cannot adequately identify specific state and local populations with a high prevalence of oral diseases. Therefore, states must find ways to determine the oral health needs of their citizens and, at the same time, direct preventive and therapeutic programs to respond to those needs.

Traditionally, oral health needs assessments have been freestanding rather than appearing within the context of an interdisciplinary approach. There are advantages to both strategies. A freestanding oral health survey is likely to provide more detailed information; whereas, within a comprehensive needs assessment, each health issue can receive only limited attention. But, if oral health is included as part of an MCH or community needs assessment, it fosters its integration with other general health services and offers perspective on oral health needs.

Some state and local dental programs have conducted and documented well-designed oral health needs assessments, while others have been intimidated by data collection and analysis. By using the Seven-Step model, you can collect oral health data in a manner consistent with your particular resources and expertise.