

**National Institute of Dental and Craniofacial Research  
Submission for the  
NIH Comprehensive Strategic Plan and Budget  
To Reduce and Ultimately Eliminate Health Disparities**

**NIDCR Mission**

The mission of the National Institute of Dental and Craniofacial Research (NIDCR) is to improve and promote oral, dental and craniofacial health through research and research training.

**Overview of the Institute's Strategy for Addressing Health Disparities**

The NIDCR health disparities plan recognizes that eliminating oral health disparities requires a comprehensive and systematic approach to understand and address the multiple and often complex factors that may determine oral health. While the research challenges relate to understanding the causes of health disparities, elucidating risk factors, facilitating means of risk reduction, and enhancing care delivery and health promotion, attention also must be paid to addressing the lack of diversity in the scientific workforce and to improving educational and outreach activities to transfer health information to the communities of interest. Thus, the plan emphasizes three major areas: research, research training, and health communication. The plan builds on the investments of NIDCR since the early 1990's to enhance research opportunities for underrepresented minorities and on more than 50 years of research to understand, treat and prevent oral diseases. Recognizing the complexity and wealth of factors that may contribute to disparities in oral health, and the considerable diversity between and within the affected communities, the NIDCR strategy to eliminate health disparities is viewed as an incremental long-term approach that involves collaborations with many organizations and institutions that constitute the oral health community – researchers, educators, clinicians, academic institutions, patient advocates, and professional and voluntary groups.

**Oversight and Input**

The health disparities plan reflects input received from the NIDCR advisory council and the public and addresses the research necessary to achieve several national oral health objectives in *Healthy People 2010* and the major findings from the Surgeon General's Report on Oral Health <http://www.nidr.nih.gov/sgr/oralhealth.asp>. A draft plan was placed on the NIDCR home page in April 2000 for public comment. In addition, professional and voluntary organizations were sent copies and asked for input. The September 2000 meeting of the National Advisory Dental and Craniofacial Research Council (NADCR) was designed to gain input from other federal agencies and professional organizations and to further refine the draft plan. Working groups that convened during the NADCR Council considered four specific questions: a) What specific opportunities can your group identify for implementing the plan? (b) What are the strengths and weaknesses of the plan, and what changes would you make to the plan? (c) How can we better disseminate the plan and stimulate and expand interest in its implementation? (d) What suggestions do you have for leveraging efforts involving NIDCR's plan and those of other organizations or agencies?

After the release of the final plan in March 2001, presentations were made to professional organizations such as the American Association of Public Health Dentistry and at the meeting of the NIDCR Patient Advocates Forum. As part of the implementation plan that the Institute has developed to address its health disparities agenda, review of the plan will include advice and guidance by a subcommittee of the National Advisory Dental and Craniofacial Research Council (NADCRC), which will include input from other agencies, professional and voluntary organizations, and the public.

***Initiative I: Research to Eliminate Health Disparities in Oral Infections, Oral and Pharyngeal Cancer and Craniofacial Injuries and Disorders***

**GOAL 1: Eliminate Health Disparities in Oral Infections and Their Complications**

The two most prevalent oral diseases are bacterial infections: dental caries, associated with infection by bacteria which produce acids that attack the hard tissues of the teeth, and periodontal diseases that are associated with a number of bacterial species whose by-products can destroy the soft tissue and bones that support the teeth.

**Objective I: Eliminate Health Disparities in Dental Caries and Complications**

**Rationale**

Dental caries is a late manifestation of a progressive disease process—left untreated it results in the destruction of the tooth, eventually causing pain, acute infection and costly treatment. Tooth decay is the most common chronic childhood disease—5 times more common than asthma and 7 times more common than hay fever. Over 50 percent of all 5- to 9-year-old children in America have at least one filled or decayed tooth; that proportion increases to 78 percent among 17-year-olds. Despite considerable progress in the prevention and treatment of dental caries, it is a widespread problem especially among the most vulnerable Americans: low-income children and adults, certain racial and minority groups, and the elderly. While dental caries is a disease that can be prevented and treated, it also represents a disease with important health and behavioral sequelae that extend well beyond the mouth. For example, American Indian youngsters with extensive caries avoid smiling because they view themselves unattractive and may become isolated from their peers because of the appearance of diseased teeth. A similar pattern is observed in adults. In addition, a severe form of dental caries in infants and toddlers, known as Early Childhood Caries (ECC), has been associated with diminished growth in toddlers and compromised nutrition. ECC is more likely to affect American Indian and Mexican American infants and toddlers.

**The Disparities**

- ❑ America's youngest and poorest children<sup>1</sup> have almost 5 times as much tooth decay as children of higher income families.
- ❑ Nearly twice as many low-SES children 2-9 years of age have at least three decayed or filled primary teeth compared to higher SES children.

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<sup>1</sup> age 2-5 and living below the poverty level compared to children of families living at >300% poverty.

- ❑ For low-income children age 2-5 with decay, almost 80 percent of it remains untreated.
- ❑ The rate of untreated dental caries is twice as high among low SES children than for those at higher income levels at ages ranging through adolescence. A higher proportion of poor non-Hispanic black children and Mexican American children ages 2-9 have untreated primary teeth compared to poor non-Hispanic whites – the disparities are even greater when comparing non-poor minority children to white children of similar age and income status.
- ❑ In adults, the proportion of untreated dental caries is higher among the poor than the non-poor and higher among non-Hispanic blacks and Mexican Americans compared to non-Hispanic whites.

**Action Plan** – see page 4

***Objective II: Eliminate Health Disparities in Periodontal Diseases and Complications***

**Rationale**

Most adults show signs of periodontal or gingival diseases. About 14 percent of adults age 45- to 54- and 23 percent of 65- to 74-year-olds have severe periodontal disease which puts them at risk for losing their teeth. At all ages, people at the lowest SES levels have more severe periodontal disease. Total tooth loss, or edentulism varies considerably according to income, race/ethnicity, and across states in the United States. Edentulism may be the end stage of dental caries and periodontal disease as well as injury. Tooth loss and edentulism have physical, emotional and economic consequences and include poor nutrition, speech problems, and negative self-image that can affect one's ability to gain employment. There are also other emerging consequences of periodontal diseases that warrant increased investigations. A number of studies indicate that mothers of low-birth-weight infants born as the result of preterm labor or premature rupture of membranes tend to have more severe periodontal disease than mothers with normal birth weight infants. Logistic regression models have demonstrated a sevenfold increase in risk of low birth weight associated with severe periodontal diseases even when the analyses controlled for other known risk factors (e.g., smoking, race, alcohol use, age, nutrition, and genito-urinary tract infections).

In addition, recent studies show an association between periodontitis and atherosclerosis, stroke, respiratory diseases, and diabetes that warrant further research. The disparity in the incidence and severity of periodontal diseases in lower SES and racial/ethnic minorities puts individuals in these groups at greater risk for tooth loss as well as grave systemic consequences such as stroke and atherosclerosis. The NIDCR health disparities initiative will address both the direct and systemic aspects of periodontal disease.

**The Disparities**

- ❑ At all ages people at the lowest SES levels have more severe periodontal disease. That translates to 36 percent of adults in the lower SES group 75 years old and over. At every age, the proportion of low-income individuals with severe disease is at least three times that for individuals in the highest income groups.
- ❑ A higher percentage of the poor are edentulous (toothless), a condition that may be the end stage of dental caries or periodontal disease, and also injury.
- ❑ A higher percentage of non-Hispanic Black individuals at each age group exhibit at least

one tooth site with severe periodontal attachment loss compared to other groups.

- Gingivitis, as measured by gingival bleeding, is more evident among Mexican-Americans than among non-Hispanic African Americans and non-Hispanic whites.
- A form of severe and rapidly progressive generalized periodontitis can occur in adolescents and adults under 35 years. Data indicate that the prevalence of early-onset periodontitis in 13- to 17-year-olds occurs twice as often in African Americans than in Hispanics and ten times more frequently than in whites.

### **Action Plan for Goal 1 (Objectives 1 and 2)**

1. Establish Specialized Centers for Research to Reduce Oral Health Disparities (CRROHD) (<http://grants.nih.gov/grants/guide/rfa-files/RFA-DE-99-003.html>). These Centers will support research to understand underlying factors involved in oral health disparities, design interventions to reduce such disparities, develop and strengthen research capacity particularly for scientists in underrepresented groups, and evaluate these efforts.

Timeline: FY 2001 - issue notice of award  
FY 2001-FY 2007 – fund grants

2. Develop grants to provide resources for the development of institutional capacity to conduct research on health disparities and for the support of planning and pilot studies. One initiative will focus on research infrastructure development for minority dental schools enabling them to recruit research personnel, enhance the necessary infrastructure for research and research training, and create/enhance intra-and inter-institutional links and agreements for collaborative research on health disparities. The other two include a focus on the support of planning and pilot studies to address health disparities in specific populations that are underrepresented in NIDCR's portfolio and for whom significant health disparities have been identified. Three RFA's are planned as part of this effort which include:

- a) Research Infrastructure and Capacity Building for Minority-Serving Dental Institutions to Reduce Oral Health Disparities
- b) Pilot Grants for Research to Reduce Oral Health Disparities and
- c) Planning Grants for Research to Prevent or Reduce Oral Health Disparities.

Timeline: FY 2002- Develop new RFAs  
FY 2002-FY 2005 fund grants

3. Expand existing studies and encourage new research designed to document oral health disparities, understand the basis for disparities, and prevent or eliminate differences among groups that show disparities in oral health status. Such studies may include research on:

- a) Microbial genomics of cariogenic organisms
- b) Transmission of bacteria involved in caries and periodontal diseases
- c) Active vaccines for caries and periodontal diseases and passive vaccines for caries
- d) Risk assessment strategies and disease management based on risk
- e) The identification of human genetic variations via single nucleotide polymorphisms

- f) The efficacy and cost-effectiveness of caries-prevention based on individual risk
- g) Genetic/environmental biomarkers for risk factors and disease progression
- h) Local chemotherapeutic agents to treat periodontal diseases via clinical trials
- i) Guided tissue regeneration to treat periodontal diseases
- j) Biomimetics and tissue engineering to develop biocompatible materials
- k) The interactions between infectious agents, host predisposition and susceptibility factors, and the environment in the pathogenesis of dental caries among populations exhibiting oral health disparities (*Model Complex Diseases*).

Timeline: FY 2002-2006 – Develop new program opportunities as needed

FY 2002-2006 – Fund projects related to this goal

## **Goal 2: Eliminate health disparities in oral and pharyngeal cancers**

**Rationale:** Oral and pharyngeal cancers are one of the most debilitating and disfiguring of all malignancies. Worse, the currently available therapies (surgery, radiation, and chemotherapy) often exacerbate disfigurement and loss of function (e.g., speech, taste, swallowing, and vision). Oral or pharyngeal cancer will be diagnosed in an estimated 30,000 Americans this year and will cause more than 8,000 deaths. Most disturbing about oral and pharyngeal cancer is the survival rate. In the United States it is approximately 50 percent, a statistic that has not changed appreciably over the past 20 years. Oral cancer is unusual in that it carries a high risk of second primary tumors. One out of five patients with oral cancer develop a second primary. The heightened risk can last 5-10 years, sometimes longer. Until researchers learn more about this phenomenon, second primary tumors will remain a specter faced by all oral cancer patients. As with all cancers, there are health disparities by gender, race, and other factors. These differences may reflect host susceptibility factors as well as those related to health care utilization patterns.

### **The Disparities**

- ❑ The incidence rate of oral and pharyngeal cancers in males is about three times higher than females (15.8 per 100,000 compared to 5.8 per 100,000).
- ❑ The average age of diagnosis for African Americans is about 10 years younger than that for whites; African American men have a much poorer five-year survival rate for oropharyngeal cancer than whites (31 percent vs. 55 percent)
- ❑ African Americans tend to have a higher proportion of pharyngeal versus oral cavity cancer than whites. Pharyngeal cancers are more difficult to diagnose.
- ❑ Newly diagnosed black males are half as likely to be diagnosed with oral and pharyngeal cancer at the local stage (19 percent) as their white male counterparts (38 percent). The five-year survival rate for those diagnosed at advanced stages (22 percent) is little more than one fourth the survival rate for those diagnosed at early stages (81 percent).
- ❑ Between 1992 and 1996 the mortality rate for oral and pharyngeal cancers was twice as high for blacks (4.7 per 100,000) than for whites (2.5 per 100,000), and 2.3 times higher for black males (8.4 per 100,000) than for white males (3.7 per 100,000).
- ❑ Adults with less than 12 years of education (8.8 percent) were 2.5 times less likely than those with 13 or more years of schooling (21.8 percent) to ever have had an oral cancer examination; also, blacks (10.3 percent) were 1.5 times less likely to have had an oral cancer examination than whites (15.5 percent).

## Action Plan for Goal 2

1. Fund Exploratory/Developmental Grants (R21) for State Models for Oral Cancer Prevention and Early Detection. This is the first part of a two-phase initiative to design and implement future interventions to prevent and reduce oral cancer morbidity and mortality in the United States. The first part of the initiative (Phase I) will fund the needs assessment for a particular state; and Phase II will fund the design, implementation and evaluation of interventions based on results from Phase I. (<http://grants.nih.gov/grants/guide/rfa-files/RFA-DE-00-005.html>)  
Timeline: award grants for Phase I FY 2001  
FY 2001-2003 fund grants for Phase I
2. Collaborate with NCI to establish a network of dentists, oral surgeons, oral pathologists, and oncologists to identify and obtain samples of pre-malignant lesions. This effort has the potential to lead to the identification of early lesions and diagnosis at a stage when the progression of pre-malignancy to malignancy may be abrogated.  
Timeline: TBD.
3. Support an education and community outreach project within the University of Pittsburgh Comprehensive Oral Health Center of Discovery on oral cancer. A part of this program is directed toward populations at risk for oral cancer, particularly African Americans (<http://www.upci.upmc.edu/internet/occ/center/community.html>)  
Timeline: FY 2002 – support outreach activities as part of the Center project  
FY 2004 - complete outreach activities
4. NIDCR is collaborating with the state of Maryland on a State Model of Oral Pharyngeal Cancer Prevention and Early Detection Initiative. Phase I of this initiative included an epidemiological assessment of oral cancer in the state of Maryland; a quantitative and qualitative assessment of the knowledge, opinion and practices of health care providers and the public. Based on the findings from Phase I, interventions for health care providers are being pilot tested as part of Phase II. Another activity planned for Phase II is the Maryland Oral Cancer Awareness Week that took place from September 16 to September 26 of 2001.  
Timeline: ongoing
5. Collaborate with NCI to fund a Specialized Program of Research Excellence (SPORE) on head and neck cancers, designed to support research on new approaches for early detection, and improved diagnosis, treatment and prevention of cancers.  
Timeline: FY 2002 – issue grant award  
FY 2002-2006 – fund project

### **Goal 3: Eliminate Health Disparities in Craniofacial Injuries and Disorders**

#### **Rationale**

Injuries are a major public health problem, outranking cancer and heart disease as a leading cause of death in some age groups. There are 20 million visits to emergency departments for craniofacial injuries every year, and close to 6 million orofacial injuries are treated by dentists in private offices. Craniofacial injuries in particular are a leading cause of mortality; and when they do not kill, can cause devastating disfigurement and loss of function. The leading causes of oral and craniofacial injuries are sports, violence, falls, and motor vehicle collisions. Domestic violence includes child abuse, spousal and elder abuse, and abuse of the disabled. Sadly, intentional injuries—attacks of violence—commonly affect the craniofacial tissues. Craniofacial disorders are a highly diverse group of disorders that include oral clefts, malformations of the skull, face, or jaws, misshapen or missing teeth, and a host of other facial traits that accompany complex syndromes. Three-fourths of all malformations seen at birth fall under the category of “craniofacial,” affecting the head, face or neck. These malformations are particularly devastating to the persons affected and their families and are typically extremely costly to treat.

#### **The Disparities**

- ❑ Persons 24 years or younger accounted for 47.6 percent of craniofacial injury visits (CFI), but represented only 36.3 percent of the population in 1993-94.
- ❑ Males accounted for 58.3 percent of CFI visits, but make up only 48.7 percent of the population.
- ❑ Blacks accounted for more CFI visits than what might be expected given their share in the population.
- ❑ The most common craniofacial malformation – cleft lip with or without cleft palate—occurs in 1.2 per 1,000 births. The incidence of oral clefts is higher among North American Indians (3.7 per 1,000 births) and females and lower among blacks (0.5 per 1,000 live births).

#### **Action Plan:**

1. NIDCR in collaboration with CDC and other agencies as appropriate will encourage new studies of craniofacial injuries, including injury prevention programs targeted to the public to promote wearing protective head and face gear in sports and in operating riding vehicles.  
Timeline: TBD
2. NIDCR in collaboration with NIGMS will encourage molecular biological and clinical research on scar formation following repair of facial injury and/or surgery involving oral cancers in various minority groups (e.g., keloids).  
Timeline: TBD

## **Performance and Outcome Measures for Goals of Initiative I**

**Performance measures:** performance will be measured by assessing increases in: (1) the research portfolio supporting research in the specific areas where disparities exist; (2) the establishment of collaborative relationships with other agencies; and (3) the development of community outreach initiatives.

**Outcome measures:** we plan to use conventional scientific metrics such as publications and citations, stories of discovery, and science advances to measure the outcomes of the research initiatives. In addition, we plan to conduct comprehensive program evaluations over our entire health disparities portfolio covering the period of 1999-2006. These measures may not fully assess the outcomes and impact of our health disparities research given that the impact of new findings in many cases may not be known or measurable in the near-term. As data become available, we plan to assess these longer-term outcomes.

### ***Initiative II: Enhance Research Capacity***

To build added capacity to conduct health disparities research, the Institute will enhance its training and career development programs to encourage individuals from racial and ethnic minorities and individuals from disadvantaged backgrounds to enter science careers and retain them in their career paths. NIDCR also will act to increase participation of members of these population subgroups in clinical studies and trials.

#### **Goal 1: Enhance Research Capacity through Training and Career Development**

##### **Rationale**

NIDCR has a long-standing commitment to train and support researchers that reflect the diversity of the United States. In 1999, NIDCR convened a Blue Ribbon Panel to identify the research opportunities for the 21st century and the competencies that researchers in the area of craniofacial, oral, and dental diseases need in order to address these opportunities. Among the issues identified by the panel is the need to use training programs to increase the diversity of the workforce and to expand training opportunities at all stages of career development. ([http://www.nidr.nih.gov/research/blueribbon/career\\_BRP.htm](http://www.nidr.nih.gov/research/blueribbon/career_BRP.htm)).

##### **Ongoing Actions**

1. A part of the initiative for Centers for Research to Reduce Oral Health Disparities, each Center is expected to develop plans to expand training and career development opportunities for scientists in underrepresented groups. Each center is required to involve a partnership with one or more minority institutions (e.g., Historically Black Colleges and Universities, Hispanic Serving Institutions, Tribal Colleges and Universities).



2. NIDCR requires that all institutional training programs funded through the T or K mechanisms (T32, K12) include a comprehensive approach to recruit candidates from all population groups, including those who have not been traditionally part of the scientific workforce.
3. NIDCR is providing administrative supplements to five of its Institutional Short-Term Training Program grantees (T35) to enable them to offer summer research training experiences to dental students from Meharry, Howard University and the University of Puerto Rico.

### **Action Plan**

1. NIDCR will encourage its T-35 programs to apply for competitive supplements to support an increase in the number of research positions for dental students from underrepresented minority groups.  
Timeline: TBD
2. Create partnerships between minority institutions and NIDCR-funded research centers and grantees studying diseases that disproportionately affect minorities. A possible strategy would be a request for planning grants to help researchers and faculty in minority-serving institutions collaborate with researchers and faculty in designated Centers such as the Centers for Research to Reduce Oral Health Disparities to plan and implement projects that will lead to the submission of specific grant applications.  
Timeline: TBD

### **Goal 2: Ensure Appropriate Representation in Clinical Trials through Improved Inclusion Policies/Activities**

#### Rationale

The inclusion of individuals from all racial/ethnic, gender, and age groups in clinical trials is critical to the development of effective interventions for improving health. The objectives are to increase enrollment and retention of racial and ethnic minorities and the underserved in studies conducted at NIDCR and in NIDCR-funded clinical trials.

### **Action Plan**

1. Identify, compile, and disseminate proven communication methods and materials (from other areas – e.g. diabetes, cancer, heart disease) for recruiting and retaining participants from minority and underserved communities to aid researchers in their recruitment efforts.  
Timeline: FY 2003
2. Identify gaps in research on effectiveness of methods and materials for recruiting and retaining participants from minority and underserved communities. Possible mechanism would be through the issuance of a PA for pilot studies to gather information that will lead to better understanding of the reasons for patient's refusal to

enroll in clinical studies, and the factors that influence providers decisions to refer patients to clinical trials.

Timeline: FY 2004

3. Establish and strengthen collaboration with allied groups (e.g., health voluntary organizations; minority organizations) to increase awareness by minority groups and the underserved of the purpose and value of oral health-related clinical trials, and, as appropriate, provide information concerning inclusion criteria, contact persons, informed consent, and so on, in order to increase their recruitment and retention as volunteer trial participants.

Timeline: FY 2004.

## **Performance and Outcome Measures for Initiative II**

**Performance Measures:** performance will be measured by an increase in partnerships with minority institutions and collaborations between dental schools and community groups.

**Outcome Measures:** we plan to use a variety of methods to assess outcomes, such as the proportion of research grants to individuals from underrepresented groups, increased enrollment of minorities in clinical trials, and increased proportion of minorities in training programs.

## ***Initiative III: Information Dissemination***

As the NIDCR investment in research on health disparities increases, so does the responsibility to assure that scientific knowledge is used to benefit underserved communities. This proposed initiative reflects NIDCR's recognition that evidence-based health communications and information dissemination can and should be used, alone or, in support of larger initiatives to bridge the gap between scientific discovery and reducing health disparities. This initiative employs a range of strategies for transferring information from the research community to multiple audiences, making use of extensive collaborations that exist across the components of NIH and with prospective partners in industry, academia, and the community at large. Emphasis will be placed on promoting the use of evidence-based approaches, i.e., identifying those personal behaviors and clinical practices shown to be the most appropriate and effective in improving health and reducing health disparities. Toward this end, NIDCR will collaborate with the Agency for Healthcare Research and Quality to support the development of systematic reviews of the literature and dissemination of evidence to clinicians; and work with other federal partners, professional organizations, societies, and voluntary organizations to promote the use of evidence emanating from the scientific literature in clinical decision-making.

## **Rationale for Goals 1-3**

Although many oral diseases and conditions can be prevented or controlled, large knowledge gaps among providers and particularly in underserved communities remain significant challenges. There is frequently a large gap between the publication of clinical research findings and related science and health information and their adoption and use by diverse consumers,

people who have access to the communities of interest such as educators, health care providers, community groups, businesses and institutions, as well as policy makers and public health officials. Clearly, we need to step up our efforts to determine, through well designed studies, the most effective means of reaching providers and consumers, with information emanating from research and to examine issues related to how they become aware of and use information. We also need to identify evidence-based communications strategies for addressing access, reimbursement, and other health care systems barriers that contribute to oral health disparities.

## **The Disparities**

- ❑ Qualitative research has shown that the public often views oral health as simply cosmetic and unrelated to overall health and quality of life. The public also tends to blame parents for children’s oral health problems, overlooking community and system solutions such as water fluoridation or improving access to dental care.
- ❑ Lack of public awareness among consumers about oral cancer represents a significant barrier to narrowing the gap for oral cancer incidence and mortality. For example, only 25 percent of U.S. adults could identify one sign of oral cancer and the knowledge gap is pervasive across race, ethnic groups and frequency of recent dental/medical visits.
- ❑ Data show that nearly 1/3 of U.S. dentists could not identify the two most common sites for malignant lesions, and less than half correctly identified the stage at which most oral cancer is diagnosed. There are also inconsistencies between dental hygienists' knowledge of risk factors for oral cancer and clinical performance.
- ❑ Particularly troubling are the disparities in the likelihood of having had an oral cancer examination, which can detect premalignant lesions or cancer at early stages. Hispanics (9.6%) and African Americans (10.3%) were less likely than non-Hispanics (16.0%) and whites (15.5%) to report that they had undergone an oral cancer examination.
- ❑ Gaps in knowledge among members of the general public have been identified with respect to oral health complications of diabetes, the appropriate use of fluoride and dental sealants, and about the most common signs of periodontal disease.

**Goal 1: Ensure the integration of science-based oral health messages and materials into existing federal health communication and education programs for racial/ethnic minorities and the underserved.**

## **Action Plan**

1. Collaborations with staff at other NIH components are expanding to integrate science-based oral health messages into materials and programs about other systemic diseases that have an oral health component. As a partner in NIDDK's National Diabetes Education Program, for example, NIDCR will work to provide information on the oral complications of diabetes to the national diabetes education program that includes a minority outreach initiative.  
Timeline: ongoing collaboration.
2. Develop and provide educational materials on oral health topics such as early childhood caries to programs such as the Administration for Children and Families' Head Start program and the USDA's Women, Infants, and Children program (WIC), which assist primarily minorities and the underserved.  
Timeline: ongoing collaboration.

**Goal 2: Expand outreach and promote partnerships with communities and institutions needed to disseminate culturally sensitive oral health communication and education programs.**

**Action Plan**

1. Establish and maintain ties with organizations engaged in science education. For example, NIDCR will collaborate with the Office of Science Education (OSE), NIH to disseminate a Science Curriculum Supplement for Grades 1-2. Part of the dissemination effort will target large school districts that have highly diverse and/or underserved student populations. Another collaboration with OSE involves the development of the NIH Virtual Mentor, a website for middle school, high school, and college students who may be interested in health science careers. One of the goals of the project is to increase the number of minorities and women interested in research and health science careers. The database would also assist parents, teachers, guidance counselors, health science professionals and others interested in mentoring a student. The website would include a career database with "virtual role models" including basic researchers, epidemiologists, physicians, dentists, nurses, dental hygienists, genetic counselors, and biomedical ethicists, among others.  
Timeline: begin dissemination of the curriculum in the first quarter of FY 2002. Site currently under development; various sections of the site will be pilot tested begin FY 2002.
2. Establish and maintain collaborations with state and local organizations and entities to increase awareness about oral health. For example, follow the Washington state and other state-based "Watch Your Mouth" campaigns for children's oral health to identify opportunities for future collaborations. The "Watch Your Mouth" campaign is based on communications research conducted by the FrameWorks Institute and funded in part by NIDCR to identify what messages, spokespeople, visuals and symbols help the public understand and prioritize oral health.  
Timeline: ongoing
3. Create and maintain partnerships with local community groups and organizations conducting educational efforts involving underserved local communities and groups such as African American, Hispanic and American Indians. Explore the feasibility of an outreach educational effort to organizations and groups in the Mt. Pleasant neighborhood of Washington D.C. to identify specific needs for culturally appropriate oral health education and information among Hispanic residents of the community.  
Timeline: begin planning phase 2<sup>nd</sup> quarter FY 2002.
4. Establish links with African American, Hispanic, Native American and Asian American health professional organizations to exchange information and promote participation of underrepresented minority members in biomedical research.  
Timeline: ongoing

**Goal 3: Ensure the development, collection, and distribution of proven oral health communication and education methods/materials for populations associated with health disparities to oral health education program planners**

**Action Plan**

1. Conduct in-depth interviews with persons at highest risk for oral cancer (i.e. tobacco users, heavy drinkers, persons without medical or dental insurance) to better understand what oral cancer prevention and detection messages and materials are likely to be most effective with this population.  
Timeline: award a contract via the NIH/OD Communications Task Order contract during the 3<sup>rd</sup> quarter of FY 2001; complete interviews during FY 2002.
2. Support *Communications Research on Public Perceptions of Children's Oral Health*. This project provides data that can be useful for groups and organizations engaged in efforts to increase awareness of the importance of children's oral health and to eliminate the disparities in oral health that persist among children in America. The project provides data on: a) how the public thinks about children's oral health, b) how different children's oral health messages affect public perceptions of the importance of oral health, and c) which entities should be involved in solving children's oral health problems and what messages, visuals, and symbols help the public understand and prioritize oral health. .  
Timeline: ongoing.
3. Support a research workshop on *Health Communication and Information Dissemination Research: Opportunities in Oral Health*. The purposes of the workshop are to encourage collaborations between health communications researchers and oral health researchers and to develop a research agenda for oral health communication research.  
Timeline: TBD
4. Collaborate with researchers within NIDCR's Centers for Research to Reduce Oral Health Disparities to integrate science-based oral health messages into materials and programs for racial/ethnic minorities and the underserved.  
Timeline: Office of Communications and Health Education staff will work with staff in the Division of Population and Health Promotion Sciences and the directors of the Health Disparities Centers to identify appropriate information during FY 2004 and FY 2005. Since the funding period for the Centers extends to FY 2007, this will be a long-term activity with potential products being developed and disseminated over the next 5-8 years.
5. Assess the extent to which information from NCI's *Consumer Profiling Database* and their *Health Information National Trends Survey (HINTS)* can help identify cancer information seeking practices, needs, and preferences for sources of information for underserved populations with respect to oral cancer. HINTS is a biennial, nationally representative survey of cancer seeking strategies and needs of the American public. Data from this survey can help direct cancer communication programs and

interventions. NCI plans to oversample underserved populations for the next survey to be conducted sometime during 2001.

Timeline: TBD

6. Explore the feasibility of providing a research supplement to the forthcoming NCI Centers for Excellence in Cancer Communications Research <http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-01-019.html>. This NCI initiative is a comprehensive strategy to address cancer risk communications including how to promote knowledge about, access to and use of cancer information for low literacy audiences. Supplemental funding would allow one of the centers to add, if feasible, a component relevant to head and neck cancer.

Timeline: TBD

7. Develop and distribute education and health information for special populations on selected oral health topics via the National Oral Health Information Clearinghouse contract.

Timeline: FY 2001 – FY 2005.

### **Performance and Outcome Measures for Initiative III**

**Performance Measures:** performance will be measured by an increase in: (1) the number of materials developed or adapted for minority populations, (2) linkages with minority organizations; (3) collaborative relationships with federal, state and local agencies to improve oral health communication to minority populations; and (4) research on communication methods that are effective for minority populations.

**Outcome Measures:** We plan to conduct evaluations of the quality and distribution of materials developed or adapted for minority populations.

NIDCR Health Disparities Budget  
(Dollars in Millions)

Institute / Center	FY 2002			FY 2003		
	Research	Infrastructure	Outreach	Research	Infrastructure	Outreach
NIDCR	\$20.50	\$1.00	\$0.20	\$22.00	\$1.00	\$0.20