



# *Oral, Eye and Foot Complications of Diabetes*

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## Focus Groups – Diabetes and Oral Complications

**Prepared for:**

Division of Diabetes Translation  
Programs Development Branch  
Centers for Disease Control and Prevention

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## **EXECUTIVE SUMMARY**

Diabetes is one of the most burdensome and costly chronic diseases of our time. In the United States, an estimated seventeen million people have diabetes and more than three quarters of a million people are newly diagnosed with diabetes each year.<sup>1</sup> It is a condition in which the body is unable to either produce or use the hormone insulin, leading to elevated blood sugar levels and potentially serious complications. These complications are a significant cause of morbidity and mortality and are associated with the damage or failure of various organs such as the eyes, kidneys, and nerves. Poor glycemic control can lead to heart disease, stroke, blindness, kidney disease, amputations, and oral disease.

The Centers for Disease Control and Prevention (CDC) is dedicated to eliminating the preventable burden of diabetes in the United States. The Division of Diabetes Translation (DDT) works to achieve this mission by combining support for public health-oriented diabetes prevention and control programs (DCPs) with efforts to translate diabetes research findings into widespread clinical and public health practice. Under contract to CDC, ORC Macro conducted a literature review and an environmental scan regarding oral complications of diabetes. Information collected from the literature review and environmental scan suggested specific audience segments on which to focus in further formative research. For more information on the literature review and the environmental scan, see reports entitled *Literature Review of Oral, Eye and Foot Complications of Diabetes* (April, 2001) and *Environmental Scan for Oral Complications of Diabetes* (April, 2001).

As a result of these activities, CDC determined that focus groups and in-depth interviews should be conducted with an emphasis on African Americans with diabetes and the health professionals caring for these individuals. In this effort, it was critical to solicit information from health professionals who not only have a stake in disseminating the potential materials developed by CDC, but also play a significant role in preventing and treating oral complications of diabetes in African Americans. With this in mind, 4 focus groups were conducted with certified diabetes educators (CDEs), registered dental hygienists, and 8 in-depth interviews were conducted with other important stakeholders addressing oral complications of diabetes, such as practicing dentists (with over 50% of their practice being with African American patients), a representative from a diabetes program of a state health department, and a representative from CDC's National Diabetes Education Program.

### **Key Findings Relevant to Program and/or Intervention Planning**

Several important findings have emerged as a result of this formative research. This information will assist CDC in developing communication concepts and materials addressing oral complication of diabetes with the African American population. A selection of these findings follows.

## **Role of CDC**

Participants envision CDC as a strong organization with which to collaborate in the effort to educate African Americans about oral complications of diabetes. Nevertheless, participants believed that CDC should take a more active approach in addressing oral complications of diabetes; that efforts were needed in increasing access to dental care and developing education in this area.

Specifically, participants believed that CDC should become a more visible stakeholder within the dental community; CDC should be more aggressive in disseminating data regarding the link between diabetes and oral health. Specifically, it was suggested that CDC develop a campaign focusing on “the three D’s” – diet, diabetes, and dental care.

Finally, participants felt that CDC should take more of a leadership role in disseminating, if not creating and developing, no-cost educational information about diabetes and oral complications for both African American patients with diabetes and for the diabetes care professionals that treat them.

## **Importance of Partnerships and Collaboration**

Participants believed that every stakeholder trying to eliminate the complications of diabetes (members of the diabetes care team) has a role in improving and promoting the oral health of patients with diabetes. Participants felt that many stakeholders can participate in a continuous quality-improvement cycle; a series of steps designed to enhance processes leading to improved patient and program outcomes at the state level and practice level.

Specifically, participants spoke of the merit of programs that involve partnerships between minority faith- and community-based organizations and health care facilities in a collaborative effort that specifically addresses the cultural needs of the African American population. Churches, health fairs, and community centers were repeatedly mentioned as places/opportunities to effectively reach this population in the effort to reduce the effects of diabetes complications.

In addition to CDC, participants recognized and recommended the American Dental Association and the American Diabetes Association as key organizations to partner with in any collaborative effort.

## **Content-Specific Knowledge, Attitudes, Beliefs, and Behaviors**

### ***Knowledge***

Participants stated that they are knowledgeable about the importance of nutrition/diet and exercise in prevention of diabetes and the delay of complications. They also stated that they regularly emphasize several self-management strategies with their patients including blood glucose control, brushing and flossing of the teeth, and routine dental exams for prevention of oral complications.

### ***Attitudes***

Participants noted that it is essential to develop a rapport, or trusting relationship, with African Americans with diabetes in order for these patients to be receptive to any educational messages provided.

Certified diabetes educators believed that it is easier for them to address eye and foot complications than oral complications of diabetes with their patients because patients are more concerned about their eyes and feet and more receptive to messages of preventing blindness and amputation. Similarly, registered dental hygienists believed that patients viewed eye and foot complications of diabetes as being a more serious threat to health compared with oral complications.

Overall, participants felt that patients perceive of losing their teeth as a natural part of the aging process. They believed that patients may not be motivated to prevent oral complications of diabetes and that patients believe they will lose their teeth regardless of their actions.

### ***Beliefs***

Participants believed that every member of the diabetes care team, from medical to dental professionals, has a role in improving and promoting healthy behaviors and in supporting the patient's diabetes care management.

Indeed, participants felt very strongly that it is their duty and moral obligation to address issues of concern with African Americans with diabetes. Many mentioned that the disease has affected them or their parents, relatives, or close friends in different ways.

Also, participants felt that it is easier for patients to prevent oral complications of diabetes than to prevent eye or foot complications. They believed that patients are less likely to seek dental care when experiencing oral complications than they are to seek medical care when they are experiencing other complications of diabetes. It was noted that patients view dental care as a luxury item and a service that they would not typically seek out.

Finally, participants expressed very strong convictions regarding what they perceive as barriers or challenges facing their patients in relation to diabetes care: lack of adequate access to services and information about diabetes, competing demands within a household, low socioeconomic status, and external locus of control and fatalism surrounding diabetes.

### ***Behaviors***

Participants felt that, with oral complications, they are able to provide specific instructions for prevention that can be easily implemented by patients such as brushing and flossing the teeth. A few participants spoke of their current efforts in providing information to patients about oral complications of diabetes; many participants expressed their willingness to gather more information on complications of diabetes via several avenues (Internet searches, calling information 800-numbers, requesting materials, participating in seminars or CME-credit activities, etc.).

## **Need for Specific Materials**

Participants believed that there was a great need for culturally appropriate materials addressing oral complications of diabetes in the African American population, as well as for all populations with diabetes.

Specifically, it was stated there is a great need for hands-on, graphical, educational materials that they could use with their clients. Participants stated that handouts with visual images and photos of a mouth impacted by oral complications of diabetes would be particularly helpful to them when attempting to educate their clients. These culturally-appropriate resources to educate African Americans with diabetes about oral complications can also include tools such as booklets and videos. These resources should be very visual and include many graphical depictions showing how diabetes can affect the mouth. Resources should also include minimal text and be written at an appropriate reading level. Moreover, it was indicated that political support for these resources and the availability of trained staff to develop them were essential to the dissemination of materials.

It was also recommended that the American Dental Hygienists' Association be involved in the development of materials, seminars and other programs focused on this issue. Participants felt that it would be very beneficial to include information about oral complications in newsletters or professional journals received by dental hygienists

## **Obstacles in Working with Various Health Care Providers**

Overall, participants expressed frustration with their professional relationships with various health care providers, in particular with the diabetes care team. Participants most often referred to primary care physicians' failure to reinforce the health messages about oral complications of diabetes.

In particular, registered dental hygienists expressed frustration with their relationship with dentists. They referred to dentists' lack of reinforcement of the health messages about oral complications of diabetes.

In sum, participants expressed concern about the lack of cohesiveness and collaboration among the medical and dental communities. They believed that a more comprehensive approach to care is needed in which dental care is considered part of overall health care.

## **Emphasis on Prevention, Self-management, and Patient Empowerment**

A consistent prevention theme can be identified throughout the data collection in this formative research across audiences, campaigns, programs, and materials developed for people with diabetes. More and more, emphasis is placed on prevention of diabetes and its related complications, in particular as a result of the newly published, substantial evidence that type 2 diabetes can be prevented or delayed.

As such, Diabetes Self-Management Education is the cornerstone of care for all individuals with diabetes who want to achieve successful health-related outcomes. Self-management implies “taking charge” of diabetes by following nutrition guidelines, engaging in regular exercise, taking medication, undertaking regular check ups and examinations, and aiming for regular communication with the diabetes care team. Central to the concept of self-management is the concept of patient empowerment. In working with the health care provider as a partner or collaborator, patients are afforded the best possible results given the resources available to them. However, education is necessary for patients to take on this role.

## **Recommendations for Program and/or Intervention Planning**

Stemming from the findings of the focus groups and in-depth interviews, recommendations listed in this report are intended to guide future activities toward message development and dissemination of information regarding oral complications of diabetes. A selection of these recommendations follows. CDC should:

- Take a more active approach in addressing oral complications of diabetes, as it has shown in addressing the foot and eye complications (currently, oral health is not one of the National Objectives for the DDT and their agreements with DPCPs).
- Become a more visible stakeholder within the dental care community.
- Prepare to manage the perceived lack of cohesiveness and collaboration among the medical and dental care communities, in order to make future efforts actionable. Participants believed that these medical organizations understand the need to address oral health as part of overall health.
- Create or support programs that involve partnerships between minority faith- and community-based organizations and health care facilities in a collaborative effort that specifically addresses the cultural needs of the African American population.
- Continue to direct efforts to support activities targeting prevention of diabetes and its related complications, in particular as a result of the newly published, substantial evidence that type 2 diabetes can be prevented or delayed.
- Take more of a leadership role in creating, developing or at a minimum, in disseminating no-cost educational information about diabetes and oral complications.
- Target the need for culturally appropriate materials addressing oral complications of diabetes in the African American population. Materials should be hands-on, with visual depictions of instructed self-management behaviors so that oral health professionals can use them with their clients.



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