Abstracts

Albert O. Adegbembo, BDS, DDPH[1], James L. Leake, DDS, DDPH, MSc, FRCD(C)[1], Patricia Main, BDS, DDPH, MSc, FRCD(C)[1,2], Herenia P. Lawrence, DDS MSc, PhD[1], Mary L. Chipman, BSc, MA[3,1]. [1]Faculty of Dentistry, University of Toronto, Ontario, [2]Regional Municipality of Durham, Ajax, ON, [2]Faculty of Medicine, University of Toronto, Ontario.*

DOES DENTAL INSURANCE STATUS INFLUENCE ORAL HEALTH STATUS OF INSTITUTIONALIZED OLDER ADULTS IN DURHAM, ONTARIO, CANADA?

Objective: To assess if long-term dental insurance affects oral health status of older adults. *Methods:* A cross-sectional survey in residents (N=788) of Durham's municipal Homes for the Aged. Self-perception of oral heath status was used to classify residents. The effect of dental insurance on oral health status was examined in a multiple logistic regression model. *Results:* Response rates for the personal interview was 64 percent. Interviewed residents were mostly female (77%) and the mean age was 83.1 (SD=8.8) years. Nearly half (44%) were dentate and 64.9 percent had never had dental insurance. One-fifth of those previously with dental insurance lost coverage on retirement. 18.5 percent reported very good or excellent oral health. This was significantly (P<.05) related to being dentate (OR=3.8), visiting the dentist within the last year (OR=2.5), not needing dental advice (OR=9.1), perceiving that older adults will have dental problems (OR=2.7), and the resident being the respondent for the interview (OR=2.7). The model likelihood ratio chi-square was 95.3 (P<.001). *Conclusions:* Dental insurance had no independent effect on self-reported oral health status in this older adult population.

Kavita P. Ahluwalia, DDS, MPH[1], David Albert, DDS, MPH[1], Jarvis Chan, DDS, PhD[2], Jovita Kerner, RDH, MS[3], Carol Kunzel, PhD[1], Sena Narendran, BDS, DrPH[2], Scott Presson[4], Claudia Vousden, RN, MPH[4], Steven Silverstein, DMD, MPH[3]. [1]Columbia University School of Dental and Oral Surgery, [2]University of Texas Health Science Center at Houston, [3]UCSF School of Dentistry, and [4]Centers for Disease Control and Prevention.*

AN ASSESSMENT OF FLUORIDE RECOMMENDATIONS DISSEMINATION METHODOLOGIES

An expert workgroup convened by the Centers for Disease Control and Prevention (CDC) has formulated recommendations for the use of fluoride for the prevention and management of dental caries in the United States. When used appropriately, fluoride is safe and effective in the primary and secondary prevention of dental caries. Recommendations are made in the areas of public health and clinical practice, self-care, consumer products industries and health agencies, and for further research. The recommendations endorse water fluoridation and appropriate use of fluoridated toothpaste for all persons. Use of other fluoride modalities should be based on caries risk assessment. CDC made special interest project awards to three Prevention Research Centers to study methods to disseminate and promote adoption and of the recommendations by three groups of health professionals: dentists, pediatricians, and public health workers. The current status of dissemination methodologies in the three groups will be presented.

David A. Albert, DDS, MPH, Carol Kunzel, PhD, Kavita P. Ahluwalia, DDS, MPH, Olepeju Simoyan, BDS, MPH, Mary McCord, MD, Columbia University School of Dental and Oral Surgery, New York, NY.*

KNOWLEDGE, OPINIONS, AND PRACTICES ON FLUORIDE AMONG PEDIATRICIANS IN NORTHERN NEW JERSEY

Objective: To assess current pediatrician knowledge and practice with patients. *Methods:* Pilot survey utilizing Dillman's total design method, completed by 22 of 32 pediatricians (69% response rate) in urban northern New Jersey. The survey focuses on three main areas: (1) current practices of pediatricians with regard to fluoride, (2) overall knowledge of fluoride and fluorosis, and (3) pediatrician knowledge of fluoride supplementation schedules. *Results:* 46 percent of pediatricians provide correct information to patients on the use of fluoridated toothpaste. Eighty-two percent of pediatricians feel they are competent to assess the fluoride needs of their patients; however, 59 percent believe that systemic fluorides are more important than topical fluorides in preventing caries. Pediatricians never or almost never recommend fluoride products to patients for home use (63%). Seventy percent had received no continuing education on oral health; 47.6 percent advised the use of pea-sized amount of fluoride; 13.6 percent never prescribe fluoride, while 68.2 percent commence first fluoride prescription at less than one year of age. Only 27.3 percent assessed caries history of siblings prior to recommending fluoride toothpaste. *Conclusion:* The findings indicate that pediatricians provide home care instructions and advice to patients, but require additional knowledge and resources to accurately assess and recommend fluorides to patients. This project is funded by a grant from the Centers for Disease Control and Prevention.

E. Joseph Alderman, DDS, MPH, Oral Health Section, Family Health Branch, Division of Public Health, Georgia Department of Human Resources, Atlanta, GA.*

REDUCING DISPARITIES IN ORAL HEALTH ACCESS: GEORGIA ORAL HEALTH PREVENTION PROGRAM

Objective: To reduce disparities in oral health access through the Georgia Oral Health Prevention Program (GOHPP). *Methods:* July 2000, an additional $1 million in state funding enables the GOHPP to employ a dental hygienist supervised by a dentist in each of the state's 19 public health districts, instead of just nine districts that were fully or partially staffed. GOHPP uses portable dental equipment to provide children services such as dental sealants and fluoride rinses, examinations, and referrals to public and private dentists for treatment, in addition to prevention education. The focus of the school-based GOHPP is to reach children in elementary schools who qualify for the school lunch program or who do not have dental insurance or access to a dentist. *Results:* More than 220,000 additional children in 88 counties are expected to be receiving dental health services through the expanded GOHPP. Children in 64 counties are presently served. *Conclusions:* One key to making the GOHPP effective will be coordination and cooperation among public health departments, community health centers, private dentists, and schools. Paradoxically, Georgia has many resources for improving health care in rural areas; however, these are not well coordinated, and oral health often is not included in efforts to correct this situation. GOHPP provides preventive services to high-risk children, and has reduced disparities in oral health access.

Olusegun K. Alonge, BDS, MPH, MS, Sena Narendran, BDS, DDPH, MSc, Dental Branch, University of Texas Health Science Center, Houston, TX; Dan D. Williamson, DDS, MPH, MBA, Harris County Health Department, TX.*

INCISAL TRAUMA AMONG CHILDREN IN HARRIS COUNTY, TEXAS

Trauma to the teeth is a common reason for children to visit the emergency room. The most common teeth affected are the maxillary anterior teeth. The sequelae of dental trauma include disfigurement, speech defects, and psychological effects. This cross-sectional study was conducted as a component of the 1998 Harris County, TX, survey of schoolchildren. A total of 1,039 students constituted the sample, 47 percent were males and 53 percent were females. The teeth were examined for physical evidence of trauma. The prevalence of incisal fracture was 2.4 percent for the study population; prevalence for males and females was 2.9 and 2.0 percent, respectively. The male-to-female prevalence ratio was 1.45 to 1.0. The maxillary incisors accounted for 96 percent of fractured teeth. The prevalence of incisal trauma was significantly higher among low socioeconomic status (SES) children than high SES children (chi-square=5.86; P=.02; df=1). Though African American and Hispanic children had higher prevalence than white children, the differences were not statistically significant. The study reports a low prevalence of incisal trauma in Harris County children; however, incisal trauma appears to be associated with low SES status. This study recommends further investigation of incisal trauma in this region, as well as education of the public in prevention of dental trauma.

Patrick Blahut, DDS, MPH, Candace Jones, RDH, MPH, Nancy Reifel, DDS, MPH, William Bailey, DDS, MPH, Indian Health Service, Division of Oral Health, USPHS, Rockville, MD.*

1999 INDIAN HEALTH SERVICE ORAL HEALTH SURVEY: METHODS, OBJECTIVES

Since 1956, the Indian Health Service (IHS) has maintained a system for monitoring the oral health and treatment needs of American Indian and Alaska Native (AI/AN) dental patients. This system is limited to people who seek dental care; it has provided data regarding trends in oral health for over four decades. During the 1970s, monitoring evolved from annual reports to periodic surveys. Recent surveys prior to 1999 were completed in 1984 and 1991. The 1999 effort targeted five age groups: 2–5, 6–14, 15–19, 35–44, and 55+ years of age. Licensed dentists and hygienists completed all exams using a mounted dental light, front surface mirror, WHO disposable probe, and NIDCR periodontal probe. Radiographs were not used. Variables assessed: demographic and health factors, total tooth loss in either arch, oral prosthetic appliance status, oral pathology, fluorosis, coronal and root caries, periodontal status, and treatment needs. Because patients seeking care were examined, data may not reflect status of the general AI/AN population. While this survey may overestimate disease in very young children and underestimate total tooth loss in the adults, it provides the most comprehensive information available on the oral health of the ASI/AN population.

Luisa N. Borrell, DDS, MPH, PhD, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI.*

RACE AND PERIODONTITIS IN THE US: 15-YEAR TRENDS

Objective: To examine whether historically evident disparities in periodontal status between the African American and the white populations in the US have persisted over time. *Methods:* The method compared findings from similar age-cohorts in NHANES I (1971–74) and NHANES III (1988–94). Records of US African American and white adults 17 years and older with at least one tooth and who received a periodontal assessment during the dental examination were included in the analysis. *Results:* The prevalence of periodontitis in the US adults population in NHANES I was 31.6 percent, with African Americans exhibiting higher prevalence than whites (37% vs 30%; P=.04). In NHANES III, a different case definition for periodontitis led to an apparently sharp drop in overall prevalence to 4.3 percent, with African Americans exhibiting twice the prevalence as whites (7.5% vs 3.7%; P<.01). After adjustment for socioeconomic indicators, multiple logistic regression analysis indicates that the disparity between African Americans and whites may have persisted between NHANES I (OR=1.31, 95% CI: 0.78–2.19) and NHANES III (OR=1.60, 95% CI: 1.14–2.24). *Conclusions:* Although periodontal health may have overall between NHANES I and NHANES III, the disparity in periodontal status between African Americans and whites has persisted over time.

Richard Brandon, PhD, University of Washington, Evans School of Public Affairs, Seattle, WA; Tracy Peterson, MA, Washington Dental Service, Seattle, WA.*

BUILDING PUBLIC SUPPORT TO PRIORITIZE CHILDREN'S ORAL HEALTH: A PROGRESS REPORT

Objective: To create a public climate in which policy proposals to improve children's oral health are more likely to be understood and supported by the public and policy makers. This presentation will provide results of first quarter, 2000, campaign activities. *Methods:* Research was done to understand public perceptions of children's oral health and how to best frame the issues to increase their salience. These data were used to develop: a multichannel communications campaign to be launched in January 2001; a broad-based coalition of influential and grass roots advocates (Citizens' Watch for Kids' Oral Health); and a broad policy menu. Public awareness tracking polls were done at the beginning and will be done at the end of the campaign to measure public awareness. Future work will focus on implementation of the policy menu. *Results/Conclusions:* A communications campaign was developed with the "Watch Your Mouth" slogan; a 30-second television campaign was run in two major media markets; television, radio, and print public service announcements have been distributed to all major media markets in Washington; and a Web site was published at www.kidsoralhealth.org. The communications campaign has received a positive response particularly because the tools are research driven. Coalition: The coalition was formed and includes business leaders, education groups, health professionals and children's advocates. Tool kits were distributed to all members and commitments have been made to extend the communication messages through newsletters, opinion editorials, community presentation, etc. Policy: There has been increased focus and networking on policy relating to improved children's oral health.

Walter Bretz, DrPH, John Thomas, PhD, Robert Weyant, DrPH, Richard Crout, PhD, Daniel McNeil, PhD, Ralph Tarter, PhD, West Virginia University and University of Pittsburgh, Pittsburgh, PA.*

DEVELOPMENT OF A FAMILIAL LIABILITY INDEX FOR ORAL MICROBIAL STATUS IN APPALACHIA

Objective: Develop a familial liability index for oral microbial status that reflects an imbalance of oral domains based on the presence of risk indicators in saliva, interproximal plaque, tongue, and throat. Thirty-six mother-child pairs from Webster and Nicholas counties, West Virginia, participated in this study. Saliva samples were assayed for the mutans streptococci (MS), interproximal plaque samples for BANA Test (BT) species, tongue scrapings for BT, and throat swabs for any of the sentinel organisms (*S. aureus, S. pyogenes*, and yeasts). The corresponding thresholds for a (+) risk indicator were, respectively, $\geq 10^5$ CFU of MS salivary levels, one or more BT–(+) plaques ($>10^5$ CFU/mg of plaque of at least one of BT–(+) species), weak–(+) BT for a tongue scraping ($>10^4$–$<10^5$), and $>10^4$ CFU/swab for any of the sentinel markers. Relative risk estimates were employed to analyze the data. The mean age of mothers and children was 42.1 and 14.7 years, respectively. Ninety-one percent of both mothers and children had at least one (+) risk indicator. Overall, 76 percent of mother-child pairs had at least one (+) concordant oral microbial risk indicator. Accordingly, the relative risk (RR) of children having concordant results with their mothers was increased 2.9 (BT-plaque), 1.25 (BT-tongue), 0.7 (sentinel organisms), and 1.75 (MS) times. The cumulative RR for having at least one (+) concordant indicator was 6.7. Mother-child pairs shared similarities of oral microbial risk indicators that allow for the development of a liability index.

María Teresa Canto, DDS, MPH, Thomas F. Drury, PhD, Alice M. Horowitz, PhD, NIDCR, NIH, Bethesda, MD.*

ANNUAL ORAL CANCER EXAMINATIONS AMONG EDENTULOUS ADULTS 40+ YEARS

Because the American Cancer Association recommends an annual oral cancer examination (OCE) for those 40 years of age or older, the objectives of this analysis are to describe the likelihood of having an OCE in the past year among edentulous adults 40+ years of age, and to evaluate the effects of age, education and family economic status on this likelihood. Weighted data from a one-third subsample of the 1998 National Health Interview Survey were analyzed using SAS and SUDAAN. Logistic models controlled for age, educational attainment and family economic status, and were evaluated at the .01 level. While 15.5 percent of dentate adults 40+ years had an OCE in the past year, only 4.3 percent of the edentulous did so. Overall, compared to dentate adults, edentulous were four times less likely (OR=.25; P<.00001) to have had an oral cancer examination in the past year. Even with age, education and family income status taken into account, the edentulous still were approximately three times less likely to have had an OCE in the past year (Adj OR=.34; P=.00000). Considering that many edentulous individuals are smokers or former smokers, it is important for them to have an OCE. Edentulous individuals need to know the importance of an OCE and dental professionals need to provide them.

Joanne B. Clovis, PhD, Dalhousie University, Halifax, NS, Canada; Alice M. Horowitz, PhD, NIDCR, NIH, Bethesda, MD, Dale H. Poel, PhD, Dalhousie University, Halifax, NS, Canada.*

DENTAL HYGIENISTS' KNOWLEDGE, OPINIONS, AND

PRACTICES ABOUT ORAL AND PHARYNGEAL CANCERS

Objective: To assess dental hygienists (DH) in British Columbia (BC) and Nova Scotia (NS) as part of a larger study on knowledge, opinions, and practices of dental professionals. *Methods:* A pretested, 41-item survey was mailed to 894 DH. A follow-up postcard and one additional complete mailing were sent to nonrespondents. SPSS software was used for the analysis of 606 usable responses (RR=70% overall, 66% BC, 73% NS). *Results:* On a total of 16 risk factors the mean correct score was 8.7. On a total of 14 diagnostic factors the mean correct score was 9.5. Almost all correctly identified tobacco use (99.7%), alcohol use (94%) and prior oral cancer lesion (99%) as real risk factors, but only 28 percent identified both erythroplakia and leucoplakia as the conditions most likely associated with oral cancer. Average to low percentages of correct responses were consistent with their beliefs that their knowledge of oral cancer was not current (43% BC, 63% NS). On four knowledge items and the mean diagnostic score, between group differences were significant at $P<.01$. BC dental hygienists reportedly provided significantly more oral cancer examinations for patients aged 18–39 years and 40+ years at both initial and recall appointments than NS DH ($P<.01$). *Conclusions:* Educational interventions are needed to increase knowledge of risk and diagnostic factors, and early detection practices among dental hygienists in BC and NS.

Gail N. Cross-Poline, RDH, MS, Deborah B. Astroth, RDH, Terri S. I. Tilliss, RDH, MS, MA, Donna Stach, RDH, MS, Susan Annan, RDH, Dental Hygiene Department, University of Colorado Health Sciences Center, School of Dentistry, Denver, CO.*

FOCUS GROUP RESPONSES ON ORAL SELF-CARE BEHAVIOR

The cleaning of one's teeth interproximally is considered important for maintaining a high level of oral health. There is a lack of research on the factors that may influence a person's decision to adopt interproximally cleaning as a self-care behavior. *Objective:* This exploratory, descriptive study employed a focus group approach to elicit qualitative data concerning reasons why people do or do not practice regular interproximal cleaning of their teeth. *Methods:* Three focus group sessions were conducted with a combined convenience sample of 23 university employees. Two of the focus groups consisted of people who did not clean their teeth interproximally on a regular basis while the people in the third group did regularly clean interproximally. The focus group sessions were structured around 10 questions. These questions asked the participants to identify benefits and drawbacks of cleaning interproximally. *Results:* The main benefits identified by the focus groups were, "helps remove food particles from between teeth," "prevents bad breath," "feels good," and "gums are healthier." The main drawbacks identified were "it takes time," "difficult to do," "painful to gums," and "gums bleed." *Conclusions:* Understanding reasoning behind an individual's decision whether or not to clean interproximally may assist in the development of interventions for oral health self-care.

Gordon B. Empey, DMD, MPH, Leann Dooley, BS, Susan Sanzi-Schaedel, RDH, MPH, Multnomah County Health Department, Portland, OR.

EARLY CHILDHOOD CARIES PREVENTION PILOT IN LOCAL HEALTH DEPARTMENT DENTAL CLINICS

Objective: To describe the implementation of an early childhood caries pilot project in four Multnomah County Health Department Dental Clinics. *Methods:* The project targeted children 9–24 months old who were enrolled in the county's managed care plan. Potential patients were notified by mail and offered "Baby Day" walk-in appointments at the four county dental clinics. A risk assessment model was developed. Risk was assessed through a screening exam of the babies and a questionnaire for parents. Appropriate intervention activities—including education, fluoride varnish, recall, etc.—were delivered. Process evaluation criteria were developed to determine potential success of a larger program to be administered in a primary care setting. Parents were surveyed to determine their satisfaction with the services delivered. *Results/Conclusion:* Ten percent (638 of 6,355) eligible children accessed "Baby Day" services.

- Of the children assessed for disease, 35 percent were high risk and 65 percent low risk.
- Results of a patient satisfactory survey showed: 95 percent found "Baby Day" walk-in times convenient; 99 percent planned to bring their babies for recall.
- Recommended changes to the pilot included increase use of auxillary personnel to deliver services, changes in scheduling babies, changes in initial contact protocols, and recommended changes in follow-up treatment models.

Judith A. Feinstein, MSPH, Maine Department of Human Services, Augusta, ME; Kathy Phipps, DrPH, Newport, OR; Janet H.P. Sawyer, RDH, BS, Augusta, ME.*

RESULTS OF THE 1999 MAINE STATE SMILE SURVEY

Objective: To assess the oral health status of kindergarten and third grade students in Maine schools. *Methods:* Public elementary schools were chosen to participate based on a random sample of schools stratified by region; the state was divided into six regions. The sample size was based on 10 percent of the number of students statewide in grades K and 3 for the 1997–98 school year. Children with permission received an oral screening using a tongue blade and penlight. The screening protocol followed that presented in the ASTDD Basic Screening Survey. Questionnaires were integrated into permission forms. *Results:* The overall response rate for the state was 54 percent. A total of 2,459 children were screened, or 7.3 percent of the total population; questionnaires were returned for 2,829 children. Results show that 68.8 percent of kindergarten children were caries free; 55.3 percent of the 3rd graders were caries free in both dentitions and 88.3 percent in their permanent dentition; 18.5 percent of grade K children and 20.4 percent of third graders had untreated decay; 19.7 percent of the younger group and 20.6 percent of the older children needed restorative care; 19.3 percent of the younger children needed sealants; and 47.6 percent of the third graders had at least one sealant, while 56.8 percent needed at least one more. *Conclusions:* For all children screened, those who were eligible for the free and reduced rate lunch program had significantly poorer oral health. These children were also less likely to have visited a dentist in the past year. Regional differences were not significant; although three regions have slightly poorer oral health, the regional disparities are largely due to regional differences in SES.

Monica A. Fisher, DDS, MS, MPH, PhD, Department of Community Medicine, West Virginia University, Morgantown, WV; George W. Taylor, DMD, DrPH, Department of Cariology, Restorative Sciences and Endo, University of Michigan, Ann Arbor, MI.*

PERIODONTAL DISEASE: A PREDICTOR FOR POOR GLYCEMIC CONTROL IN ADULTS WITH DIABETES

Objective: We evaluated the association between severe active periodontal disease (SAPD) and glycemic control in US adults aged 45+ years with diabetes mellitus (DM). *Methods:* The National Health and Nutrition Examination Survey III dataset was used to identify 502 individuals ≥45 years old with DM ≥95% of individuals aged 45+ years with DM have type 2 DM). Multiple logistic regression analysis was performed, taking into account the complex survey design and sample weights. A proxy measure for SAPD was defined as having at least one tooth with both 6 mm loss of attachment and gingival bleeding. DM was defined as having a fasting plasma glucose of at least 126 mg/dl. Poor glycemic control was defined as having glycosylated hemoglobin (glyHb) >9% and better glycemic control was glyHb≤(9%). *Results:* Individuals with DM who had SAPD were 2.58 (95% CI: 1.14–5.81) times more likely to have poor glycemic control than those with DM and no SAPD. After controlling for the possible explanatory variables of age, use of insulin or oral hypoglycemics, going to a particular place for health care, number of physician visits and hospitalizations during the past 12 months, number of months since seeing a doctor, serum cholesterol and low density lipoproteins, exercise, race, sex, education, and smoking, individuals with DM and SAPD were 2.80 (95% CI: 1.20–6.56) times more likely to have poor glycemic control than those with DM and no SAPD. *Conclusion:* These results from a US population-based study of type 2 DM support a positive association between SAPD and poor glycemic control.

Stuart A. Gansky, DrPH, Howard Pollick, BDS, MPH, UCSF School of Dentistry, San Francisco, CA.*

HEAD START STATUS MODIFIES RACE/ETHNICITY EFFECT IN

EARLY CHILDHOOD CARIES OF CALIFORNIA PRESCHOOLERS

Objective: To assess the role of race/ethnicity and socioeconomic status in the 1993–94 California (CA) Oral Health Needs Assessment (COHNA), a population-based statewide oral examination survey. *Methods:* The COHNA (Pollick et al., 1999), a stratified cluster sample of 2,520 children aged 2–5 years from 84 preschools (public and private), conducted examinations after obtaining parental consent and a seven-page questionnaire. Strata were eight geographical regions and preschool Head Start status. The target population covered 77 percent of California's schoolchildren. Previous reports from this survey defining early childhood caries (ECC) as at least one decayed, extracted (due to caries), or filled primary maxillary incisor surface reported prevalence as 14 percent overall - higher in African Americans and Latinos, as well as Head Start preschools. These analyses using SUDAAN software for linear and logistic regression models classify ECC as recently defined by consensus (Drury et al., 1999). *Results:* ECC prevalence was 31 percent among preschoolers, excluding "other" race. Preschool Head Start status was an effect modifier of race/ethnicity (3 df interaction test, $P<.001$) after adjusting for age, sex, parental education (<high school (HS) graduate, HS graduate, >HS graduate), community water fluoridation, race/ethnicity, and Head Start status. Effect modification is due to the fact that non-Head Start Asians/Pacific Islanders had relatively low ECC prevalence, while Head Start Asians/Pacific Islanders had the highest ECC prevalence of any racial/ethnic group. *Conclusions:* Socioeconomic status should be considered in multiple dimensions when assessing racial/ethnic differences. (Support: CA Wellness Foundation and CA Department Health Services Maternal & Child Health Branch.)

Chris Halliday, DDS, Indian Health Service, Rockville, MD; Nancy Reifel, DDS, MPH, Indian Health Service; Betty Skipper, PhD, University of New Mexico, Albuquerque, NM.*

SEALANT UTILIZATION

Patterns of sealant utilization and caries in the permanent dentition were evaluated to explain unexpected results. Two areas with the highest sealant prevalence (69%) also had the lowest percent of caries-free children (24%). Likewise, one area with a lower sealant prevalence (61%) had the highest percent of caries-free children (39%). More children in the low caries-free sites had smooth surface caries (42%) and more children had caries at an early age (47% at age 7 years). A large percentage of the children had access to sealants at an early age (54% at age 7 years) and continuing through the early teenage years (14–19-year-olds with first and second molar sealants was 43%). Because of the early age at which children develop caries, earlier and more frequent visits to the dental sealant programs would benefit these communities, as would an increased emphasis on the prevention of smooth surface caries. Fewer children in the high caries-free site had smooth surface caries (33%). A smaller percentage of children received sealants (41% at age 7 years), but the sealants were better targeted to the individual child (14–19-year-olds with eight molar sealants was 9 percent vs 6 percent in the low caries free sites). In areas with lower caries prevalence, sealant utilization targeted to the individual is effective.

Richard J. Hastreiter, DDS, MPH, Peilei Jiang, MS, MS, PhD, Steve Springman, Delta Dental Plan of Minnesota, Eagan, MN.*

CLINICAL DENTAL SERVICES PROVIDED TO PERSONS LIVING WITH HIV

Objective: To evaluate oral health care services funded by Title II of the Ryan White Care Act. *Methods:* This is a retrospective eight-year evaluation of the oral health care utilization patterns of underserved individuals living with HIV. Standard descriptive statistical methods were used to analyze dental claims databases. Dental service utilization patterns of HIV-infected persons were compared with other population groups. *Results:* 10,953 dental services were provided to 619 persons living with HIV—557 males and 62 females—from August 1992 to October 2000. Ninety-one percent of services were provided to males, 9 percent to females. Mean patient age was 41 years. Total provider reimbursement was $325,573, an average of $526 per patient. Of 10,953 identifiable ADA procedure coded services: 36.8 percent (4,025) were diagnostic; 16.1 percent (1,766) preventive; 29.2 percent (3,202) restorative; 1.7 percent (180) endodontic; 3.0 percent (326) periodontic; 1.8 percent (197) removable prosthodontic; 0.2 percent (21) fixed prosthodontic; 7.4 percent (815) oral surgery; and 3.8 percent (420) adjunctive general services. Diagnostic, preventive, and restorative services comprised 82 percent of all services, with diagnostic and restorative accounting for 65.9 percent. Most frequently provided services in descending order were: oral examinations, 18.4 percent (2,021); radiographs, 18.0 percent (1,962); amalgams, 15.9 percent (1,731); prophylaxes, 14.8 percent (1,627); resin restorations, 10.9 percent (1,194); and extractions, 6.5 percent (722). *Conclusion:* These 619 persons living with HIV exhibit dental service utilization patterns that are similar in many ways to the general population of commercially insured individuals. Differences and similarities will be discussed.

Kathy L. Hayes, DMD, MPH, Office of Rural Health Policy, Health Resources and Services Administration, Rockville, MD.*

IMPROVING ORAL HEALTH IN RURAL AMERICA: POLICIES AND INITIATIVES OF THE OFFICE OF RURAL HEALTH POLICY

Efforts aimed at improving the oral health of underserved rural communities frequently are hampered by a paucity of data on issues related to dental need and service in rural areas. Such information is critically needed for policy formulation. Recently, the Office of Rural Health Policy (ORHP) has begun to address data and policy issues related to rural oral health through a series of initiatives. Activities that have begun within the last year include: analysis of NHANES and NHIS data by urban/rural status, a demonstration project to describe issues related to dental residency training in rural communities, a rural companion document to Healthy People 2010 containing specific oral health goals and objectives, and support to the National Rural Health Association for a white paper outlining issues related to rural oral health. In addition to these activities, a national rural workforce study on dental and related personnel is planned for the coming year. For over 10 years the ORHP has supported improved local access to dental services in underserved rural communities through the award of Rural Health Outreach grants to initiate or expand health services in those communities. The initiatives described will strengthen and enhance the more established activities aimed at service delivery.

Keith E. Heller, DDS, DrPH, Stephen A. Eklund, DDS, MHSA, DrPH, Brian A. Burt, BDS, MPH, PhD, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI; Daniel M. Briskie, DDS, Mott Children's Health Center, Flint, MI.*

USE OF PRIVATE INSURANCE AND MEDICAID DENTAL CLAIMS DATA FOR CHILDREN'S ORAL HEALTH SURVEILLANCE

Objective: To determine the utility of using private insurance and Medicaid dental claims data for assessing the oral health of children aged 5–12 years in Genesee County, MI. *Methods:* Dental findings from Delta Dental Plan of Michigan claims data from 1990–99 and Michigan Medicaid claims data from 1994–99 were compared to findings from two school-based oral health surveys—the 1995 Genesee County Oral Health Project conducted in 20 schools and the Mott Children's Health Center oral health screenings conducted in 30 schools. Data were analyzed using Zip codes as the comparison unit. Statistical comparisons using correlation coefficients were used to compare the findings from the four groups. Rankings of community Zip codes by dental findings were also done for each of the four comparison groups. Geographical Information System (GIS) methods were also used to analyze and display findings. *Results:* Correlations between the four different groups were generally low and not statistically significant. Rankings of the communities, however, demonstrated that some communities consistently demonstrated high levels of dental caries or treatment across the four data sets. Similarly, some communities demonstrated consistently low levels of dental caries or treatment. *Conclusions:* Dental insurance claims data can be useful in identifying communities with either very high or very low dental needs. Where traditional oral health surveys are not practical to conduct, dental insurance claims data can provide valuable oral health surveillance information. (CDC U48/CCU515775-02.)

Christine K. Heng, DDS, MPH, Department of Dentistry, Federal Correctional Institution, Danbury, CT.*

DENTAL HEALTH OF FEMALE INMATES IN A FEDERAL PRISON

Objective: To determine the extent of dental disease and the level of unmet need among female offenders. *Methods:* All inmates admitted into the Federal Correctional Institution at Danbury, Connecticut, during May 31, 1997, to May 21, 1998, were given oral screening examinations (n=500; age range, 20–65). The data were analyzed in terms of race/ethnicity and age. Comparisons of means were made using ANOVA and Bonferroni t-tests for statistical significance. *Results:* The mean DMFT and DMFS scores were 36.8 and 36.0 percent, respectively. *Conclusions:* Female prisoners had high levels of dental disease and unmet need; racial disparities persisted in the prison.

Michelle Henshaw, DDS, MPH, Kathy Lituri, RDH, BS, Gilberto Arciniegas, DDS, Kathy Held, MEd Adm, Aljernon J. Bolden, DMD, MPH, Boston University School of Dental Medicine, Boston, MA.*

SUMMER ADVENTURES IN LEARNING HEALTH INIATIVE (SAIL HI): LESSONS LEARNED

Objective: To describe SAIL HI, a five-week summer camp targeting 101 children in grades 1–6 with special social needs. *Methods:* SAIL HI's goal was to develop a wellness program for children and their families that provided education in seven health-related topics previously identified by parents and teachers as unmet health needs: nutrition, personal hygiene, oral health, sibling care, first aid, fitness, drug and alcohol awareness, and self-esteem. The oral health component included a supervised daily toothbrushing program, screenings utilizing the Basic Screening Surveys protocol, and five "oral health days." One day per week for five weeks, BUSDM faculty and students presented age- and culturally appropriate activity-based lessons on oral hygiene, nutrition, dental safety, and tobacco use, as well as a visit to a "virtual" dental office. Key messages were integrated into the other six health topics. *Results:* 87 children participated in the program and parental consent for dental screenings was 100 percent. Pre- and post-tests demonstrated increases in oral health knowledge. Of the 66 (76%) children screened, 20 percent had untreated decay and only 11 percent had sealants. *Conclusion:* This comprehensive oral health promotion program had a positive impact on the children's overall oral health knowledge and—although not measured as an outcome of this implementation cycle—appeared to significantly impact their views of dental professionals.

Lawrence F. Hill, DDS, MPH, Dental Director, Cincinnati Health Department; Michael Kelsch, BS, Case Manager, Greater Cincinnati Oral Health Council, Cincinnati, OH.*

FOLLOW-UP TREATMENT IN A SCHOOL-BASED SEALANT PROGRAM

The Cincinnati Health Department and the Greater Cincinnati Oral Health Council, a private nonprofit agency, have operated a school-based dental sealant and referral program for 16 years. The program targets second, sixth, and seventh grade children and all children in special education classrooms in schools in which 50 percent or more of the children are eligible for the subsidized meal program. A dentist examines each participating child. The school nurse and the parents of those needing treatment are notified by letter. When one-year sealant retention checks are done, the examiner records which of the children who had been found to need treatment at the initial exam had actually received any care. More than 70 percent of those children needing treatment had not received care. In response to this problem, a case management model, targeting children with Medicaid, was implemented the next year. Findings for 65 schools in year one of the pilot indicate that, of all children examined, 34 percent were in need of treatment. Of these, 57 percent had no public or private insurance. Of the 43 percent (682) covered by insurance who needed care, 44 percent (301) of the parents could not be contacted or failed to respond to letters or calls from the case manager. Twenty-seven percent stated they had a dentist and 29 percent (192) accepted case management. Of the 192 who participated in the case management program, 55 (28%) completed treatment and 75 (39%) are still in treatment. This pilot demonstrated the difficulty, even with case management and insurance, of getting children of low-income families dental treatment in traditional settings. It indicates the need for further study of case management and consideration of alternate systems of care, i.e., school-based programs.

A.M. Horowitz, PhD, M.T. Canto, DDS, MPH, T.F. Drury, PhD, W.L. Child, MS, NIDCR, NIH, Bethesda, MD, Silver Spring, MD.*

PERSPECTIVES OF MARYLAND ADULTS ON ORAL CANCER

Maryland ranks 13th among all states and Washington, DC, for estimated new oral cancer (OC) cases, and ranks sixth highest overall in mortality rate for OC, fifth highest among black males. Most OCs in Maryland are diagnosed at late stages and by physicians. A 1996 survey of Maryland adults 40+ years found that they were not very knowledgeable about OC and had many misconceptions. Only 28 percent had ever had an oral cancer exam (OCE) and only 29 percent reported having an OCE in the past year, the frequency recommended by the American Cancer Society. The purpose of this study was to obtain more in-depth information from adults 40 years of age or older on OC, OCE, and factors associated with having an OCE. A qualitative descriptive study generated from three focus groups (FGs) was conducted at two different locations with 9, 10, and 7 adults. Participants were selected at random from a telephone list. A professionally trained moderator conducted all FGs using a semistructured interview guide. Participants were struck by the fact that they rarely hear about this type of cancer. Many said that they had never had an OCE and did not know there was such a thing. Many participants also reported that they would likely be more comfortable discussing OC with their physicians than with their dentists. These findings provide added insights to the survey conducted among Maryland adults about knowledge, opinions, and practices regarding oral cancer prevention and early detection. This information will help in the development of educational interventions for the public to promote OC prevention and early detection in Maryland.

Beverly Isman, RDH, MPH, Consultant, Davis, CA; Laura Roberts, BS, Lassen Children and Families Commission, Susanville, CA.*

GRASSROOTS MULTIDISCIPLINARY COLLABORATION FOR ORAL HEALTH

Objective: To form a regional coalition to improve oral health and access to dental care for children aged 0–5 years and their families in four rural northern California counties. *Methods:* In 1998 the California Children and Families Act created funding from tobacco taxes to provide noncategorical resources to young children through statewide initiatives and county allocations. Lassen County CFC received funding for a two-day regional oral health summit for four geographically isolated counties who identified oral health as a priority based on community focus groups and interviews. One hundred parents, agency staff, dental professionals, and other health professionals completed pre-summit surveys to reflect their views. The 42 people who attended the summit represented health departments, dental offices/clinics, Prop. 10 commissions, child care providers, early childhood programs, and parents. All received a binder of resources and networked with representatives from state, university, local, and foundation programs to discuss barriers to care, community assets, strategies appropriate for isolated rural areas, and ways to leverage additional resources. *Results:* Participants chose four or five priority strategies, and formed a regional steering committee to frame an action plan for the first year and to write grants. Everyone left with a personal action plan to broaden and help with the coalition. The state CFC considers this summit a model for addressing other crosscutting issues for young children. Specific accomplishments since the summit will be discussed. *Conclusions:* A grassroots multidisciplinary group can make significant strides to create advocacy for oral health and improve dental access not only locally, but also regionally and statewide. This regional approach is a model for creating inclusiveness, new resources, and new roles for community groups around oral health as an integral part of children's health and readiness to learn.

Randall D. Jenkins, Class of 2003 Oregon Health Science University, Portland, OR.

NEED VS ACCESS STUDY OF PUBLIC HEALTH DENTISTRY IN THE STATE OF HAWAI'I

Objective: To determine if the access to the dental public health system present in the state of Hawai'i was adequate to serve the underrepresented communities' need for dental health care. *Methods:* The types of programs and services offered by the government to provide dental health care were studied. United States census data were used to determine the size and geographic distribution of the population living below the federal poverty level in the state. The geographic distribution of practicing dentists in the state was obtained through the local Yellow Pages listings. Letters were sent to the department of human resources, department of health, and to insurance companies participating in Medicaid programs requesting statistics regarding the geographic distribution of both patents and participating dentists. *Results:* The bulk of care given to Medicaid-eligible dental patients is provided by private dentists willing to participate. The number and distribution of these dentists and the patients enrolled in Medicaid was not made available from any of the resources contacted in this study. It was found that the island of Lanai and Puna district on the Big Island of Hawai'i had the highest concentrations of people living below the federal poverty level with the lowest concentration of dentists per capita in the state. *Conclusions:* The results suggest that barriers to public dental health care exist in both Lanai and Puna. Due to the threat of litigation by the ACLU regarding access to dental health care, the information sought by this study was not made available. This information should be made available so that it can be determined what problems do or do not exist with access to public dental health care in the state of Hawai'i.

Candace Jones, RDH, MPH, Indian Health Service, Rockville, MD; Nancy Reifel, DDS, MPH, Indian Health Service, Los Angeles, CA; Kathy Phipps, DrPH, Oregon Health Sciences University, Portland, OR.*

THE ORAL HEALTH OF AI/AN PRESCHOOL CHILDREN

Dental caries in the primary teeth of children 5 years of age or younger is one of the major health problems in the United States—especially among AI/AN children. To monitor caries rates among very young children, the 1999 IHS Dental Patient Survey targeted children 2–5 years of age. A total of 2,663 children between the ages of 2–5 years were examined. About 78 percent of these children had a history of dental decay and 68 percent had untreated decay at the time of the examination. The mean dmft and dmfs scores for this age group were 5.5 and 15.7, respectively. When stratified by IHS areas, children in the Bemidji, California, and Oklahoma areas had the best oral health, while children in the Navajo, Phoenix, Nashville, and Albuquerque areas had the poorest oral health. Although IHS has implemented several programs designed to prevent caries in very young children, there has been little change in caries rates since the previous IHS survey in 1991. When compared to both the white non-Hispanic and Hispanic children in NHANES III, the AI/AN children examined by IHS had significantly more dental decay. In fact, the percentage of children with untreated decay was more than three times higher in the AI/AN children compared to the NHANES III children (68% vs 19%).

Rene Joskow, DDS, MPH, FAGD, Stephanie Kiesak, MA, MPH, Centers for Disease Control and Prevention, Environmental Hazards Health Effects, Health Studies Branch, Atlanta, GA.*

FLUORIDE SUPPLEMENT USE IN THE UNITED STATES FROM 1988 TO 1994

Objective: To describe the prevalence of fluoride supplement use among the civilian, noninstitutionalized, population of the United States for the period 1988 to 1994. *Methods:* Using NHANES III data, this study describes fluoride supplement intake for individuals older than 2 months of age. The information was obtained from household questionnaires of vitamin/mineral supplement use. Fluoride consumption was examined in relationship to age, sex, race/ethnicity, and poverty–income ratio. Chi-square tests were used to determine the statistical significance of the findings. *Results:* Nearly 40 percent of persons reported taking a vitamin/mineral supplement and 1 percent reported taking a supplement that contained fluoride. Among all race/ethnicity groups, Mexican Americans reported the highest use of fluoride-containing supplements. Non-Hispanic blacks were less likely to take fluoride supplements than either non-Hispanic whites or Mexican Americans. In addition, lower income individuals were less likely to use fluoride-containing supplements than individuals in other income groups. Four percent of persons aged 2 months to 17 years took a supplement with fluoride, in comparison to less than 1 percent of older individuals. Of fluoride supplement users, 97 percent were 17 years of age or younger. *Conclusions:* This study presents new estimates of fluoride supplement use from a population-based, nationally representative sample.

A.M.M. Kamal, BDS, PhD, T. Iwanaga, MD, PhD, T. Ohida, MD, PhD, Department of Public Health Administration, National Institute of Public Health, Tokyo, Japan.*

"SOJO" MODEL FOR COMMUNITY ORAL HEALTH PROMOTION

Objective: This presentation aims to introduce SOJO (System Oriented Joyful Operation) health promotion model used in Japan, and justify its implication for Oral Health Promotion. *Methods:* Our health promotion laboratory developed and implemented the SOJO model in a small community with a population of 800 in Oogoe town under Fukushima prefecture in Japan. The model consists of four phases: launching, planning, implementation, and evaluation. In the process of the model, participants consisting of community members, administrative personnel and professionals have a joyful workshop to establish a healthy community in their locality. Participants share their ideal goal as an image of healthy life and take their respective roles to fulfill the required conditions to realize the ideal goal. *Results:* After working with SOJO process model, empowerment and participation of the community members had remarkably improved, as evidenced by their subjective reports and performances of various activities. *Conclusions:* Empowerment and participation are two established prerequisites for community-based oral health promotion. We hypothesize that a model that enhances empowerment and participation of the community members has special implication in promoting any aspect of human health. SOJO model's proven capability to develop empowerment and participation duly recognizes its implication in community-based oral health promotion.

Linda M. Kaste, DDS, PhD, Paul J. Nietert, PhD, W. David Bradford, PhD, MUSC, Charleston, SC; Richard Oldakowski, Thomas Drury, PhD, NIDCR, NIH, Bethesda, MD.*

RACE/ETHNICITY VARIATION OF USUAL SOURCE OF MEDICAL CARE AND SEALANTS

Objective: To assess whether the impact of having a usual source of medical care on dental sealant prevalence varies among Hispanics (H), non-Hispanic whites (n-HW), and non-Hispanic blacks (n-HB). *Methods:* Data were obtained from 13,645 children included in the 1998 National Health Interview Survey, ranging in age from 0 to 17 (mean±std dev: 8.4±5.4 years). Chi-square statistics were used to measure bivariate associations, while odds ratios (OR) calculated from multivariate logistic regression models were used to measure associations that adjusted for age, sex, education of mother, and welfare support. SUDAAN(r) was used to account for the complex sampling design. *Results:* 90.6 percent of children had a usual source of care for both sick and well medical visits. The prevalence of ever having received dental sealants was similar in H children with or without usual source of medical care (12% vs 10%, chi-square=1.9, *P*=.17), while among n-HW and n-HB having a usual source of medical care was associated with higher prevalences (29% vs 18%, chi-square=26.3, *P*<.0001 and 12% vs 8%, chi-square=3.5, *P*=.06, respectively). In the multivariate models, a usual source of medical care was not associated with an increase of prevalence in sealants for H (OR=1.2, 95% CI: 0.8–1.8), but was for n-HW (OR=2.4, 95% CI: 1.7–3.2) and n-HB (OR=2.0, 95% CI: 1.1–3.6). *Conclusion:* Having a usual source of medical care is associated with increased prevalence in dental sealants for non-Hispanic whites and non-Hispanic blacks, but not for Hispanics.

Jayanth V. Kumar, DDS, MPH, Valentine Yanchou Njike, MD, Bureau of Dental Health, New York State Department of Health, Albany, NY.*

BURDEN OF ORAL AND PHARYNGEAL CANCERS IN NEW YORK STATE

Objective: The objective of this study was to assess the burden of oral and pharyngeal cancers in New York State. *Methods:* Data from the New York State Cancer Registry and the Statewide Planning and Research Cooperative System (SPARCS) were analyzed to determine incidence, mortality, and hospitalization related to these cancers. *Results:* The annual average number of new cancers of oral cavity and pharynx for the period 1993–97 was 1,227 and 662 in males and females, respectively. The incidence rates per 100,000 for males and females were 13.4 and 5.5, with corresponding mortality rates of 4.2 and 1.4. The number of hospitalizations for these cancers in 1999 was 7,469. The average length of stay was 8.3 (95% CI: 6.6, 7.1) days. The average charge per case per admission was $19,665. In addition, 2,966 cases were treated in hospital outpatient facilities. *Conclusion:* These data show that oral and pharyngeal cancers result in a significant cost to the society.

Steven M. Levy, DDS, MPH, John J. Warren, DDS, MS, Jane R. Jakobsen, MS, College of Dentistry, University of Iowa, Iowa City, IA.*

FOLLOW-UP STUDY OF DENTAL STUDENTS' ESTHETIC PERCEPTIONS OF DENTAL FLUOROSIS

Several studies have assessed esthetic perceptions of dental fluorosis, suggesting that concerns may be greater than previously believed. This paper reports on changes in dental students' esthetic perceptions of dental fluorosis versus other conditions. Fourth-year dental students (*n*=45) completed questionnaires about computer-generated photographs of fluorosis vs other conditions, repeating the protocol followed when they were first-year students. They rated mild fluorosis "less satisfactory" on a visual analog scale than all nonfluorosis conditions: midline diastema, isolated opacity, and normal control. Results were compared over time for each of eight images at the individual level using paired statistical tests. Although many patterns were generally consistent, there were a substantial number of differences over time, concerning both mild fluorosis and nonfluorosis images. Students tended to view both the fluorosis (two of five comparisons statistically significant) and nonfluorosis (one of three comparisons statistically significant) more favorably as fourth-year students. This may be due to increased understanding that these cosmetic concerns are generally not painful or progressive. (Supported by RO1-DE-09551.)

Kathy M. Lituri, RDH, BS, Gilberto Arciniegas, DDS, Aljernon J. Bolden, DMD, MPH, Alejandro Moreno, MD, MPH, Division of Community Health Programs (CHP), Section of General Internal Medicine, Health Law Department, Boston University Schools of Dental Medicine (BUSDM), Medicine, and Public Health, Boston, MA.*

WHAT DOES DENTISTRY HAVE TO DO WITH SURVIVORS OF TORTURE?

Objective: Improve the oral health of survivors of torture seeking assistance at the Boston Center for Refugee Health and Human Rights (BCRHHR), Boston Medical Center. *Methods:* Because survivors of torture frequently suffer malnutrition and direct trauma to the head, neck, and teeth, BUSDM/CHP & BCRHHR developed a collaborative program to assess and address the oral health needs of this patient population aiming to (1) screen, educate, and provide appropriate referrals; (2) enhance cultural competency of dental referral network; (3) educate BCRHHR nondental providers on oral health matters. Oral assessments are requested by a primary care physician. An exchange of torture history and cultural information enables CHP to prepare for visit. Patients are interviewed about their mouth, teeth, and dental history. The oral screening notes hygiene, decay, pain, gingival signs, trauma, malocclusions, pathology, and treatment priority. Patients receive appropriate oral health education and home care products. In addition, referral options are discussed and an appointment is made with a dentist to whom the torture, cultural, medical, and dental history is conveyed. *Results:* Between March and October 2000, 26 survivors of torture, representing 13 countries and 11 languages, and ages ranging from 6–65 years, received an oral screening, education, and referral. Four (15%) patients had never had an oral exam, 6 (23%) were referred for immediate dental treatment, 15 (58%) had suffered undernourishment, 15 (58%) had suffered trauma to the head, and of those 15, 2 (13%) had suffered trauma to the face resulting in loss of teeth or facial fracture. *Conclusions:* Addressing the oral health needs of survivors of torture contributes to their physical, mental, and social well-being. Exploring and sharing information about the needs of torture survivors bridges cultural gaps among patients, nondental health professionals, and oral health professionals.

Mark D. Macek, DDS, DrPH, Department of Oral Health Care Delivery, Baltimore College of Dental Surgery Dental School, University of Maryland, Baltimore, MD; Keith E. Heller, DDS, DrPH, Department of Epidemiology, University of Michigan School of Public Health, Ann Arbor, MI.*

X% OF DENTAL CARIES IS FOUND IN Y% OF PERSONS: AN AGE- AND DENTITION-DEPENDENT CONCEPT

Objective: Researchers and policy makers state that the majority of dental caries is found in a minority of the population, or X% of dental caries is found in Y% of persons. The purpose of this study was to assess the cumulative dental caries distribution and derive values of X and Y for different ages and dentitions. *Methods:* We used oral examination data from the third National Health and Nutrition Examination Survey to calculate X and Y values for the primary and permanent dentitions, across several ages. We used full sample weights and SUDAAN to derive weighted estimates of dental caries experience for the US civilian, noninstitutionalized household population. *Results:* For the primary dentition, among children aged 2 years, 75 percent of dental caries is found in 3 percent of persons, and among children aged 4 years, 75 percent of dental caries is found in 10 percent of persons. For the permanent dentition, among children aged 12 years, 75 percent of dental caries is found in 20 percent of persons, and among adults aged 19 years, 75 percent of dental caries is found in 37 percent of persons. *Conclusions:* Cumulative caries distribution varied with age and dentition; therefore, the blanket statement X% of dental caries is found in Y% of persons should not be used without specifying age and dentition. Otherwise, researchers and policy makers risk misrepresenting the true relation.

Ana Karina Mascarenhas, BDS, DrPH, Barbara Polivka, PhD, RN, Ohio State University, Columbus, OH.*

DETERMINANTS OF DENTAL ACCESS AND UTILIZATION BY ADULTS IN OHIO

Objective: To evaluate the determinants of dental access and utilization by adults in Ohio. *Methods:* Data from the Ohio Family Health Survey, a study sponsored by the Ohio Department of Health, was used in this study. The Ohio Family Health Survey is a telephone interview survey of access and use of medical and dental services by approximately 16,261 adults across the state of Ohio. *Results:* The demographic distribution of the sample was 43.5 percent males and 56.5 percent females, 89.8 percent whites, 6.5 percent African Americans, 1.8 percent Asian, and 1.9 percent other. In 33.7 percent of the sample the county of residence was metropolitan, 15.6 percent suburban, 24.3 percent rural non-Appalachian, and 26.4 percent Appalachian. In the bivariate analyses, dental utilization (defined as at least one dental visit in the past 12 months) was substantially lower in the elderly, in those whose income was less than 300 percent of the federal poverty level, in Appalachians, and in those with no dental insurance during the past year. More respondents reported a need for dental care than for any other unmet service need. *Conclusion:* Increasingly, as the population in the United States is living longer, as well as retaining their teeth, dental access and utilization represents an important component of the health care process.

Gerardo Maupomé[1,2], P. Michele Williams[1], Christopher C.L. Wyatt[1], Michael I. MacEntee[1], [1]University of British Columbia, Vancouver BC, Canada; [2]Center for Health Research, Portland, OR.*

ORAL HEALTH STATUS OF INSTITUTIONALIZED CANADIANS USING AN INDEX OF CLINICAL ORAL DISORDER IN ELDERS (CODE)

Objective: To establish a baseline assessment for a five-year longitudinal study of oral health status and health care needs in an institutionalized population living in long-term and intermediate care facilities in Vancouver, British Columbia. *Methods:* An Index of Clinical Oral Disorder in Elders (CODE) (Gerodontology 1999;16(2):85-96) has been implemented in a Microsoft Access™ platform designed to input data chairside and to generate summaries at the individual and institutional levels. Elders were examined between October 1999 and May 2000 in five facilities (extended and intermediate care). *Results:* 557 residents (mean age 85 years; female 65%) had their mouths examined: 44 percent were completely edentate and 56 percent partially dentate. While 71 percent had at least one carious tooth (mean=6.2 carious lesions per person), 68 percent of lesions involved the pulp. Forty-seven percent of residents had at least one periodontally involved tooth; 32 percent had mucosal abnormalities; and 72 percent and 61 percent had a mandibular or maxillary dysfunction, respectively. Treatment needs were evident as 42 percent of residents needed dental hygiene, 23 percent at least one restoration, 25 percent some form of prosthetic device, and 31 percent needed at least one tooth extracted. *Conclusions:* There are scant North American data pertaining to the incidence of oral diseases/conditions and the evolution of treatment needs in old and very old populations. Enhanced access, financing, and guidelines are being negotiated with stakeholders and provincial agencies, using the present data as a demonstration case to place in context the challenge of providing appropriate health care to this population.

Jill Marr, CDA, Nebraska Department of Health & Human Services/Dental Division, Kearney, NE; Denise Brill, CDA, Nebraska Department of Health & Human Services/Dental Division, Scottsbluff, NE; Kim McFarland, DDS, MHSA, Nebraska Department of Health and Human Services/Dental Division, Lincoln, NE.*

FINDINGS FROM A STUDY OF EARLY CHILDHOOD CARIES PREVALENCE IN NEBRASKA CHILDREN FROM BIRTH TO AGE 5

Objectives: For the first time ever, to provide prevalence data on Early Childhood Caries for Nebraska children living in fluoridated communities. *Methods:* Screenings were conducted by two Community Dental Health Coordinators (certified dental assistants) and one dentist on children aged birth to 5 years in day care centers. The day care centers were selected geographically based on water fluoridation status. The screenings were conducted using a flashlight and a tongue depressor in a knee-to-knee position. The Association of State and Territorial Dental Directors, (ASTDD) Screening Training Project (STP) index was utilized. Findings were characterized as 0 (no obvious oral health problems; routine dental care recommended), 1 (observable oral health problems; early dental care recommended) or 2 (presence of pain, swelling, and possible infection, or three or more areas of possible decay; emergency dental care recommended). *Results:* 939 children were screened in 31 day care centers. Of the 939 children screened 23 (2%) were classified as 2, 129 (14%) as 1, and the remaining 787 (84%) were classified as 0. *Conclusion:* Of the total number of children screened in low-income day care centers of Nebraska, 16 percent had visible decay for which they needed to see a dentist.

Michelle McQuistan, BA, Christopher Squier, PhD, FRCPath, College of Dentistry, University of Iowa, Iowa, City, IA.*

TOBACCO MARKETING STRATEGIES TO WOMEN IN THE US VERSUS LOW-INCOME COUNTRIES AND THE RELATED HEALTH IMPLICATIONS

The World Health Organization (WHO, 1998) estimates that the number of people worldwide who will die each year from tobacco-related disease will rise to 10 million by the year 2025. In contrast to the US, where smoking rates among women is similar to those of men, rates among women in low- and middle-income countries are significantly lower than men. However, as women gain improved social and economic status in these countries, more women are beginning to smoke. Tobacco companies have recognized this potential new market, and they have initiated campaigns aimed at women that promote images of glamour and independence that mirror those used in the US over the last 25 years. Associated with the greater use of tobacco among women is an increase in disease such as breast cancer. Smoking may also cause infertility and cranial-facial defects such as cleft palate. Furthermore, environmental tobacco smoke (ETS) has been linked to an increase of sudden infant death syndrome and asthma among children. These risks pose enormous challenges in low-income countries, where the health risks associated with smoking are not well understood among the general population. This presentation will illustrate and discuss the advertising techniques that have been employed by tobacco companies to attract women to their product in the United States, compare this with approaches currently being used in low- and middle-income countries, and offer public health policies and educational interventions to resist them.

Robert E. Mecklenburg, DDS, MPH, Tobacco Control Research Branch, National Cancer Institute, Bethesda, MD.*

DENTAL PUBLIC HEALTH IN GLOBAL AND NATIONAL TOBACCO-FREE INITIATIVES

Objective: To be able to reference one's own tobacco use prevention and control activities to recent and planned developments at global and national levels. The World Health Organization's Tobacco-free Initiative is creating new opportunities for dental public health workers. Progress made by the WHO Framework Convention on Tobacco Control, clearer understanding about the nature of tobacco dependence and withdrawal, the new Public Health Service Clinical Practice Guideline, Treating Tobacco Use and Dependence, results from the second International Conference on Smokeless/Spit Tobacco, new partnerships among dental programs in US agencies and with the private sector, and much more are contributing to a shift in emphasis toward developing the policy, administrative, education, and practice changes needed to establish tobacco-intervention services as a dental practice norm.

Elizabeth Mertz, MPA, Center for the Health Professions, University of California, San Francisco; Edward O'Neil, MPA, PhD, Division of Family and Community Medicine, University of California, San Francisco; Carolyn Manuel-Barkin, MPP, MPH, Center for the Health Professions, University of California, San Francisco, Beverly Isman, RDH, MPH, Dental Health Consultant.*

IMPROVING ACCESS THROUGH SAFETY NET EXPANSION AND SYSTEM INTEGRATION

Objective: To assess successful trends, models, and evaluation methods of policies and programs for expanding access to oral health care. *Methods:* A literature review assessed the current barriers to oral health care and existing dental public health approaches. Structured interviews of over 100 dental safety net programs were conducted. Programs were selected to represent a variety of approaches, regions, and populations served. Interviews identified: program type; barriers to dental care in the community; target populations; program description, including methods used to overcome access barriers; program financing and administration; organizational partners; presence of evidence-based practices; program evaluations; implementation challenges and successes. Programs were categorized into 13 broad "safety net" strategies. Each strategy was then evaluated for strengths and weaknesses. *Results:* Themes found in successful approaches included integration with other community services, strong leadership, creativity in service delivery, and collaborative approaches. Most programs were constrained by workforce shortages, financial difficulties, and environmental factors. Very few programs used evidence-based practices or conducted any systematic evaluations of their efforts. *Conclusions:* Understanding what strategies exist and how they interact with the broader public health and dental delivery system is an important first step in formulating systemwide strategies to expanding access to oral health care. A strong set of strategies exist; however, they must be integrated within broader health and services systems, they must focus on prevention, and they must be greatly expanded if they are to be successful in increasing access to quality oral health care.

M. Doherty, DMD, A. Mira, BDS, MSC, G. Shostak, MPH, M. Henshaw, DDS, MPH, Boston University School of Dental Medicine, Boston University, Boston, MA.*

A COST COMPARISON OF TWO PROGRAMS PROVIDING DENTAL CARE TO ADOLESCENTS IN THE MASSACHUSETTS DEPARTMENT OF YOUTH SERVICES (DYS)

Objective: To analyze the cost benefit of two programs providing dental treatment for adolescents committed to facilities managed by the Massachusetts DYS. *Methods:* Four dentists (one FTE) and four assistants (one FTE) utilized mobile equipment to provide dental treatment for 3,000 adolescent residents in 55 residential programs in MA. Services provided included charting and examination, prophylaxis, fluoride treatment, sealants, and restorations. The compensation for services was Medicaid fees. Prior to development of the mobile program, the adolescents were transported to private dental offices and community health centers. The differences in costs for these programs were assessed. *Results:* 3,000 patients were seen and 12,000 procedures were performed. The value of the procedures performed as tabulated from median private and health center fees was $321,700 plus $300,000 for transportation. The transportation cost of $100/visit involves the utilization of a vehicle, a driver, and one or two staff. The total cost to the Commonwealth of this program was $621,700 ($51.8/procedure). In comparison, the cost of the mobile program was $191,500 in Medicaid fees plus $53,982 in equipment, salary, and supplies. By utilizing the mobile program, the total cost dropped to $245,482 ($20.5/procedure), for a savings of $376,218. *Conclusions:* The mobile program is an efficient and financially viable way to provide dental care to committed adolescents as exhibited primarily by the elimination of transportation fees by bringing oral health providers to the programs. It is important to note that the average adolescent had four procedures. This analysis assumed that all procedures were completed in one visit; therefore, the transportation costs were conservatively calculated at $300,000. If adolescents were to be transported to the dentists' office more than once, the transportation costs would have been higher, translating into greater cost savings.

Vinod Miriyala, BDS, MPH, Robert Weyant, DMD, DrPH, Patricia Corby, DDS, Department of Dental Public Health, School of Dental Medicine, University of Pittsburgh and Mike Manz, DDS, MPH, School of Dentistry, University of Michigan.*

THE USE AND KNOWLEDGE OF DENTAL SEALANTS AMONG PENNSYLVANIA DENTISTS

Objective: The purpose of this survey was to assess the extent of use and knowledge of dental sealants among private practice dentists in Pennsylvania via a mailed questionnaire. Additionally, reasons for under utilization of sealants were explored. *Methods:* A random sample of dentists who were listed as either general practitioners or pediatric dentists in Pennsylvania were selected for participation. Questions regarding sealant use and attitudes toward sealant effectiveness were mailed to a sample of 500 dentists in Pennsylvania. *Results:* 47 percent of the dentists responded to the survey; 90 percent of dentists who responded reported using sealants. Most dentists (90%) applied the sealants themselves. However, 50 percent of respondents indicated that hygienists also applied sealants in their offices. Ninety-seven percent of the respondents agreed that the effectiveness of sealants in preventing caries is scientifically proven. The top three reasons stated by them were that occlusal fillings are preferred over sealants, that there are not enough child patients in their practice, and that insurance programs do not reimburse for sealants. Also the respondents stated that sealants do not last long in the mouth. *Conclusion:* There is a high prevalence of sealant use among Pennsylvania dentists who responded to this survey.

Mahyar Mofidi, DMD, MPH, Cecil G. Sheps Center for Health Services Research, Chapel Hill, NC; Gary Rozier, DDS, MPH, School of Public Health, University of North Carolina, Chapel Hill, NC; Rebecca King, DDS, MPH, Dental Health Section, Division of Public Health, Raleigh, NC.*

PROBLEMS WITH ACCESS TO DENTAL CARE FOR MEDICAID-INSURED CHILDREN: WHAT CAREGIVERS THINK

Objectives: The purpose of this study was to gain insights into caregivers' perspectives on problems with access to dental care for their Medicaid-insured children. *Methods:* Criterion purposive sampling was used to select participants for 11 focus groups, which were conducted in three locations in North Carolina. Seventy-seven caregivers of diverse ethnic and racial backgrounds participated. Full recordings of sessions were obtained and transcribed. A comprehensive content review of all data including line-by-line analysis was conducted. *Results:* Negative experiences with the dental care system discourage many caregivers from obtaining dental services for their Medicaid-insured children. Searching for a provider, arranging an appointment where choices are severely limited, and finding transportation leave caregivers discouraged and exhausted. Caregivers who successfully negotiate these barriers encounter additional barriers in the dental care setting, including long waiting times and judgmental, disrespectful, and discriminatory behavior from staff and provider because of their race and public assistance status. *Conclusion:* Current proposals to solve the dental access problem likely will be insufficient until many of the barriers identified by caregivers are addressed.

Sena Narendran, BDS, DDPH, MSc, Jarvis Chan, DDS, PhD, Stewart Turner, PhD, Harris Keene, DDS, Dental Branch, University of Texas Health Science Center, Houston, TX.*

DENTISTS' KNOWLEDGE, ATTITUDE, AND PRESCRIPTION PRACTICES OF FLUORIDE SUPPLEMENTS

The purpose of the study was to determine dentists' knowledge, attitude, and prescription practices of fluoride supplements. The study population consisted of 360 general dental practitioners from the city of Houston, TS. Data were collected by a self-administered mail questionnaire that consisted of 13 open-ended and 29 precoded items. The effective response rate to the survey was nearly 40 percent. The majority of the respondents were male (75%) and the mean number of years in practice was 20.1±10.4. A majority of the population agreed with fluorides' cost-effectiveness (88.4%) in preventing dental caries, as well as its benefits to adults (87.7%). While 53.2 percent of the respondents felt that systemic effects were more important than topical in preventing caries, another 31 percent were uncertain about the predominant effect of fluorides. Only 7.2 percent felt that fluoride supplementation should commence between 6–12 months and 16.7 percent would stop prescribing fluorides to patients at 16 years of age. Proportions of incorrect responses to fluoride supplement prescriptions ranged from 33.3 percent to 84.1 percent. Nearly 75 percent believed that mechanics of toothbrushing is more important than fluorides in caries prevention. Results indicate deficiencies and ambiguity in fluoride knowledge among respondents. Supported by Centers for Disease Control and Prevention.

Victor M. Badner, DMD, MPH, Nora A. Odingo, BDS, DMD, MPH, Montefiore Medical Center, Bronx, NY.*

A PILOT STUDY INVESTIGATING PERIODONTAL INFECTION AS A RISK FACTOR FOR LOW BIRTH WEIGHT

Objective: To investigate the prevalence of periodontal diseases in pregnant women and to assess the birth outcomes in those with periodontal infection. *Methods:* A convenient sample of 33 pregnant women attending prenatal clinics in the Bronx, NY, was recruited. A periodontal assessment was made during prenatal visits using the Community Periodontal Index (CPI). The CPI was used as it is a simple, low-cost, and low-technology tool that may be used in large populations for screening of periodontal diseases. Medical history and sociodemographic data were obtained from obstetric records. Pregnancy outcomes were obtained from the women by telephone report. *Results:* 13.3 percent of the neonates had low birth weight (<2,500 g). 54.5 percent of the women had some form of periodontal disease. 75 percent of those with periodontal infection had babies with low birth weight. However, this was not statistically significant (P>.05). There was no association between periodontal infection and medical or sociodemographic variables (including previous history of low birth weight, number of previous pregnancies, sexually transmitted diseases, age of mother, ethnicity). *Conclusion:* The association between low birth weight and periodontal infection was not statistically significant. This finding may be attributed to the small sample size. A future study of similar design using a population of 425 women (as determined by a power calculation) will be likely to produce a statistically significant result.

Sharon J. Perlman, DDS, MPH, Dental Health Services, Angela Jaszczak, MPH, CHES, Epidemiology and Data Development, Seven M. Seweryn, MPH, Epidemiology and Data Development, Cook County Department of Public Health, Bureau of Health Services, Chicago, IL.*

SCHOOL-BASED SEALANT PROGRAMS—WHAT BENEFITS DO THEY PROVIDE? AN ASSESSMENT OF A DENTAL SEALANT PROGRAM

Objective: To assess the impact of a sealant program. *Methods:* A clinical examination and preventive dental services were provided to 5,499 children in schools throughout suburban Cook County, IL, during a two-year period. Of these, 11 school districts having at least 95 records were selected for analysis. A total of 4,055 records were reviewed. The oral health status, demographic variables, insurance status, and access to school-based preventive care programs were assessed. *Results:* No significant differences were seen in caries-free rates between children with Medicaid coverage compared to those without insurance (34% vs 37%). Overall rates of untreated decay were not significantly different in insured vs uninsured students (34% vs 33%). Further, sixth graders with a history of sealants were less likely to have untreated decay than those without a sealant history (38% vs 47%, $P<.05$). *Conclusions:* From these data it is apparent that insurance coverage alone does not ensure that patients have better oral health or receive regular dental care. Sealant programs fill in this gap by providing definitive preventive care, identifying otherwise unrecognized pathology and then linking patients to treatment.

Renee Newton, RDH, MPA, Dental Health Foundation, Oakland, CA; Kathy Phipps, DrPH, Research Consultant, Newport OR.*

EVALUATION OF THE CHILDREN'S DENTAL HEALTH INITIATIVE'S SCHOOL-BASED DENTAL PROGRAM

Objective: To evaluate the effectiveness of school-based dental programs (SBDP) in increasing access to preventive dental services and in referring children for necessary dental care. *Methods:* Five different data sources were used to evaluate the program that included; telephone interviews with local coordinators, mail surveys of participating providers, baseline and follow-up oral health screenings at program and comparison schools, focus groups with parents and school staff, and parent surveys. *Results:* A total of 1,870 children received both a baseline and follow-up screening. At the end of the 1999–2000 school year, 37 percent of the children at the SBDP schools had dental sealants, compared to only 15 percent at the non-SBDP schools. Sealant retention rates ranged between 52–91 percent, with the average being 77 percent. The SBDP had only a slight impact on the need for dental care with 10 percent of the SBDP children showing improvement in treatment need, compared to 7 percent at comparison schools. Only 48 percent of the dental providers reported that they recommended sealants for teeth with incipient decay. *Conclusions:* The SBDP increased access to preventive dental services, including topical fluorides and dental sealants. If school-based dental programs are to improve the oral health of high-risk children, they must include both a preventive and restorative component. Based upon the evaluation findings that 80 percent of programs stated they provided training and only 29 percent of providers reported that they received training, it appears that sealant retention is highly dependent upon quality provider training.

Kathy Phipps, DrPH, Oregon Health Sciences University, Portland, OR; Eugenio Beltrán, DDS, DrPH, Centers for Disease Control and Prevention, Atlanta, GA; Beth Hines, MPH, Washington State Department of Health, Olympia, WA.*

ECC IN INFANTS AND TODDLERS — A STATEWIDE PERSPECTIVE

Most prevalence surveys of early childhood caries (ECC) have used convenience samples, most often Head Start enrollees. Because children in Head Start are low income, they are not representative of the entire population. In addition, Head Start children are usually 4–5 years of age and are too old for an accurate estimate of ECC in infants and toddlers. The purpose of this study survey was to determine the prevalence of and risk factors for ECC among a random sample of 1–2 year olds in Washington State. We partnered with the Washington State Lead Poisoning Prevalence Survey. The Lead Survey used birth certificates to select a stratified random sample of children aged 1–2 years. Children of farm workers and Hispanics were oversampled. During home visits, trained nurses completed a risk-factor questionnaire, an oral screening plus collected blood, tap water, and saliva. Out of the 900 birth certificates selected, 554 children were located and participated. Fourteen percent of the children had a history of dental caries, 13 percent had untreated decay, and 9 percent had hypoplasia. In multivariate models, age of the child, household income, education of the mother, and previous visits to the dentist were significant predictors of ECC. In a different dimension, mothers were able to ascertain, with a high level of accuracy (P=.001), the oral health status of their children. *Conclusion:* ECC is a significant public health problem and the statewide prevalence in Washington is higher than anticipated.

Kate M. Pierce, DDS, R. Gary Rozier, DDS, MPH, William F. Vann, Jr, DMD, PhD, University of North Carolina at Chapel Hill, Chapel Hill, NC.*

ACCURACY OF PHYSICIANS' SCREENING AND REFERRAL FOR EARLY CHILDHOOD CARIES

Objective: To determine whether physicians can accurately identify and record cavitated carious lesions on young children and whether they can identify children who need a referral to a dentist. *Methods:* Children 9–36 months of age who were eligible for North Carolina's Medicaid Preventive Dental Program were recruited to participate. The final sample included 258 children (mean=1.7 years) who were receiving routine medical care at Thomasville Pediatrics. A pediatric dentist and a pediatrician conducted an oral screening examination when each child presented for a routine medical appointment. Each examiner recorded clinical information (including unerupted, missing, and carious teeth), as well as whether the child needed a referral to a dentist. Sensitivity and specificity were calculated to determine the accuracy of the physicians' screening examination and referral when compared with a gold standard (the pediatric dentist). *Results:* The pediatric dentist identified 25 (9.7%) children who had one or more cavitated carious lesions. The pediatricians achieved a sensitivity of 48.8 percent and a specificity of 97.1 percent for individual teeth versus the gold standard. They achieved a sensitivity of 76 percent and a specificity of 95.3 percent in identifying which children had one of more carious lesions. When determining those children who needed a referral to a dentist, the pediatricians achieved a sensitivity of 63 percent and a specificity of 97.4 percent. *Conclusion:* Pediatricians achieved a reasonable level of accuracy when screening for caries in young children. (Supported by MCH grant #MCJ379494.)

Patrick Blahut, DDS, MPH, Ann Racy, RDH, Candace Jones, RDH, MPH, Chris Halliday, DDS, Tim Lozon, DDS, Division Oral Health, Indian Health Service, USPHS, Rockville, MD.*

TOBACCO USE BY NATIVE AMERICANS: 1999 ORAL HEALTH SURVEY RESULTS

Objective: Assess prevalence of tobacco use among American Indians and Alaska Natives (AI/AN) as part of overall assessment of oral health. *Methods:* Convenience sample of IHS dental facility users, stratified by age. 12,900 AI/AN in all IHS geographic Areas were examined. Patients were asked about tobacco use. Additional data regarding patients' desire to quit were gathered from review of 519 health histories. Comparisons made with data from the 1991 national oral health survey. *Results:* Self-reported prevalence of use of tobacco varied widely by geographic locale, ranging from 14 percent in northern Arizona to 54 percent in northern plains. Only 21.6 percent desired to quit using tobacco products. Most significant change, from 1991 to 1999: prevalence of tobacco use in younger cohorts has increased significantly. *Conclusions:* Prevalence of tobacco use is significantly higher than among non-Native Americans. Two disturbing trends: (1) increased prevalence of use among adolescents in geographic locales that have in the past consistently exhibited extremely low rates of tobacco use, and (2) prevalence of use failed to significantly decrease from 1991 to 1999. Trends during the last decade relative to both geographic locale and age are discussed. Ramifications for future initiatives are suggested. Reactions of Native American Health Educators to these data are discussed.

Susan G. Reed, DDS, DrPH[1,3], Sharon H. Crossley, RDH, MPH[1], James S. Zoller, PhD, MHSA[3], David M. Ward, PhD[2,3], Stacy A. Nash, MPH[1], Frances W. Lee, DBA[2]. [1]College of Dental Medicine, [2]College of Health Professions, [3]Center for Health Care Research, Medical University of South Carolina, Charleston, SC.*

COST COMPARISON OF DENTAL OUTREACH ACTIVITIES

Objective: To assess the costs of different types of dental outreach activities from a dental college that provides dental education to populations at risk for dental disease. *Methods:* Dental outreach activities during the spring semester of 2000 were selected for study. An access database was designed to record requests, planning, actual, and evaluation data of dental outreach activities. Costs were itemized for dental personnel, equipment, and supplies. Personnel costs included both direct and indirect costs. Evaluations were completed by participants and recipients. *Results:* For the spring semester 2000, 16 speaking engagements reached 1,445 children (at least 50% from elementary schools), and five health fairs reached 413 adults and children. Preliminary results indicate similar costs per recipient for health fairs or for speaking engagements. *Conclusions:* This database provides useful cost and evaluation information to assist in decision making about dental outreach activities.

Nancy Reifel, DDS, MPH, Indian Health Service, Los Angeles, CA; Tad Mabry, DDS, Indian Health Service, Wewoka, OK; Kathy Phipps, DrPH, Oregon Health Sciences University, Portland, OR.*

THE ORAL HEALTH OF AI/AN CHILDREN AND ADOLESCENTS

Over the last 20–30 years, there has been a steady decline in the prevalence and severity of dental caries among US schoolchildren. Certain population groups—especially low-income and minority children—still have high caries rates. The 1999 IHS Dental Patient Survey targeted children 6–14 and 15–19 years. A total of 4,070 children between 6–14 years of age and 2,059 between 15–19 years were examined. For the 6–14-year-olds, 86 percent had a history of caries, 62 percent had untreated decay. For the 15–19-year-olds, 91 percent had a history of caries and 67 percent had untreated decay. The prevalence of sealants was high, ranging from 18 percent in 6-year-olds to 83 percent in 16-year-olds. About 17 percent of the 6–14-year-olds had at least one permanent tooth with fluorosis. A few children under 13 years of age reported using tobacco on a regular basis. The prevalence of tobacco use, however, started to rise at 13 years of age, with 3 percent of the 13-year-olds and 39 percent of the 19-year-olds reporting regular tobacco use. Periodontal status was assessed in the 15–19-year-olds and 18 percent of this group had periodontal pockets ≥4 mm and 18 percent had loss of attachment ≥4 mm. While significant decreases were seen in caries rates between 1984 and 1991, very little change has occurred since 1991.

Donald B. Rindal, DDS, Michael J. Goodman, PhD, B. Alex White, DDS, DrPH, HealthPartners Research Foundation, Minneapolis, MN, and Kaiser Permanente, Portland, OR.*

EVALUATION OF PRESCRIBING PRACTICES FOR FLUORIDE SUPPLEMENTS AMONG DENTISTS AND PHYSICIANS

Objective: To describe quantitatively and qualitatively the percentage of systemic fluoride prescriptions written by dentists, physicians, and other providers and analyze other factors that influence prescribing patterns, such as patient age and fluoridation of the community water supply. *Methods:* Dispensing data were examined from January 1, 1995, through June 30, 1999, at two health maintenance organizations with both medical and dental components. We identified all individuals at each site who had concurrent medical, dental, and pharmacy eligibility and had at least one or more visits to a medical or dental clinic. Descriptive statistics are utilized to analyze the data. Tables were generated that described the provider type, age distribution, total fluoride prescriptions filled, and fill rates per 1,000 individuals. *Results:* Prescribing rates were: dentists, 7 percent; physicians, 78 percent; and other providers, 15 percent. Overall rates of fluoride prescribing were much lower in the fluoridated community of Minneapolis/St. Paul than the nonfluoridated community of Portland, OR. Age data show that physicians write prescriptions at a higher rate for children from birth through age 2 years. Dentists prescribe fluoride supplements more commonly in children age 3–12 years. *Conclusions:* Prescribing practices appear appropriate in that fluoride fill rates are much higher in the nonfluoridated community as compared to the fluoridated community. Overall, physicians account for the majority of systemic fluorides prescribed, especially in the child younger than 3 years old. This result would be expected as the physician has the opportunity during well baby visits early in life. Children traditionally do not come in to the dental office until age 3 years, although the wisdom of this pattern is being questioned.

Tracy A. Rodgers, RDH, BS, Iowa Department of Public Health, Des Moines, IA.*

EVALUATION O. DATA TO DETERMINE THE NEED FOR SCHOOL-BASED SEALANT PROGRAMS IN IOWA

Objective: Assess the need for public health school-based sealant programs in Iowa. *Methods:* Three state surveys allow a comparison of sealant prevalence data on children's permanent molars. Two spring surveys conducted by the Iowa Department of Public Health, completed in 1999 and 2000, used visual screenings to measure the presence of at least one sealant on a permanent molar of third graders in 32 schools. A more comprehensive fall survey was completed in 1999, measuring decayed filled teeth and surfaces and presence of sealants on 2nd–4th graders in 13 school districts. Involved dentists and hygienists completed calibration training for the fall survey. The participating schools for all three surveys were chosen based on location of the state's Title V Child Health agencies. *Results:* Forty-nine percent and 39 percent of third graders had at least one sealant on a permanent first molar in the 1999 and 2000 spring surveys, respectively. Twenty-four percent of low SES and 37 percent of high SES in grades 2–4 had a sealant in the 1999 fall survey. Sixteen percent of low SES children had untreated occlusal decay in a molar, compared to 9 percent of high SES children seen in the 1999 fall survey. Also, 17 percent of children with dental coverage through Medicaid had at least one area of untreated occlusal decay, compared to just 8 percent of children with private dental insurance. *Conclusion:* Lack of preventive dental treatment continues to exist for lower income families. Continuation of public health school-based sealant programs targeting communities with a large enrollment of at-risk children ensures provision of effective preventive treatments to those populations.

Donald Sadowsky, DDS, PhD, David A. Albert, DDS, MPH, Kavita P. Ahluwalia, DDS, MPH, Sherri Sheinfeld Gorin, PhD, Alfred I. Neugut, MD, PhD, Ed Schooley, DDS, Columbia University School of Dental and Oral Surgery, New York, NY, and Aetna US Healthcare Roseland, NJ.*

COLUMBIA/AETNA US HEALTHCARE ADDRESSING TOBACCO IN MANAGED CARE DENTIST'S SURVEY OF TOBACCO-RELATED KNOWLEDGE AND ATTITUDES

Objective: To assess dentist tobacco knowledge and interventions with patients. *Methods:* Qualitative in office surveys and provider surveys have been completed on 41 offices recruited into the Aetna US Healthcare/Columbia University Addressing Tobacco in Managed Care Program in Pennsylvania, New Jersey, and New York. *Results:* At pretest, 16.1 percent of dentists routinely provided cessation counseling to more than 80 percent of their patients; 62 percent of dentists indicated that they were very willing or willing to receive training. Only 7 percent of the providers had received prior training in tobacco control; 16 percent recorded counseling behaviors in the patient's chart on more than 80 percent of their patients; 33.3 percent of dentists advised patients to quit smoking at every or almost every visit; 16.7 percent of dentists indicated that they had a specific strategy for discussing tobacco cessation with patients who smoke; 5.6 percent of dentists reported regular advice to use a transdermal patch and 11.1 percent of dentists reported regular advice to use nicotine gum. 12.5 percent of dentists indicated that time was not a barrier to incorporating tobacco cessation activities into the dental office, while 25 percent reported that reimbursement was not a barrier to incorporating tobacco cessation activities into practice. *Conclusion:* The pretest reveals limited knowledge and use of tobacco interventions by dentists, but an interest in integrating tobacco cessation into practice. (This project is funded by a grant from the Robert Wood Johnson Foundation.)

Margaret Scarlett, DMD, American Association of Women Dentists, Chicago, IL.

SEPARATE DOES NOT MEAN EQUAL: ORAL HEALTH AND HUMAN RIGHTS

Objective: To review available national and international human rights documents as they may relate to oral health. *Methods:* Published articles from Psych Lit, Medline, and United Nations documents. The Universal Declaration of Human Rights (UNHR) affirms "the dignity and worth of the human person and in the equal rights of men and women to promote social progress and better standards of life." Adopted by the United Nations on December 10, 1948, it also affirms that standard of life includes "housing and medical care, and necessary social services." The International Covenant on Economic, Social, and Cultural Rights (ICESR) proclaims the "need for the prevention, treatment, and control of epidemic, endemic, occupational, and other diseases." Beginning in 1969, the American Convention on Human Rights affirmed the goal to create "conditions where everyone may enjoy his economic, social, and cultural rights." *Conclusions:* Fifty-seven articles document the relationship between oral health and human rights. Oral health is a social justice issue, and relates to standard of life and dignity of persons within the context of UNHR. Oral diseases are epidemic and therefore relate to ICESR. Future policy and policy research must be devoted to positioning oral health as a basic human right.

Fred B. Skrepcinski, DMD, MPH, Indian Health Service, Albuquerque, NM; Kathy Phipps, DrPH, Oregon Health Sciences University, Portland, OR; Candace Jones, RDH, MPH, Indian Health Service, Rockville, MD.*

THE ORAL HEALTH OF AI/AN ADULTS AND ELDERS

In the past, IHS focused both its clinical and preventive services toward children. This focus has changed and IHS now provides services to adults and elders. In addition, more emphasis has been placed on the prevention and treatment of periodontitis, especially among diabetic patients. The 1999 IHS Dental Patient Survey examined 2,022 adults between 35–44 years and 2,066 elders aged 55 years or older. For the 35–44-year-olds, 81 percent had lost at least one tooth, while 2 percent had lost all of their teeth. On average, each adult had lost almost three teeth because of decay. Sixty-eight percent of the adults had untreated decay and 14 percent had at least one root surface with a history of caries. For the elders aged 55+, 24 percent had lost all of their natural teeth. Of the remaining elders, 56 percent had untreated decay and 32 percent had a history of root caries. On average, seven teeth were missing because of dental decay. Periodontitis was prevalent among both age groups, with 35 percent of the adults and 59 percent of the elders having pockets 4–5 mm. Pockets ≥6 mm were found in 19 percent of the adults and 25 percent of the elders. Smoking and diabetes were significantly related to the prevalence of advanced periodontitis in both age groups. These data suggest that tobacco use and diabetes have similar deleterious effects on periodontal status and tooth loss among adults and elders.

Woosung Sohn, DDS, PhD, DrPH, Brian A. Burt, BDS, PhD, MaryFran Sowers, PhD, University of Michigan, Ann Arbor, MI.*

FLUID CONSUMPTION PATTERNS AMONG CHILDREN BY SOCIODEMOGRAPHIC FACTORS

Objectives: To investigate the relationship of fluid consumption patterns and sociodemographic factors among US children aged 1–10 years. *Methods:* A secondary analysis of data from the Third National Health and Nutrition Examination Survey (NHANES III, 1988–94) was conducted (n=7,925). Fluid consumption data were from a 24-hour dietary recall survey. Cluster analysis was conducted using SAS FASTCLUS procedure to determine fluid consumption patterns. SUDAAN (Release 7.5) was used to adjust standard errors for the complex sampling design of NHANES III. Generalized multinomial logistic regression models were constructed for categorical outcome using the SUDAAN MULTILOG procedure. *Results:* By using cluster analysis, we grouped children into four distinct patterns of fluid consumption: high carbonated drinks (HC), high juice (HJ), high milk (HM), and high water (HW). This analysis found that age, sex, race/ethnicity, and SES are significantly associated with children's fluid consumption patterns. African American children were more likely to be in the HW cluster and less likely to be in the HM cluster than any other ethnic group. Children from low-SES families were more likely to be in the HW cluster and less likely to be in the HJ cluster. *Conclusions:* It is suggested that fluid consumption patterns and sociodemographic factors should be considered in future research and public policy making for fluoride use.

Kari L. Steinbock, BSDH, RDH, John J. Warren, DDS, MS, College of Dentistry, Charles F. Lynch, MD, PHD, College of Public Health, University of Iowa, Iowa City, IA.*

DESCRIPTIVE EPIDEMIOLOGY OF ORAL AND PHARYNGEAL CANCER IN IOWANS, 1973–97

The objectives of this study were to determine the incidence and mortality of oral and pharyngeal cancer in Iowans during 197–97, and to study the relationships between selected demographic variables and oral and pharyngeal cancer during those same years. The primary data source for incidence data from 1973–97 was the SEER data system and NCHS for mortality data during the same time period. All rates are per 100,000 population and 1970 world standard was used for age-adjusted rates. For both sexes and races combined, the overall crude incidence rate increased from 11.06 in 1973–77 to 12.52 from 1993–97. The crude incidence rates for both males and females saw an increase of about 2.4 (males: 17.36 to 19.71, females 5.04 to 7.41). However, this was an increase of 11.9 percent for males and 31.9 percent for females. Age-adjusted incidence rates for both sexes combined during the same two time periods remained relatively the same, although males saw a decrease in incidence and females an increase. The crude mortality rates for both sexes combined decreased from 3.12 in 1973–77 to 2.84 in 1993–97. Males also experienced a decrease in crude mortality rate from 4.33 to 3.71, and females a slight increase from 1.97 to 2.02 during these periods. Age-adjusted mortality rates for both sexes combined went from 2.67 in 1973–77 to 2.08 in 1993–97, male rates decreased from 4.16 to 3.19, and female rates decreased from 1.52 to 1.17. As the population lives longer, incidence and mortality of oral and pharyngeal cancer will remain a challenge for medical and dental professionals. Prevention and intervention strategies need to be developed and implemented to focus attention on those groups, particularly women.

Denice C.L. Stewart, DDS, MHSA, Department of Community Dentistry, Oregon Health Sciences University, Portland, OR, Alexander N. Ortega, PhD, David Dausey, MPhil, Division of Health Policy and Administration, Yale University School of Public Health, New Haven, CT.*

ORAL HEALTH AND USE OF DENTAL SERVICES AMONG HISPANIC SUBGROUPS

Objectives: This study assessed factors related to oral health and dental service use among Mexican Americans, Cuban Americans, and Puerto Ricans from the Hispanic Health and Nutrition Examination Survey, 1982–84 (HHANES). *Methods:* Six categorical measures of oral health were stratified by the subgroups to assess perceived oral health (self-reported condition of teeth and gums) and evaluated oral health status, decayed permanent teeth, teeth missing due to caries, total permanent teeth present, and periodontal classification. Multivariable models using logistic regression were analyzed to examine the effect of acculturation, education, dental insurance, family income, and perceived condition of teeth and gums on dental care use in the past two and five years. Adjusted odds ratios and 95 percent CIs are reported. *Results:* Demographics, oral health status, access and utilization of oral health care, and acculturation differed among Cuban Americans, Mexican Americans, and Puerto Ricans. Factors influencing access to dental care included insurance and education for all three groups and acculturation for Mexican Americans. *Conclusions:* In addition to the usual factors influencing access to dental care, acculturation may also be an important factor for Mexican Americans.

Louis Susi, BA, Ana Karina Mascarenhas, BDS, DrPH, Ohio State University, Columbus, OH.*

DISTRIBUTION OF DENTISTS IN OHIO USING GIS

Objective: To study the spatial and regional inequalities in the distribution of dentists throughout the sate of Ohio using Geographical Information System (GIS). *Methods:* For this project, three databases on Ohio dentists were identified and mapped by zip code, county, and regional subgroup using Arc View 3.2. One database, maintained by the Ohio Dental Board, consisted of the 6,132 licensed dentists in Ohio. The second database was of 1,898 dentists who billed Medicaid in 1998. The third was a database of Safety Net clinics. *Results:* The distribution of dentists in Ohio was 69.4 percent in 12 metropolitan counties, 14 percent in 17 suburban counties, 9 percent in 30 rural non-Appalachian counties, and 7.6 percent in 29 Appalachian counties. Also, the 9 most populated counties contained 65 percent of Ohio's dentists, but only 52 percent of its population. Finally, the dentist-to-population ratio in metropolitan counties was 1:1,479 and 1:3,146 in Appalachian counties. *Conclusion:* Obvious disparities exist in the distribution of dentists in Ohio, particularly in the rural and Appalachian counties. Our recommendation is that the state of Ohio set forth an incentive program to attract dentists to these areas.

Michael R.J. Felix, Felix, Burdine and Associates; Amy L. Abel, MSPH, Felix, Burdine and Associates; James Sutherland, DDS, MPH, HRSA; Dee Raisl, HCFA, , Denver CO.*

STATE LEVEL "ORAL HEALTH SUMMITS" AS A VEHICLE FOR ORAL HEALTH POLICY CHANGE: PROCESS AND PROOF

Objective: To describe a methodology for organizing and implementing a state-level "Oral Health Summit," as one component of a state oral health policy change strategy. *Methods:* Policy change is essential for expanding oral and dental health services to the underserved. The authors have helped plan and facilitate state level oral health strategies in five states since November 1999, as part of the national Oral Health Initiative. The preparation process, agenda, and facilitation method for a state "Oral Health Summit" as one component of a state strategy will be described, as well as summit follow-up activities that effectively begin the policy change process. *Results:* Outcomes from activities to date in MD, MO, MT, ND, and UT will be described. Lessons learned and applications for states considering oral health summits will also be presented. *Conclusions:* Oral health summits are an effective component of the oral health policy change process in states.

Scott L. Tomar, DMD, DrPH, University of Florida College of Dentistry, Gainesville, FL; Stuart Lockwood, DMD, MPH, Dolores Malvitz, DrPH, Division of Oral Health, Centers for Disease Control and Prevention, Atlanta, GA.*

STATES' SUCCESS IN ACHIEVING HEALTHY PEOPLE 2000 ORAL HEALTH OBJECTIVES

This report summarizes the success of the 50 states and Washington, DC, in achieving three Healthy People 2000 Oral Health Objectives. 13.3: "Increase to at least 45 percent the proportion of persons aged 35–44 years who have never lost a permanent tooth due to caries or periodontal disease." 13.4: "Reduce to no more than 20 percent the proportion of people aged 65 years and older who have lost all of their natural teeth." 13.14: "Increase to at least 70 percent the proportion of people aged 35+ years using the oral health care delivery system during each year. Subobjectives: aged 65+ years (60%) and edentulous persons (50%)." Data were from the 1999 Behavioral Risk Factor Surveillance System (BRFSS), a state- and telephone-based system conducted among persons aged 18+ years. Questions on tooth loss and dental visits were included in the 1999 BRFSS core questionnaire. Sample sizes ranged from 1,248 (NH) to 7,543 (KY) (median=2,910). Data were weighted to state populations and analyzed by using SUDAAN software. The proportion of persons aged 35–44 years who had never lost a tooth due to disease ranged from 32.8 percent (NC) to 73.4 percent (MN); median=59.2 percent. Seven states and Washington, DC, did not meet the target. Total tooth loss among persons aged 65+ years ranged from 15.9 percent (HI) to 44.3 percent (WV); median=25.6 percent. Only 10 states met the target. Past-year dental visits among persons aged 35+ years ranged from 53.1 percent (WV) to 79.3 percent (CT); median=68.5 percent. Twenty-nine states did not meet the objective. Dental visits among those aged 65+ years ranged from 42.7 percent (WV) to 75.9 percent (HI); 17 states did not meet the target. Dental visits among edentulous persons ranged from 12.1 percent (ND) to 36.8 percent (HI); no states achieved the target of 50 percent. Although many states exceeded targets for these oral health objectives, the wide range suggests there are substantial opportunities for improvement.

Nancy Waddell, Program Officer, Washington Dental Service Foundation, Seattle, WA; Dianne Riter, MPH*, Public Benefit Program, Washington Dental Service, Seattle WA*

EVALUATION OF ABCD PROGRAM FOR IMPROVING ACCESS FOR LOW-INCOME YOUNG CHILDREN

Objective: Washington State's Access to Baby and Child Dentistry Program (ABCD) is a public/private partnership designed to increase access to preventive and restorative dental care for Medicaid-eligible children from birth to age 6 years, with emphasis on enrollment by age 1 year. Washington Dental Service Foundation provides local funding and technical assistance for five of the seven Washington ABCD programs. With the state Medicaid office, we are tracking outcomes of access to dental services and dental provider participation to determine whether the goals of the program are being met. *Methods:* Dentists receive specialized pediatric dental education from the University of Washington to help them successfully treat young patients. Client families are coached to improve patient behavior. Public health agencies and dental societies do outreach to clients and providers. The ABCD model is also being considered by other states and the AAPD as a "best practice" for improving access. *Results:* ABCD programs have enrolled over 15,000 children from birth through age 5 years since 1995. In FY 2000, there was a 23 percent and 16 percent increase in children 0–5 years accessing dental services in Franklin and Yakima counties, respectively, where ABCD programs had operated for up to a year. WDS surveys of newly enrolled ABCD clients in these two counties reveal that only 23 percent report going to the dentist once a year, compared to 44 percent of surveyed WIC enrollees. This implies ABCD programs may be reaching children who have had minimal access to dental services in the past. Predental visit family orientations have resulted in no-show rates of less than 10 percent. WDS surveys of dentists in ABCD counties show that training in early pediatric techniques has a positive impact on attitudes and skills of dentists with regard to seeing patients aged 2 years or younger. These surveys also show that ABCD participating dentists provide more preventive services to ABCD clients than to other Medicaid clients, treating them more like private-pay patients. *Conclusions:* ABCD is effective in increasing access to dental services for hard-to-reach low-income children, coaching families to be better dental customers, and encouraging dentists to see younger children for preventive services. Additional federal or state funding will be crucial to achieving long-term sustainability.

Jayanth V. Kumar, DDS, MPH, Sangeeta Wadhawan, BDS, MPH, Bureau of Dental Health, New York State Department of Health, Albany, NY.*

ORAL HEALTH SERVICE UTILIZATION IN HOSPITAL OUTPATIENT FACILITIES IN NEW YORK STATE

Objective: The objective was to study the extent of utilization of hospital outpatient facilities for oral health related illnesses in New York State. *Methods:* Data were obtained from the 1998 Statewide Planning and Research Cooperative System (SPARCS) to determine the extent of utilization of outpatient hospital services. Using ICD-9-CM codes, 17,708 oral health related visits were analyzed. *Results:* Oral health related conditions resulted in 17,708 (1.5%) outpatient visits in 1998. Fifty-six percent of these visits were due to inflammatory or infectious conditions of teeth. Dental caries accounted for 31 percent of all the visits. Other major categories were related to injury (18%), neoplastic diseases (17%), and congenital conditions (7%). Three thousand fifty-six (17%) children under age 6 years visited a hospital outpatient service for dental caries. *Conclusion:* These data illustrate that dental caries continues to be a significant problem and results in a large number of hospital visits.

John J. Warren, DDS, MS, Barbara A. Broffitt, BSEd, MS, Boipelo Mariri, DDS, Steven M. Levy, DDS, MPH, Michael J. Kanellis, DDS, MS, University of Iowa, Iowa City, IA.*

SEVERE EARLY CHILDHOOD CARIES: ROLE OF FLUORIDE EXPOSURES AND DIET

Early childhood caries (ECC) continues to be a serious health problem in the United States. Unfortunately, a full understanding of risk factors for ECC has been elusive, in part because of limitations in study designs and inconsistent case definitions. This paper presents preliminary findings from the Iowa Fluoride Study using case-control methodology. This cohort study has followed nearly 700 children since birth, has periodically assessed fluoride exposure among these children, and examined them at about age 5 years. Using a recently proposed definition of severe ECC, we identified 56 cases with dfs of 6 or greater. We matched these cases by date of birth (within 2 months), date of examination (within 6 months), and sex to controls with no caries experience. We were unable to match 3 cases, excluded 3 cases because "filled" surfaces may have been related primarily to hypoplasia, and excluded 11 cases because fluoride and dietary data were missing for more than two time points. Thus, 39 cases and 39 controls were compared. As in other studies, lower family income and lower parental education levels were strongly associated with severe ECC. Estimated fluoride ingestion at 12 months and fluoride supplement use at all time points were not associated with severe ECC; however, water fluoride concentration was significantly lower in the severe ECC group. Children in the severe ECC group were less likely to use fluoride dentifrice "regularly" at 16 and 20 months, compared to those in the control group. Consumption of juices and sugared soft drinks at 20 months also was associated with severe ECC. Results suggest that in addition to SES, sugar consumption plays a role in severe ECC etiology, and that home topical fluorides may be critical in its prevention. (Supported by NIH grants R01-DE09551, P30-DE10126 and CRC-RR00059.)

Elizabeth Wehr, JD, George Washington School of Public Health and Health Services, Center for Health Services Research and Policy, Washington, DC; Barbara F. Gooch, DMD, MPH, Centers for Disease Control and Prevention, Atlanta, GA.*

USING MEDICAID MANAGED CARE CONTRACT SPECIFICATIONS TO IMPROVE PEDIATRIC ORAL HEALTH

Objective: Managed care organizations (MCOs) may be used to improve utilization of oral health and dental services among Medicaid and other underserved children. The session will describe sample Medicaid managed care purchasing specifications (contract language) for pediatric oral health and dental services and will review current knowledge about the capacity of Medicaid managed care to increase utilization of certain population-based pediatric care. *Methods:* Review of literature on delivery of population-based pediatric care in Medicaid MCOs; analysis of existing Medicaid managed care contracts; development of sample specifications reflecting recognized clinical guidelines, peer-reviewed research, Medicaid law, and expert opinion. *Results:* Managed care performance for Medicaid children is mixed, but effective plans provide "medical homes" that children have lacked and have improved children's lead screening and immunization rates. The specifications are designed for use in negotiating for pediatric oral health and dental care for Medicaid children and are also suitable for purchasing SCHIP benefits; purchasing may be on a capitated or fee-for-service basis. Topics of the specifications include benefits, quality assurance, data collection, and reporting standards. *Conclusion:* MCOs could accountable for oral and dental health services to young enrollees as part of basic pediatric care, and also for monitoring the utilization and quality of such care. (Project support: Centers for Disease Control and Prevention.)