DETERMINANTS OF A DENTAL HOME IN EARLY HEAD START FAMILIES

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ABSTRACT

Rhonda L. Kearney, DDS: Determinants of a Dental Home in Early Head Start Families
(Under the direction of Jessica Y. Lee, DDS, MPH, PhD)

The concept of a dental home (DH) is new to dentistry. We sought to identify

determinants of a family DH, including the role of Early Head Start (EHS), as measured by

the UNC Family Dental Home Index (FDHI). A cross-sectional survey was undertaken of

NC-EHS families. The 66 item, self-completed questionnaire for parents solicited

knowledge, attitudes and practices about dental health. Our dependent variable was the

recently developed 22-item FDHI. The FDHI includes six domains of care: accessible, usual

source, family-centered, comprehensive, compassionate and culturally competent. The

overall index is the mean of the domains (scored 0-100). Higher scores suggest more

characteristics associated with a DH. Major predictor and socio-demographic variables were

analyzed. Bivariate and multivariate Ordinary Least Squares (OLS) regression analyses were

completed using STATA 9.0. The results showed that the EHS program, dental knowledge,

trust in dentists, better dental health status and dental neglect play an important role in

establishing a DH for EHS families.

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LIST OF ABBREVIATIONS

AAP   American Academy of Pediatrics

AAPD   American Academy of Pediatric Dentistry

ADA   American Dental Association

DH   Dental Home

EHS   Early Head Start

FDH   Family Dental Home

FDHI   Family Dental Home Index

FMH   Family Medical Home

MH   Medical Home

MHI   Medical Home Index

CHAPTER 1

INTRODUCTION

Dental Home Concept

The concept of a dental home (DH) is an idea that has gained momentum in recent

years as underscored by a plethora of policy and position statements emanating from major

professional dental organizations (1-5). The DH concept was first described by Nowak in

1999 as a setting for infants and toddlers to receive preventive and comprehensive oral health

care services, emergency dental treatment and referrals for specialized care (6). The concept

was later adopted by the American Academy of Pediatric Dentistry (AAPD) in 2001 and

revised in 2004 and 2006 (1). DH components include a central source of accessible dental

care that provides continuous, comprehensive treatment with a culturally competent dental

provider in an environment that is family-centered, coordinated and compassionate (2,6).

The ADA House of Delegates adopted the DH concept in 2005 (5), defining a DH as the

ongoing relationship between the patient and the dentist, who is the primary dental care

provider. The ADA definition includes comprehensive oral health care beginning no later

than age one.

The AAPD defines the DH as the ongoing relationship between the dentist and the

patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously

accessible, coordinated and family centered way(3). This definition was adapted from the

American Academy of Pediatrics (AAP) definition of a medical home (1,4). It consists of

seven domains wherein care should be delivered or directed by well-trained physicians who provide primary preventive, acute and tertiary care that is 1) accessible, 2) continuous, 3) comprehensive, 4) family-centered, 5) compassionate, 6) culturally effective and 7) coordinated with specialized services provided outside the primary care setting (2).

The AAPD and the AAP advocate for the early establishment of a DH but the definitions are different in terms of nuance and timing. The AAPD (1,4) recommends that every child establish a dental home by 12 months of age and urges a comprehensive oral health care assessment, an individualized preventive dental health program based on risk assessment, intervention through education on disease prevention, anticipatory guidance, emergency trauma management, dental care as needed and referrals as appropriate. The AAP policy statement (4) states that every child should begin to receive oral health risk assessments by six months of age from a pediatrician or a qualified pediatric health care professional and urges a DH by 12 months of age for children identified at significant risk for dental disease. The AAP policy recommends that all health care professionals who serve mothers and infants should incorporate effective oral health preventive methods in their practices.

Determinants of a Family Medical Home (FMH)

Determinants of a FMH and its role in access to medical care for their children have not been studied comprehensively but maternal use of health care services is a strong predictor of pediatric health care utilization; indeed, a higher maternal use is associated with higher child use (7). Therefore, we can hypothesize that higher rates of mothers having a DH may be related to higher rates of children with a DH.

There is evidence to reveal factors associated with access to a MH, including the beneficial effects of insurance, race and poverty and children with special health care needs (8-11). African American and uninsured children have been reported to have significantly lower utilization of MHs than Caucasians and those with private or Medicaid Insurance (8). Lack of insurance has been found to predict lack of a regular source of care (10). Nelson and colleagues (11) found other factors are essential to the importance of the clinician-parent relationships in the medical home, which include trust, compassion and family-centeredness.

Improvement of medical service utilization and health status can be hypothesized as likely positive outcomes for those with access to a MH. Parents of children who have a MH have reported less delayed or forgone care, fewer unmet health care needs and fewer unmet needs for family support services (9). Strickland and colleagues reported that 23% of children without a MH had unmet health care needs compared to only 10% of children with a MH. In another study, authors examined the presence of the MH characteristics and described the relationship with utilization of medical services (12), reporting a level of a usual source of care (USC) at 95%.

Children's Utilization of Care in a Family Dental Home (FDH)

The concept of a DH from the perspective of the family has not been studied in detail but there is some evidence that mothers' dental use can be related to their children's dental use. United Kingdom studies of dental attendance (e.g. dental visits) offer insights into the Family Dental Home (FDH) concept, suggesting that mothers' dental care is associated with the dental care of their children. Crawford and Lennon (13) examined the dental attendance patterns of mothers of low socioeconomic status and reported that mothers' dental attendance was a good predictor of their child's attendance. Forty-five percent of mothers had a dental

visit within 12 months of survey completion and 64% also arranged a visit for their five-year old child, while only 33% of non-attending mothers arranged a dental visit for their child. Similarly, Gratis and colleagues (14) found that mothers who did not visit a dentist during the previous year were also less likely to arrange a dental visit for their children. Likewise, Kinirons and colleagues (15) confirmed that mothers who were relaxed about their own dental care (ie reduced maternal anxiety related to dental visits) and those whose last dental visit occurred within the previous six months were more likely to have preschool children who were registered for dental care.

Determinants of a Family Dental Home

There is evidence that suggests the establishment of a DH may follow the MH model as a cost-effective alternative to emergency health care treatment (1). The MH is more effective and less costly than care provided at emergency facilities that include emergency departments, walk-in clinics and other urgent care establishments (16). In theory, we hypothesize that a DH will improve access to dental care for young high-risk children and their families. Children who have a DH at an early age should be more likely to receive preventive dental care. Anecdotal evidence as suggested by Nowak and Casamassimo suggest a link between having a DH and improvements in oral health of children (17). The beneficial outcome includes appropriate care, reduced treatment costs and access to otherwise unavailable services. In the context of the medical model, similar determinants that predict if a child has a MH may determine if a child has a DH. Among others, these may include the following: (1) ethnic backgrounds other than non-Hispanic white children, (2) low socioeconomic status, (4) male gender and (5) lack of insurance.

Other studies have examined predictors of having a DH among the adult population. For example, Graham and colleagues (18) explored the role of trust in dental providers as a predictor of having a dental home among various ethnic groups. They found that of respondents who reported a high trust level, 66% reported having a regular dentist, whereas 48% among those with a medium level of trust and only 36% amongst those with a low level of trust. These findings hint that trust in dental health care providers is a predictor of having a DH and whites were significantly more likely to have a DH than blacks or Hispanics. In a more recent study, the same investigators explored the role of social status and primary language as predictors of having a DH among Hispanics (19), concluding that perceived social status and acculturation, defined as the language spoken in their homes, may influence whether Hispanics have a DH. The authors found that the following were associated with having a DH among four Hispanic groups (Columbian, Cuban, Nicaraguan and Puerto Rican): (1) respondents who perceive themselves to be at a higher social status in the United States than in their own community and (2) respondents who primarily spoke English at home.

Early Head Start (EHS)

Early Head Start is uniquely positioned to help high risk children and their families establish a DH. EHS is a federally-funded program established by Congress in 1994 with the Head Start Reauthorization Act. Its mission is to serve low-income pregnant women and families with infants and toddlers from birth to age 3 (20). Head Start began in 1965 to help provide comprehensive services to low-income families to meet the academic, developmental, and nutritional needs of children aged 3-5. The EHS program began in 1995 as an early intervention component of HS. The goal of EHS is to enhance children's

development while educating parents to be better caregivers. Services are designed specifically to provide early intervention so that healthy outcomes and developmental needs are strengthened.

EHS expanded in response to the increase in need for child care in communities across the country. Nationwide, there were 68 EHS programs in 1995 and by 2000 there were more than 600 serving nearly 45,000 children (21). More than 650 EHS programs existed in all 50 states, the District of Columbia and Puerto Rico in FY2004, serving nearly 62,000 children under the age of three (22).

EHS is committed to comprehensive and optimal health for children. To accomplish this, performance standards are implemented. The performance standards for EHS are the same as those for HS and are accessible for review (23). Guidelines are implemented and recommend that enrollees have both a MH and DH. MH guidelines include the stipulation that a child has an ongoing source of continuous, accessible health care (23). If there is not a source of ongoing health care, appropriate agencies must assist the parents in this process. EHS Staff help determine that each child has a source of continuous, accessible, coordinated care that serves as a MH and that it continues beyond the time of HS enrollment. Staff also help determine whether or not each child has a source of funding for health services, which is necessary to assure a prompt and complete assessment of a child's health status. If a child does not have a continuous source of care, staff and parents work together to plan strategies to ensure that the family acquires a MH.

EHS does address oral health care for infants and young children but is faced with more difficulty in accessing the presence of a DH for its enrollees than a MH. EHS staff do verify that all children have their dental health status evaluated with a dental exam within 90

days after entry into the program. EHS programs advocate that they should help families find and maintain an ongoing source of continuous, accessible dental care for the child's subsequent check-ups at intervals based on an individualized caries risk assessment and determined by an oral health professional (23). Despite this consideration, it has been discovered that many families and EHS programs find it difficult to access oral health care for infants and young children for a number of reasons that include: 1) Some families may have to travel several hours to obtain dental care for their children, and 2) Some dentists are unwilling or have not been trained to provide care for infants and young children, or do not participate in state Medicaid or Children's Health Insurance Programs.

Policies and expectations regarding establishment of a DH for families enrolled in EHS are loosely defined. Current health promotion strategies recommend that EHS should assist pregnant women to access comprehensive prenatal and postpartum dental care. Given the EHS commitment to helping families establish a DH, it is reasonable to hypothesize that EHS will be a determinant of a DH.

Operationalization of the DH concept is essential for the implementation of a dental home model tailored to the needs among EHS families in NC. Furthermore, advancement of the dental home requires a comprehensive definition, quantification using a valid and reliable index, determination of the presence of DHs and examination of the determinants of a dental home. Understanding the determinants integral to the DH establishment will be useful to practitioners, policy makers and researchers.   This information can be used to identify dental home domains most important in the improvement of oral health outcomes among children and families. Our preliminary research can serve as a baseline for designing and implementing DH training initiatives for EHS families.

Specific Aims

While the importance of a DH has been recognized the reality is this: many families do not have a DH. High risk infants, toddlers and their mothers are frequently seen in EHS programs where staff are trained to assist families access dental care and establish a DH. This puts EHS in a unique position to play a pivotal role in the DH promotion. There are no published studies and little is known about the determinants of a DH; rather, surveys have used dental visits, time since last dental contact and usual source of care as proxies for a DH. This study sought to fill this gap by systematically investigating this concept using a comprehensive Family Dental Home Index (FDHI).

The purpose of this study was to: 1) determine the prevalence of a FDH among EHS families as measured by the UNC Family Dental Home Index (UNC-FDHI) and 2) examine the determinants of a FDH. We hypothesize that factors such as EHS assistance, trust, dental health status, dental knowledge and dental neglect will be related to an increase in dental "homeness".

CHAPTER 2

METHODS

Overview of Study Design

A statewide cross-sectional survey approved by the UNC Biomedical Institutional Review Board was undertaken to evaluate knowledge, attitudes and practices of parents of EHS children regarding dental health. The sample inclusion criteria consisted of one parent or guardian of the oldest child enrolled in EHS in NC. Families were excluded if they were enrolled in the pregnant women program only and did not currently have children in EHS. The primary survey instrument was an 11 page, 66-item questionnaire. Because the UNC FDHI has only been shown to be valid and reliable in an English speaking population, we limited our study to those who filled out the English survey. We surveyed all 18 operating EHS programs (51 centers), an estimated 1300 children and families.

Survey Development

We relied upon an extensive research methodology to develop a parent survey. The survey instrument has its origin through the EHS Oral Health Initiative, a program to assist in the design and evaluation of educational interventions for EHS staff. To learn about the EHS programs, qualitative and quantitative research was conducted with the state's EHS programs to learn more about their operations and current practices regarding oral health. Focus groups and staff surveys supplied valuable information on oral health related knowledge and practices. Subsequently, researchers designed the parent survey to examine parental oral

health knowledge, opinions, practices and the prevalence of a DH among EHS children in NC.

Although there are no instruments that currently exist to quantify a DH, there are several that quantify a Medical Home (MH). Quantification of the AAP definition of the MH has been studied recently with several instruments (24-26), two (25-26) of which were developed by the Center of Medical Home Improvement in 2001 to assess the organization and delivery of primary care for children with special health care needs (CSHCN). These instruments are the Medical Home Index (MHI) and its companion survey, the Medical Home Family Index (MHFI), both of which collectively quantify the medical "homeness" of a primary care practice.

Parent survey questions were derived from previously developed and tested questionnaires used in research for pediatric oral health issues (17, 24-26) and modified specifically for this study. New questions were developed as necessary for relevance to the EHS Programs, DH concepts and other variables. Questions for the initial survey instrument were discussed among investigators and refined after multiple sessions. An English version was developed and pre-tested at one English language site (n=7) to help clarify and refine survey questions.   After all refinements, the instrument took participants approximately 15 minutes to complete. The survey was written to achieve a parental literacy level corresponding to a sixth-grade reading level.

Data collection

Distribution of the family survey involved three research assistants trained in the Protection of Human Research Subjects prior to data collection. Each EHS Program Coordinator or Health Coordinator was contacted by telephone in January 2006 by one of the

research assistants to explain the survey instrument and the data collection process. All

programs were asked to participate and were responsible for the distribution and collection

of parent surveys. Parents were required to complete surveys without assistance of the EHS

staff, but were given the name of a study contact person at the University of North Carolina

School of Public Health (UNC-SPH) to call in the event of additional questions.

All 18 EHS Programs agreed to participate and a total of 1,239 surveys were

delivered by Fed-Ex to a designated point-of-contact at each EHS program. Each packet

consisted of 1) a cover letter to the program contact person re-explaining the survey and

providing UNC contact information, 2) response sheets for each program to track the

distribution and return of the questionnaires, 3) envelopes for parents containing a parental

instruction letter, a questionnaire and a consent form, 4) pens to use in completing the

questionnaires, and 5) FedEx pre-paid airbills and instructions for returning completed

surveys. Confidentiality was assured in the administration of the survey. All surveys were

returned by March of 2006.

 Variable Description

The primary outcome variable in our study was identified as the FDHI score derived

from 21 survey questions from the perspective of the family. The FDHI is an instrument

tested previously and the first reported instrument that comprehensively quantifies a FDH

(27). The FDHI is a new instrument modeled after other indices, including the FMHI (24-26,

17). Instead of using a "yes or no" measure, a score that places a child or family on a

continuum of medical "homeness" has also been shown to be valuable. Completed by a

child's primary care provider, the MHI quantifies the following domains of the MH

definition: (1) accessibility, (2)comprehensiveness, (3)family-centeredness and (4)

coordination with specialized services. The MHFI is a measurement of the same domains but is used for families of CSHCN.

All questions for the FDHI (Table 1) were derived directly from one of six domains of care: accessible (3-items), usual source (2-items), family-centered (6-items), comprehensive (2-items), compassionate (5-items), and culturally competent (3-items). Mean scores for each domain ranged from 0 (no criteria met) to 100 (all criteria met) with higher scores representing more characteristics of the dental home being met. The final scoring for the FDHI is derived from the mean scores for all six domains (0-100). This dental home scoring method is modeled after Bethell and colleagues (24), who used existing population surveys to quantify the AAP definition of MHs.

Criterion-related predictive and construct validity (convergent and discrimnant) are reported for the FDHI and validity has been established (27). Criterion-related predictive validity was assessed by testing for associations between overall FDHI scores (0-100) and five outcome measures (oral health status, trust in dentist, preventive care use, restorative care use, and dental care use for pain) using Spearman's correlation. Test-retest reliability was assessed using the intra-class correlation coefficient (ICC), calculated by two-way analysis of variance with data from respondents' reporting no dental visits during the three-week interval between initial and follow-up assessments and yielded an ICC of 0.82. The UNC FDHI is a reliable and valid way of comprehensively quantifying the DH and will serve as the major outcome measure for this study.

We selected variables that might predict the determinants of a FDH. Demographic predictor variables were selected and included in the analysis. We were interested in the following child variables: race, dental insurance status, sex and age. Parental variables

included educational level, dental insurance status and race. For analysis purposes, all demographic variables were categorized into dichotomous outcomes.

We were interested in five other predictor variables: role of trust, dental neglect scale, dental knowledge, role of EHS and dental health status. We included the variable for trust of dental care providers to evaluate the concept that families who trust their dental care providers are more likely to have a dental home. Responses to trust questions were grouped as "Completely/quite a bit" versus "Some/a little/not at all". The questions on dental neglect were derived from the literature (28). The dental neglect variable was dichotomized in order to allow examination between dental neglect and DH status. We hypothesized that families of the higher dental neglect group would be less likely to have a DH. Responses to six dental neglect questions were scored as "low (0-2)" versus "high (3-6)". Responses to the questions on whether EHS helped the parent find a dentist were grouped into "yes" versus "no". Reponses to the questions on dental knowledge were grouped into "high" versus "low". Finally, responses to self-reported dental health status were grouped into "Excellent/Very good/Good" versus "Fair/Poor/Don't Know".

Data Analyses

Data from the completed surveys were entered in Microsoft Access using the double entry method to reduce errors. Descriptive statistics reporting percent distributions were generated using STATA 9.0 statistical software. All variables including main predictor and demographic variables were examined in bivariate tables using T-tests to determine their independent associations with family dental "homeness". A multivariate Ordinary Least Squares (OLS) regression analysis was developed to test the determinants of a DH, as measured by the UNC-FDHI, while accounting for all variables. Regressions included all

variables except those that were strongly correlated with another variable (P>.5). Tests were

conducted to examine potential clustering effects by program. The results of these tests

indicated no clustering effects were present, so our regression analysis did not account for

clustering by program.

CHAPTER 3

RESULTS

All 18 EHS programs participated in the survey. Of the 1,239 questionnaires that were distributed, 795 were returned and usable (for an overall parental response rate of 64%), which includes 671 English questionnaires that were included in the analysis. The socio-demographic variables and additional characteristics were examined (Table 2). Most caregivers were non-white (58%) and approximately half had an educational level of high school or less. Approximately 42% were on public assistance in the form of Medicaid or State Children's Health Insurance Program (SCHIP) and 37% did not have insurance. A majority of children were on public assistance (79%). Slightly more than half (53 %) of children were male and the most common age category was two years.

Other characteristics of our sample were examined (Table 2). Most respondents trusted their dentist (73%). Caregivers reported a high dental knowledge level and dental health status. Approximately half (52%) reported a low level of dental neglect. Lower dental scores reflect less dental neglect. Ninety three percent reported that EHS did not help them find a dentist (93.2%). The mean FDHI score was 52.3 (SD±21.5). Overall FDHI scores stratified by age groups produced similar results (Table 3).

Bivariate analysis of the independent variables with the FDHI are presented in Table 4. The following demographic variables were statistically significant: parental education and parental dental insurance type. Four predictor variables were found to be statistically significant: trust in dentists, dental neglect, assistance from EHS in finding a dentist and

dental health status. No additional variables based on bivariate analysis were significantly associated with FDHI scores.

Results of the multivariate Ordinary Least Squares (OLS) regression analysis are presented in Table 5. Four predictors were found to be associated with having higher FDHI scores among EHS families. Families who reported having higher trust levels scored 13 points higher on the FDHI. Families who had assistance from EHS in finding a dentist scored 15 points higher. Families who had a high dental knowledge level scored five points higher, while those with better dental health status scored four points higher.   Dental neglect, children with public dental insurance and parental education were correlated negatively with the FDHI. Families who reported having a high level of dental neglect scored 20 points lower on the FDHI. Parents who did not have education beyond high school scored five points lower whereas children who had public insurance coverage scored seven points lower on the FDHI. No additional variables in this model were statistically significant.

CHAPTER 4

DISCUSSION

We have identified factors related to the establishment of a DH in a community-based program for low-income families with infants and toddlers. To date, no study has examined the determinants of a DH by using a validated and reliable index, but previous studies have used dental visits and usual source of care as proxies. The finding that families who had assistance from EHS to help find a dentist scored 15 points higher on the FDHI is instructive and has important policy implications. High risk infants, toddlers and their mothers are frequently seen in EHS programs where staff are trained to assist families access dental care and establish a DH. We found that an extremely small number had received such assistance. One could speculate that barriers to dental care exist in NC resulting in an impediment for families to obtain a DH. Early preventive care during infancy is essential to dental health. Savage and colleagues found that high-risk children who had their first preventive dental visit by age one were more likely to have subsequent preventive visits, therefore reducing the need for future costly restorative or emergency treatment (29). Therefore, oral health policy makers should work together with EHS to assist families in establishing a dental home.

Another major significant finding is the impact of dental neglect on establishing a DH. Previous studies have shown that a higher neglect level is associated with episodic use of dental services, poorer self-rated oral health and symptom driven utilization of dental services (28). Our study revealed evidence that families who reported having higher dental

neglect were significantly less likely to have a DH compared with respondents who reported having less dental neglect.

Graham and colleagues have concluded that both trust and perceived health status are important predictors of having a regular source of dental care (18). We concur because we found that trust in a dental provider and self-reported dental health status are predictors with a statistically significant association for having a DH. These results are encouraging since additional evidence is provided to support the concept that trust is the foundation of a successful patient-dentist relationship. Additional research is needed to determine if self reported dental status is a reliable predictor of a DH.

The association between low socioeconomic status, poverty, race and MH utilization has been examined (8-11) and described previously. We found further evidence that sociodemographic factors are associated with DH status. These include parental educational level and dental insurance coverage. On the other hand, the impact of race and sex were not associated with having a DH in our study. This finding allows us to conclude that other factors are significantly associated with having a DH and are independent of racial and gender disparities. Future studies in diverse populations are necessary to determine if variations exist in other samples.

Our study represents the first effort to comprehensively quantify and examine DH determinants in high risk children and their families. Questions were derived from previously developed questionnaires. Pre-testing led to appropriate changes for questionnaire refinement before distribution. Research assistants were trained. Additional study strengths include a large sample size, high parent response rate and a questionnaire

retest for reliability.   Finally, data entry errors were minimized due to the double-entry data method.

Although this investigation provides evidence and possibly future directions needed to continue to support DH policy changes, limitations should be taken into consideration. These include those associated with a cross-sectional study design as well as self-administered questionnaires. Due to the cross-sectional nature of this study, it is difficult to separate causality between the determinants and presence of having a family DH. The generalizability of the results are limited because the sample population includes only English speaking families from NC. Furthermore, another potential limitation is the measurement of a dental home. We measured the level of dental "homeness" on a 0-100 scale and no "cutoff" level was determined. Measurement of the DH using another method could produce different results.

CHAPTER 5

CONCLUSION

This investigation examined a cohort of families to scientifically investigate the

concept of a dental home using a comprehensive FDHI. We sought to identify determinants

of a DH. The results are encouraging because the findings provide evidence supporting this

concept. For years, child advocacy groups and private practitioners have supported the

concept of a DH and its establishment with a lack of supporting scientific data.   This

investigation provides the evidence for promotion of DHs among child advocacy groups and

private practitioners who support at risk toddlers and infants. We conclude that the EHS

program, dental knowledge, trust in dentists, better dental health status and dental neglect

play an important role in establishing a DH for EHS families.

Table 1. Criteria used to Define a Dental Home as measured by the UNC-FDHI*

Domains

Accessible Care

Q14. Call dental office <u>during regular hours</u> in last 2 years

Q14a.If yes, how often did you get the advice you needed

Q15. How often did you get appointment for dental care when you wanted in last 2 years

Usual Source of Care

Q9. <u>One dental office or clinic</u> you get care

Q10.<u>One person</u> that is <u>your</u> personal dentist

Family Centered Care

Q11. Child been patient at your dentist

Q11a.If no, do you think dentist would see child if asked

Q12. Has dentist ever told you to take child to "child's dentist"

Q24. Does child have one dentist

Q42. During pregnancy, did you ever visit dentist

Q44a.Dureing pregnancy, wanted dental care and got it

Comprehensive Care

Q13. Needed dental care in last 2 years

Q13a. If need care, how much of a problem to get care needed.

Compassionate Care

Q17a. <u>Explain things</u> so could understand

Q17b.Show respect for what had to say

Q17c.Treat with courtesy and respect

Q17d.Spend enough time with you

Q18. Dentist should do more to reduce pain

Culturally Competent Care

Q19. Hard time speaking or understanding dentist/staff because of language

Q20. Need interpreter in last 2 years

Q21.If yes, how often was an interpreter provided

* Based on respondents' report

Table 2

Reported Socioeconomic factors and other Characteristics Among Early Head Start Families

(n=671)

Variables	Frequency (n)	Percent (%)
Child DemographicVariables		
Child's Race		
White	397	59
Other (Black/AA, Hispanic/Latina, NA, Asian/Pacific Islander, other)	274	41
Child's Dental Insurance		
Yes, Public (Medicaid/SCHIP)	495	79
Yes, Private/Other	57	9
No	76	12
Child's Sex		
Male	340	53
Female	305	47
Child's Age in Years		
0	86	14
1	196	32
2	243	39
3	95	15
Parent Demographic Variables		
Parental Education		
High School or less	337	50
Some college or more	334	50
Parent having Dental Insurance		
Yes, Public (Medicaid/SCHIP)	276	42
Yes, Private/Other	140	21
No	245	37
Parental Race		
White	279	42
Black/AA	315	47
Hispanic/Latina	21	3
NA, Asian/Pacific Islander/other	50	8
Predictor Variables		
Role of Trust		
Some/little/not at all	179	27
Completely/quite a bit	479	73
Dental Neglect Scale		
low 0-2	347	52
high 3-6	324	48
Dental Knowledge		
low	129	20
high	502	80
EHS to help find dentist (Parent)		
Yes	45	7
No	615	93
Dental Health Status		
Excellent/Very good/Good	519	78
Fair/Poor/Don't Know	147	22

Table 3
Overall Scores for Dental Home Index by Age
(n=399)

Age	Frequency (n)	Percent (%)	FDHI Score	Std. Dev.
Under age One	40	10	49	24
Age One	127	32	51	25
Age Two	163	41	52	23
Age Three	69	17	53	24

Table 4
Bivariate Associations of the FDHI and its Determinants

Variables	Sample	Mean FDHI Score	P Value
Predictor Variables			
Role of EHS to help find dentist for Parent			
Yes	29	70	
No	397	50	<0.001
Dental Health Status			
Excellent	32	73	
Good	98	62	
Very Good	121	56	
Fair	108	42	
Poor	56	38	<0.001
Dental Knowledge			
High	310	55	
Low	93	50	0.063
Role of Trust			
Completely/quite a bit	309	58	
Some/ a little/ not at all	111	36	<0.001
Dental Neglect Scale			
Moderate/High	214	39	
Low	215	64	<0.001
Child Demographic Variables			
Child's Race			
White	172	49	
Black	201	52	
Hispanic	9	61	
Other	47	55	0.74
Child Dental Insurance			
Yes, public (Medicaid/SCHIP)	318	49	
Yes, private	39	57	
No	41	62	0.24
Child's Sex			
Male	223	51	
Female	187	52	0.67
Parent Demographic Variables			
Parental Education			
Less than High School	71	42	
High School	127	51	
Greater than High School	221	55	0.0003
Parent Dental Insurance			
Yes, Public (Medicaid)	182	52	
Yes, Private	81	60	
No	157	45	<0.001
Parental Race			
White	178	49	
Black	201	52	
Hispanic	9	62	
Other	41	56	0.08

Table 5

Multivariate linear regression Results Predicting a Dental Home among Early Head Start
Families in North Carolina

(n=415)

Variables	Coefficient	Standard Error	P Value	95% Confidence Interval
Trust Dental Provider (Completely/quite a bit)	13.02	2.21	<0.001	(8.67, 17.37)
High Dental Knowledge	5.38	2.28	0.01	(1.87, 8.11)
EHS to help find dentist (Parent)	15.45	3.67	<0.001	(8.67, 22.23)
Dental Health Status (Excellent/VG or Good)	4.41	2.22	0.03	(-0.95, 7.78)
High Dental Neglect	-20.42	1.94	<0.001	(-24.24, -16.59)
Parental Education (High school or less)	-5.03	1.86	0.01	(-8.69, -1.37)
Parent Having Dental Insurance (Medicaid/SCHIP)	2.53	1.95	0.198	(-1.32, 6.38)
Child Having Dental Insurance (Medicaid/SCHIP)	-7.51	2.27	<0.001	(-11.97, -3.05)

REFERENCES

1. American Academy of Pediatric Dentistry. Policy on the Dental Home. Available at http://www.aapd.org/media/Policies_Guidelines/P_DentalHome.pdf

2. American Academy of Pediatrics. Ad Hoc Task Force on the Definition of the Medical Home. The medical home. *Pediatr* 1992; 90:774.

3. American Academy of Pediatric Dentistry. Definition of Dental Home. *Pediatr Dent*. 2006; 28(suppl): 10.

4. American Academy of Pediatrics. Section on Pediatric Dentistry. Oral health risk assessment timing and establishment of the dental home. *Pediatr* 2003; 111:1113-16.

5. House answers questions on access, quality of care. Available at http://www.ada.org/prof/resources/pubs/adanews/adanewsarticle.asp?articleid=1691

6. Nowak AJ. Dental home. In: Pinkham JR, Casamassimo, PS, Fields HW, McTique DJ, Nowak AJ, eds. Pediatric dentistry: Infancy through adolescence. 3rd ed. Philadelphia: Saunders; 1999:198.

7. Newacheck PW, Halfon N. The association between mother's and children's use of physician services. *Med Care* 1986; 24:30-38.

8. Ortega AN, Stewart CL, Dowshen SA, Katz SH. Perceived access to pediatric primary care by insurance status and race. *J Community Health* 2000; 25:481-93.

9. Strickland B, McPherson M, Weissman G, van Dyck P, Huang ZJ, Newacheck P. Access to the Medical Home: Results of the National Survey of Children with Special Health Care Needs. *Pediatr* 2004; 113:1485-92.

10. Starfield B, Shi L. The medical home, access to care, and Insurance: A review of evidence. *Pediatr* 2004; 113:1493-98.

11. Nelson CS, Higman SM, Sia C, McFarlane E, Fuddy L, Duggan AK. Medical homes for at-risk children: Parental reports of clinician-parent relationships, anticipatory guidance, and behavior changes. *Pediatr* 2005; 115:48-56.

12. Kieckhefer GM, Greek AA, Joesch JM, Kim H, Baydar N. Presence and characteristics of medical home and health services utilization among children with asthma. *J Pediatr Health Care* 2005; 19(5):285-92.

13. Crawford AN, Lennon MA. Dental attendance patterns among mothers and their children in an area of social deprivation. *Community Dent Health* 1992; 9:289-94.

14. Gratis D, Taylor G, Lennon MA. Mothers dental attendance patterns and their children's dental attendance and dental health. *Br Dent J* 1990; 168:441-43.

15. Kinirons M, McCabe. Familial and maternal factors affecting the dental health and dental attendance of preschool children. *Community Dent Health* 1995; 12:226-29.

16. American Academy of Pediatrics. The medical home. *Pediatr* 2002;110: 184-86.

17. Nowak AJ, Casamassimo PS. The dental home: A primary care oral health concept. *JADA* 2002; 133:93-8.

18. Graham MA, Logan HL, Tomar SL. Is trust a predictor of having a dental home? *JADA* 2004; 135(11):1550-8.

19. Graham MA, Logan HL, Tomar SL. Perceived social status, language and identified dental home among Hispanics in Florida? *JADA* 2005; 136(11):1572-82.

20. Early Head Start National Resource Center. Available at www.ehsnrc.org

21. Jerald, Judith. Early Head Start. *Head Start Bulletin*. Issue No. 69. Oct 2000. 1-44.

22. Head Start Program Fact Sheet. Available at http://www.acf.hhs.gov/programs/hsb/research/2005.htm

23. Early Head Start Performance Standard 1304.20 - Child Health and Developmental Services. Available at http://www.acf.hhs.gov/programs/hsb/performance/130420PS.htm#1304_a11

24. Bethel C, Read D, Brockwood K. Using Existing population-based data sets to measure the American Academy of Pediatrics Definition of Medical Home for all   Children and Children with Special Health Care Needs. *Pediatr* 2004; 113: 1529-37.

25. Center for Medical Home Improvement. The Medical Home Index. 2001.

26. Center for Medical Home Improvement. The Medical Home Family Index. 2001.

27. Lee JY, Rozier RG, Zeldin L. Development and Validation of a Family Dental Home Index. *J Dent Res*. 2007; 86:1257.

28. Jamieson LM, Thomson WM. Dental health, dental neglect, and use of services in an adult Dunedin population sample. *New Zealand Dental Journal*. 2002; 98: 4-8.

29. Savage MF, Lee JY, Kotch JB, Vann WF Jr. Early preventive dental visits" effects   on subsequent utilization and costs. *Pediatrics.* 2004; 114: e418-23.