Scientific Article

Effectiveness of an Oral Health Program in Improving the Knowledge and Competencies of Head Start Staff

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Abstract: ***Purpose:*** *Head Start and Early Head Start (HS/EHS) programs have partnered with the American Academy of Pediatric Dentistry to promote oral health and increase access to dental homes. Preparing HS/EHS staff for issues related to pediatric oral health promises to improve effectiveness of this collaboration. This paper's purpose was to describe the Columbia Head Start Oral Health Program (C-HSOHP) and changes in HS/EHS staff pediatric oral health knowledge and competencies after participating in C-HSOHP.* ***Methods:*** *Four HS/EHS grantees in New York City engaged in the 2008-09 C-HSOHP. A convenience sample of 61 staff completed pre- and postself assessments of knowledge and competencies.* ***Results:*** *Significant paired mean improvements were found for staff-reported level of preparation to explain dental issues during pregnancy, the tooth decay process, and preparing parents for their child's first dental visit. Significant improvements were found in staff confidence in teaching parents about children's oral health issues, referring for pediatric dental services, and talking to a dentist about a concern.* ***Conclusions:*** *The Columbia Head Start Oral Health Program was effective in improving Head Start/Early Head Start staff self-confidence and self-perceived preparedness in teaching parents about oral health, applying oral health knowledge to HS/EHS programs, communicating with dental professionals, and improving access to pediatric dental services. (Pediatr Dent 2011;33:403-8)*
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The US Centers for Disease Control and Prevention reports that, between 1988 to 1994 and 1999 to 2004 examination periods, the prevalence of Early Childhood Caries (ECC) in the United States increased from approximately 24% to 28%, a 15% relative increase.[1] ECC disparately affects the most vulnerable and disadvantaged, as children from poor or minority families are more likely to have caries experience, untreated tooth decay, and dental pain and less likely to be seen by a dentist.[1-3]

Early preventive dental visits have been shown to reduce restorative and emergency care and associated costs.[4] Despite American Academy of Pediatric Dentistry and American Academy of Pediatrics recommendations for an age 1 dental visit,[5,6] however, access to dental services for poor young children remains a challenge. Implementing oral health delivery strategies requires substantial effort, and too few dentists are willing to serve young children or accept Medicaid.[7,8] As a result, few children in Medicaid have access to dental care. Barely a third of all children from birth to 21-years-old with public dental coverage obtain a dental visit within a given year.[3]

Studies on dental provider reluctance to treat young Medicaid populations consistently report barriers that include low reimbursement, burdensome paperwork, unfamiliarity working with young child populations, and concern about broken appointments, patient noncompliance, and cultural and linguistic differences.[7,9-11] Likewise, parents report barriers that discourage establishing a dental home for their children, including: negative experiences searching for providers or arranging an appointment; transportation; long waiting lines; and disrespectful and discriminating behavior from staff and providers due to their race and public assistance status.[12,13]

Head Start and Early Head Start (**HS/EHS**) are federally funded programs that provide grants to local public and private agencies to provide economically disadvantaged children with child development and health services, including oral health. HS/EHS enrollment improves access to preventive dental care and treatment for dental problems.[14] HS/EHS performance standards specifically require that a health care professional determine within 90 days of enrollment whether a child is up to date with appropriate preventive dental care.[8] HS/EHS staff has unique access to underserved populations for whom they can promote healthy lifestyles and help overcome dental access barriers using a holistic, respectful, and culturally sensitive approach to those they serve. HS/EHS staff are also trained to assist families to navigate and establish a connection with a wide range of social and medical services, including access to a dental home.

The prevalence of ECC and oral health status of HS/EHS populations has been well documented,[15-26] and a number of oral health educational resources, programs, and training materials exist for HS/EHS staff.[27,28] Attitudes of HS/EHS parents and staff regarding issues of dental access and barriers to care[13,29] and the use of nondental professions providing preventive dental

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services[30] have also been examined. Little research, however, has investigated HS/EHS staff ability to advocate and assist parents to achieve optimal oral health for their children and to establish a pediatric dental home. HS/EHS staff training has been shown to improve knowledge and work satisfaction.[31] In addition, cognitive factors such as self-efficacy and controllability have been used in causal models to determine oral health promotion.[32]

The purposes of this paper were to:

1. describe the Columbia Head Start Oral Health Program (C-HSOHP)—created at Columbia University College of Dental Medicine, New York City, in 2007 in partnership with Columbia University Head Start and as part of a Health Resources and Services Administration-sponsored "Leadership in Pediatric Dentistry Training Grant"[33]; and
2. examine changes in HS/EHS staff confidence and self-efficacy in promoting pediatric oral health, preparing parents for their child's first dental visit, and gaining access to a pediatric dental home after participating in C-HSOHP using a convenience sample of 4 HS/EHS grantees from New York City.

Methods

C-HSOHP was created to assist local HS/EHS grantees in the Washington Heights/Inwood neighborhood of Northern Manhattan to access dental homes and promote a social climate of positive oral health. This training grant was established to: encourage leadership in nontraditional pediatric dental careers toward public service for Maternal and Child Health populations, such as HS/EHS; and be a resource and support for continuing education, consultation, and technical assistance. Initial development of the program, including parent education and staff training materials, occurred during the 2007-08 program year as part of a capstone project by this paper's author. C-HSOHP has since expanded and now partners with 4 Head Start grantees serving over 600 young children and their families. No selection criteria were used for participants in this study, and all 2008-09 participants learned of C-HSOHP by word of mouth.

C-HSOHP recognizes that, while promoting good oral health is a universal goal of HS/EHS, individual grantees may have specific oral health needs and concerns and may take a flexible and community-based approach with HS/EHS partners. Participating grantees were asked to complete a needs assessment to identify the current knowledge base of staff, existing areas of strength, and topics of concern where assistance would be most beneficial. The needs assessment consisted of a simple self-completed form, which instructed Head Start staff to identify and rank in order the top 5 dental issues they encountered or believed to be a problem.

The results of the needs assessment were reviewed with the grantee program director or health coordinator. Additionally, an oral health program was collaboratively designed from a menu of services, which included: a 2-hour staff workshop training session (provided by a single pediatric dentist on community-decided topics of focus in pediatric oral health; a 45-minute parent educational and question-and-answer session; a half day of onsite dental screenings; and assisted referrals to a local pediatric dental clinic for comprehensive services, which included contact information for direct assistance with appointment scheduling.

C-HSOHP staff training sessions were primarily devoted to answering specific questions and issues by staff and using

Table 1. TOP 5 REPORTED DENTAL PROBLEMS/DENTAL ISSUES FROM HEAD START GRANTEE COMMUNITY NEEDS ASSESSMENT

Rank	Grantee			
	Site 1	Site 2	Site 3	Site 4
First	Lack of dental knowledge	Bottle habits	Nutrition/ bottle habits*	Oral hygiene
Second	Nutrition/ bottle habits*	Missed dental appointments	Oral hygiene	Access to care
Third	Missed dental appointments	Pacifiers	Pacifiers	Bottle habits
Fourth	Tooth decay process	Oral hygiene	Tooth decay process	Tooth decay process
Fifth	Access to care	Lack of dental knowledge/ access to care*	†	Lack of dental insurance

* More than 1 topic/issue tied for ranking. † Did not have a ranking.

Table 2. HEAD START STAFF WORK EXPERIENCE AND LEVEL OF EDUCATION (N=71)

Distribution of staff by Head Start grantee	All staff % (N=71)	Respondents % (N=61)
Site 1	18	18
Site 2	47	44
Site 3	17	16
Site 4	18	21
Ys working at HS/EHS		
<2	36	30
2-5	21	23
>5	48	48
Highest education level		
High school or some college	44	43
Bachelors degree	38	38
Graduate degree or other	18	20
Previous employment		
Health care	6	7
Education or child care	50	46
Social services	13	13
Other	23	26
No previous job	9	8

an oral health resource guide "flipbook." This flipbook contained: educational materials for staff to use during sessions with parents; answers to frequently asked oral health questions; a glossary of commonly used dental terminology; and a list of available pediatric dental services and contact information for referral assistance.

While this collaborative approach required more initial planning, it also: allowed for an efficient allocation of resources; helped build respect and trust between partners; involved maintaining regular and open communication; and created a program that was responsive to the needs of the community. During the 2008-09 C-HSOHP: all 4 participating grantees elected to receive the 2-hour staff training and assisted referral materials; 3 grantees chose to receive at least 1 parental educational session; and 1 grantee opted for onsite dental screenings.

C-HSOHP also recognizes that, while predoctoral dental students and pediatric dental residents may already interact with the community, most of their experiences remain within a traditional dental operatory setting. C-HSOHP engages students and residents by allowing trainees to step outside the dental clinic and interact with families and communities from a different perspective. Through engagement in C-HSOHP events and activities, trainees come to better acknowledge the value of community partners by leaving the dental clinic and providing services in an environment which is much more familiar and comfortable for HS/EHS staff, children, and parents.

Through these experiences, C-HSOHP seeks to expand the trainee's ability to look beyond the mouth and consider the whole child in the context of families, community, and society. It is envisioned that these experiences and lessons learned from C-HSOHP are taken "back home" and incorporated by students and residents in their future clinical practices. Additional information about C-HSOHP can be found on their website.[34]

This study was approved by the Institutional Review Board of Columbia University Medical Center. Prior to commencing the C-HSOHP staff training, a convenience sample of HS/EHS staff members—engaged in direct and regular interaction with families (N=71)—from the 4 participating C-HSOHP program grantees were invited to participate in a self-completed presurvey. This presurvey included: demographic information; frequency of dealing with oral health issues in HS/EHS, such as dental caries or dental pain; and attitudes regarding pediatric oral health and HS/EHS populations, including perceived difficulty in various aspects of oral health promotion. Additional items assessed respondents' self efficacy and locus of control—2 psychosocial constructs that assess a person's readiness and ability to carry out tasks.

One month following the completion of the last C-HSOHP activity, an identical postsurvey was distributed to all participating HS/EHS staff. Analysis of variance and paired *t* test analyses of pre- and postsurvey data were conducted using a commercial statistical software package[35] to assess any change that may be attributed to the intervention.

Results

Table 1 presents a summary of the top 5 ranked oral health issues of concern by individual grantees. Three out of the 4 grantees ranked topics related to dental nutrition or inappropriate bottle habits either first or second in priority.

Seventy-one HS/EHS staff members of grantees in the 2008-2009 C-HSOHP were invited to participate in the study. Sixty-one of these staff members (~86%) successfully completed both pre- and postprogram surveys. The 61 HS/EHS staff who completed both pre- and post-C-HSOHP training were representative of the 71 HS/EHS staff employed by the 4 Head Start grantees regarding demographic characteristics, work experience, and level of education (Table 2). No significant mean differences in the pre- and post-C-HSOHP surveys were found when compared by Head Start grantee, years working at EHS/HS, highest level of education achieved, or previous employment.

Table 3 describes the changes in HS/EHS staff perceptions of enrollee oral health status and difficulties encountered

Table 3. CHANGES IN HEAD START PERCEPTIONS OF ENROLLEE OVERALL ORAL HEALTH STATUS AND DIFFICULTIES ENCOUNTERED WITH DENTAL CARE (N=61)

	Presurvey (%)	Postsurvey (%)	Mean paired difference ±(SD)	*P*-value
Overall oral health status of Head Start/Early Head Start children			-0.164±0.094	.09
Poor or fair	38	33		
Good	53	46		
Very good or excellent	10	21		
Difficulty to find pediatric oral health materials			0.197±0.109	.08
Not difficult or not difficult at all	39	54		
Somewhat difficult	44	34		
Difficult or very difficult	16	12		
Difficulty to complete dental screening			0.115±0.097	.24
Not difficult or not difficult at all	53	62		
Somewhat difficult	41	33		
Difficult or very difficult	7	5		
Difficulty to refer for pediatric dental services			0.180±0.079	<.03*
Not difficult or not difficult at all	48	67		
Somewhat difficult	46	25		
Difficult or very difficult	7	8		
Difficulty to obtain complete treatment			0.279±0.097	.006*
Not difficult or not difficult at all	28	53		
Somewhat difficult	61	39		
Difficult or very difficult	12	8		

with dental care. Significant paired mean differences ($P<.05$) between pre- and post-C-HSOHP surveys were found for difficulty in referring for pediatric dental services and difficulty completing all needed dental treatment. Following C-HSOHP, there was a 20% increase in staff who reported referring for pediatric dental services as not difficult or not difficult at all and a 24% increase in staff who reported completing all needed dental treatment as not difficult or not difficult at all.

No significant paired mean differences between pre- and post-C-HSOHP surveys were found by staff report of identified dental issues, dental related pain, or overall oral health status. Following C-HSOHP, 66% of staff reported physically seeing a cavity in at least 1 child's mouth within the last 6 months. Forty-eight percent of staff indicated receiving at least 1 parental report of a child experiencing tooth-related pain and 30% of staff indicated receiving at least 1 parental report of taking a child to the emergency room due to a dental-related issue.

No significant paired mean differences between pre- and post-C-HSOHP surveys were found in Head Start staff attitudes on oral health recommendations and effectiveness of training program or in their role in influencing oral health. Following C-HSOHP, 92% of staff said educating parents on children's oral health was important or very important; 93% said getting a parent to brush their child's teeth was important or very important; 97% said not allowing a child to go to sleep with the bottle was important or very important; and 89% said the age 1 dental visit was important or very important. Eighty-nine percent of staff reported training in oral health was effective or very effective, and 93% said onsite dental screenings were effective or very effective.

Regarding HS/EHS staff's perceived influence on improving children's oral health, no significant paired mean differences were found. Following C-HSOHP, the following percentages of staff reported: having an influence or a large influence on a child's overall oral health (69%); getting parents to brush their children's teeth every day (59%); getting parents to switch from a bottle to a sippy cup (56%); and getting parents to terminate nocturnal bottle use (39%).

Table 4 presents changes in attitude and perceived confidence of HS/EHS staff in advising parents on pediatric oral health issues. Significant paired mean differences between pre- and post-C-HSOHP surveys were noted for level of preparedness on teaching parents about dental issues during pregnancy and the tooth decay process, and preparing parents for child's first dental visit. Following C-HSOHP, there was a 10% increase in staff who reported being prepared or very prepared to explain dental issues during pregnancy, a 12% increase in staff who reported being prepared or very prepared to explain the tooth decay process, and a 23% increase in staff who reported being prepared or very prepared to help parents prepare for their child's first dental visit.

Significant paired mean differences were also found in HS/EHS staff confidence in teaching parents about child oral health issues, referring a child for dental services, and talking to a dental professional. Following C-HSOHP, there was a 15% increase in staff who reported being confident or very confident in teaching parents about children's oral health issues, an 18% increase in staff who reported being confident or very confident in referring a child for dental services, and a 21% increase in those confident or very confident in talking to a dentist regarding an oral health concern.

Table 4. CHANGES IN ATTITUDES OF HEAD START STAFF ON COUNSELING PARENTS ON PEDIATRIC ORAL HEALTH (N=61)

	Presurvey (%)	Postsurvey (%)	Mean paired difference ±(SD)	*P*-value
Preparedness on dental issues during pregnancy			-0.279±0.112	<.02*
Not prepared at all	54	36		
Somewhat prepared	31	39		
Prepared or very prepared	15	25		
Preparedness on the tooth decay process			-0.426±0.098	.001*
Not prepared at all	53	26		
Somewhat prepared	31	46		
Prepared or very prepared	16	28		
Preparedness in prepping parent for child's first dental visit			-0.426±0.098	.000*
Not prepared at all	43	17		
Somewhat prepared	41	44		
Prepared or very prepared	16	39		
Confidence to teach parents on child oral health issues			-0.246±0.109	<.03*
Not confident or not confident at all	31	21		
Somewhat confident	39	35		
Confident or very confident	30	44		
Confidence to refer child for services			-0.295±0.100	.005*
Not confident or not confident at all	21	10		
Somewhat confident	31	24		
Confident or very confident	48	66		
Confidence to talk to a dentist about a concern			-0.344±0.109	.003*
Not confident or not confident at all	20	7		
Somewhat confident	36	28		
Confident or very confident	44	65		

* Statistically significant ($P<.05$).

Discussion

C-HSOHP had 4 grantees participating in the 2008-09 program year who primarily heard about the program through word of mouth. Thus, findings are limited to the reported data of this convenience sample of HS/EHS grantees who participated in C-HSOHP. Additionally, while this study provides an overview of the C-HSOHP program, findings are limited to Head Start staff survey reporting and not a comprehensive evaluation of the C-HSOHP program as a whole. The number of assisted referrals, for example, was not collected as a part of this study. Finally, as individual HS/EHS grantees were allowed to choose which services they wished to receive, this study is inherently vulnerable to confounding. As HS/EHS staff were from 4 different grantees within the Washington Heights/Inwood neighborhoods of NYC, however, we believe these findings are a fair representation of HS/EHS programs serving an urban, primarily Spanish-speaking Hispanic/Latino population.

C-HSOHP was effective in improving HS/EHS staff self-confidence and self-perceived preparedness in teaching parents about oral health, applying oral health knowledge to HS/EHS programs, communicating with dental professionals, and improving access to pediatric dental services. Additionally, C-HSOHP's use of a Head Start community needs assessment and tailored program in partnership with local HS/EHS grantees allowed for the identification of pre-existing strengths and a more efficient use of resources. For example, it was concluded that onsite dental screenings would not be especially beneficial for 2 grantees, but that efforts would be better spent providing parent education sessions and staff training. An unexpected consequence of this community-based approach has been the formation of deeper partnerships. C-HSOHP faculty members have been invited to join 2 Head Start Health Advisory Boards and a community Early Childhood Coalition and to participate in a local neighborhood fair.

While not statistically significant, an increase in positive perception on the overall oral health status of HS/EHS children was reported by staff following C-HSOHP. Explanations for this finding may be due to social desirability by staff to report improvement in oral health after participating in C-HSOHP or an initial overestimation of existing disease burden. This is because HS/EHS staff are previously knowledgeable of the high caries risk status of the populations they serve. Examining the correlates of assessed oral health of HS/EHS children by HS/EHS staff would be an interesting future area of research.

It was not surprising that no significant differences were found for either the importance of oral health or the effectiveness of an oral health program following C-HSOHP, as HS/EHS staff already has previous knowledge in pediatric oral health issues. It was similarly not surprising that no significant difference was found for difficulty in obtaining a dental screening. This is due to the fact that the Office of Head Start has existing oral health requirements for Head Start grantees, including the required documentation of a dental examination within 90 days of enrollment as well as oral health programs such as after-meal tooth-brushing and the provision of oral health information.

These findings suggest that:

1. A significant baseline knowledge in oral health and an accepted role as an advocate for their local communities may pre-exist with HS/EHS staff. Additional required training may be minimal.
2. Improving access to dental screenings may be less of a concern to HS/EHS staff in this local community than other oral concerns such as improved access to pediatric comprehensive services.

When considering access solutions for pediatric Medicaid populations such as HS/EHS, increasing reimbursement rates for pediatric dental services alone are not sufficient to improve access to dental care.[36] Additional barriers include patient non-compliance, paperwork, and issues of communication and mutual understanding and respect for cultural and linguistic differences.[7,9,13] Support and assistance from trained and trusted community advocates such as HS/EHS staff can be integral in overcoming these barriers for both dental professionals and MCH populations. This can include assisting parents to navigate the health care system, ensuring patient compliance, overcoming cultural and linguistic challenges, and linking families with a source for comprehensive and ongoing oral health services.

In 2008, the American Academy of Pediatric Dentistry and the Office of Head Start partnered together to improve oral health access to pediatric Medicaid populations through the "Dental Home Initiative"[37] to provide the approximately 900,000 HS/EHS children enrolled in the United States each year with a dental home. Using a national network of pediatric dentists and general dentists, the Dental Home Initiative seeks to provide quality dental homes for EHS/HS children, train EHS/HS staff, and assist EHS/HS programs in obtaining comprehensive services to meet the full range of children's oral health needs. With the current shortage of dental workforce available for underserved US populations including EHS/HS, new strategies are needed to maximize the effectiveness of current dental care delivery systems and encourage new providers to serve MCH populations, such as HS/EHS.

Conclusions

The Columbia Head Start Oral Health Program is a community-based program that assists local Head Start/Early Head Start grantees in accessing dental homes and promoting a social climate of positive oral health.

1. C-HSOHP appears to improve HS/EHS staff-reported levels of confidence and preparation in topics related to oral health.
2. C-HSOHP appears to improve HS/EHS staff-reported ability to assist families access pediatric dental services.

References

1. Dye BA, Tan S, Smith V, et al. Trends in oral health status: United States, 1988-1994 and 1999-2004. National Center for Health Statistics. Vital Health Stat 2007;11:248.
2. Edelstein BE. Disparities in Oral Health and Access to Care: Findings of National Surveys. Ambulatory Pediatrics 2002;2(suppl):141-7.
3. Manski RJ, Brown E. Dental use, expenses, private dental coverage, and changes, 1996 and 2004. Available at: "http://www.meps.ahrq.gov/mepsweb/data_files/publications/cb17/cb17.pdf". Accessed July 20, 2010.

4. Lee YJ, Bouwens TJ, Savage MF, Vann WF. Examining the cost-effectiveness of early dental visits. Pediatr Dent 2006;28:102-5.
5. American Academy of Pediatric Dentistry. Policy on the dental home. Available at: "http://www.aapd.org/media/Policies_Guidelines/D_DentalHome.pdf". Accessed July 20, 2010.
6. American Academy of Pediatrics. Oral health risk assessment timing and establishment of the dental home. Available at: "http://aappolicy.aappublications.org/cgi/reprint/pediatrics;111/5/1113.pdf". Accessed July 20, 2010.
7. United States General Accounting Office. Dental Disease Is a Chronic Problem Among Low-Income Populations. Report to Congressional Requesters. GAO/HEHS-00-72. Washington, DC: GAO; 2000.
8. Administration for Children and Families. Strategies for Promoting Prevention and Improving Oral Health Care Delivery in Head Start: Findings from the Oral Health Initiative Evaluation. Final Technical Report. Washington, DC: ACF Office of Planning, Research, and Evaluation; 2008.
9. Office of the Inspector General. Children's Dental Services under Medicaid Access and Utilization. OEI-09-93-00240. Washington, DC: OIG; 1996.
10. Schneider D, Rossetti J, Crall JJ. Assuring Comprehensive Dental Services in Medicaid and Head Start Programs: Planning and Implementation Considerations. National Oral Health Policy Center technical issue brief. Los Angeles, Calif: National Oral Health Policy Center; 2007.
11. Mouridian WE, Wehr E, Crall JJ. Disparities in Children's Oral Health and Access to Dental Care. JAMA. 2000; 284:2625-31.
12. Mofidi M, Rozier RG, King RS. Problems with access to dental care for Medicaid-insured children: What caregivers think. Am J Public Health 2002;92:53-8.
13. Mofidi M, Zeldin LP, Rozier RG. Oral health of Early Head Start children: A qualitative study of staff, parents, and pregnant women. Am J Public Health 2009;99:245-51.
14. Jones CM, Tinanoff N, Edelstein BL, Schneider DA, DeBerry-Sumner B, Kanda MB, Brocato RJ, Blum-Kemelor D, Mitchell P. Creating partnerships for improving oral health of low-income children. J Public Health Dent 2000 Summer;60(3):193-6.
15. Siegal MD. Yeager MS, Davis AM. Oral health status and access to dental care for Ohio Head Start children. Pediatr Dent 2004;26:519-25.
16. Albert DA, Park K, Findley S, Mitchell DA, McManus JM. Dental caries among disadvantaged 3- to 4-year-old children in northern Manhattan. Pediatr Dent 2002;24: 229-33.
17. Vargas CM, Monajemy N, Khurana P, Tinanoff N. Oral health status of preschool children attending Head Start in Maryland, 2000. Pediatr Dent 2002;24:257-63.
18. Tang JM, Altman DS, Robertson DC, O'Sullivan DM, Douglass JM, Tinanoff N. Dental caries prevalence and treatment levels in Arizona preschool children. Public Health Rep 1997;112:319-29, 330-1.
19. Douglass JM, O'Sullivan DM, Tinanoff N. Temporal changes in dental caries levels and patterns in a Native American preschool population. J Public Health Dent 1996;56: 171-5.
20. O'Sullivan DM, Tinanoff N. The association of early dental caries patterns with caries incidence in preschool children. J Public Health Dent 1996;56:81-3.
21. Jones DB, Schlife CM, Phipps KR. An oral health survey of Head Start children in Alaska: Oral health status, treatment needs, and cost of treatment. J Public Health Dent 1992;52:86-93.
22. Barnes GP, Parker WA, Lyon TC Jr, Drum MA, Coleman GC. Ethnicity, location, age, and fluoridation factors in baby bottle tooth decay and caries prevalence of Head Start children. Public Health Rep 1992;107:167-73.
23. Louie R. Brunelle JA, Magglore ED, Beck RW. Caries prevalence in Head Start children, 1986–87. J Public Health Dent 1990;50:299-305.
24. Broderick E, Mabry J, Robertson D, Thompson J. Baby bottle tooth decay in Native American children in Head Start centers. Public Health Rep 1989;104:50-4.
25. Kelly M, Bruerd B. The prevalence of baby bottle tooth decay among two native American populations. J Public Health Dent 1987;47:94-7.
26. Jong A, Leske GS. Utilization and cost of dental services for preschool children in Boston's Head Start program. J Public Health Dent 1968;28:126-34.
27. Maternal Child Health Bureau Oral Health Resource Center. Available at: "http://www.mchoralhealth.org/HeadStart/index.html". Accessed July 20, 2010.
28. Milgrom P, Weinstein P, Huebner C, Graves J, Tut O. Empowering Head Start to improve access to good oral health for children from low-income families. Matern Child Health J. 2008. DOI 10.1007/s10995-008-0316-6. Available at: "http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2914140/". Accessed on Aug 24, 2010.
29. Siegal MD, Marx ML, Cole SL. Parent or caregiver, staff, and dentist perspectives on access to dental care issues for head start children in Ohio. Am J Public Health 2005; 95:1352-9.
30. Mathu-Muju KR, Lee JY, Zeldin LP, Rozier RG. Opinions of Early Head Start staff about the provision of preventive dental services by primary medical care providers. J Public Health Dent 2008;68:154-62.
31. Born D, Okunseri C, Kelly G. Minnesota's Early Head Start Oral Health Campaign. Little Rock, Ark: National Oral Health Conference; 2006.
32. Litt MD, Reisine S, Tinanoff N. Multidimensional causal model of dental caries development in low-income preschool children. Public Health Rep 1995;110:607-17.
33. Maternal and Child Health Bureau. Leadership in Pediatric Dentistry training grant, HRSA-T17MC06359.
34. Leadership Training in Pediatric Dentistry. Website available at: "http://mchb.hrsa.gov/training/project_info.asp?id=238". Accessed Aug 24, 2010.
35. PASW Statistics 18, Release Version 18.0.0 (SPSS, Inc., 2009, Chicago, IL, www.spss.com).
36. Borchgrevink A, Snyder A, Gehshan S. The Effects of Medicaid Reimbursement Rates on Access to Dental Care. National Academy for State Health Policy. 2008. Available at: "http://www.nashp.org/node/670". Accessed on Aug. 24, 2010.
37. AAPD. Dental home initiative. Available at: "http://www.aapd.org/headstart/". Accessed July 20, 2010.