

Household Chaos and Appointment Compliance in a Pediatric Dental Population

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THESIS

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LIST OF ABBREVIATIONS

ECC	Early Childhood Caries
S-ECC	Severe Early Childhood Caries
OHRQoL	Oral Health Quality of Life
UIC	University of Illinois at Chicago
COD	College of Dentistry
EHR	Electronic Health Record
SES	Socioeconomic Status
<i>dmft</i>	decayed, missing, filled teeth
CHAOS	Confusion, Hubbub, and Order Scale
ESQ	Environmental Screening Questionnaire
PROMIS	Patient-Reported Outcomes Measurement Information System
GA	General Anesthesia

SUMMARY

This was a cross-sectional study of pediatric patients and their caregivers at the University of Illinois at Chicago College of Dentistry (UIC COD) post-graduate and pre-doctoral pediatric dental clinics. The purpose was to describe and evaluate household-level chaos in relation to children's dental appointment compliance. This study also explored demographics and oral health behaviors as covariates of this relationship.

Using a tablet-based Qualtrics (Qualtrics XM, a 2020 software, Provo, U.T., USA) survey, 74 caregivers completed a series of questions related to demographics, caregiver's oral health, child's oral health, and the reason for their appointment that day demographic. They also completed the "Confusion, Hubbub, And Order Scale" in either English or Spanish. The CHAOS Scale is a validated instrument in English and Spanish that measures household chaos. Once the survey was completed, the patient's *dmft* score and next scheduled appointment date was collected to assess the patient's follow-up appointment type. Finally, follow-up appointment compliance was noted.

Study participants lived in Cook County and all children were enrolled in Medicaid insurance. Most subjects (86%) surveyed were compliant for their next scheduled appointment, but there were high levels of household chaos amongst most families. High CHAOS scores increase the risk for suboptimal health behaviors, so social policy is needed to address for high risk populations since chaos can reflect structures of society. Furthermore, these families may require additional social support to achieve health outcomes through family-centered care.

Our small sample size could be a study limitation and the impact of the COVID-19 pandemic could have had a confounding impact on the results of the study. Future studies should focus on collecting a larger sample from different dental settings.

I. INTRODUCTION

A. Consequences of Dental Caries

Dental caries continues to be the most prevalent disease in children and is particularly rampant in lower socioeconomic populations and among children aged 6-19 years of age.¹ Early childhood caries (ECC) is defined as the presence of one or more decayed, missing, or filled tooth (dmft) surfaces in a child seven months or younger; severe early childhood caries (S-ECC) is defined as a dmft of ≥ 4 for a child who is 3, ≥ 5 for a child who is 4, and ≥ 6 for a child who is 5.² The Centers for Disease Control reported the prevalence of total caries between 2015-2016 to be 45.8% for children aged 2-19 years and untreated caries to be 13%.³ Untreated caries can have a negative impact on a child's oral health-related quality of life (OHRQoL).⁴

The consequences of untreated dental caries are substantial because they affect a child's overall health. Caries left untreated can cause pain, infection, early tooth loss, and can also lead to problems eating, speaking, and learning in children.^{5,6,7} Studies have even shown an association between caries and BMI; children with odontogenic infections had below normal BMI due to poor nutrition intake.^{8,9} In severe cases, untreated dental decay can lead to disability and death.⁷

Acute problems such as pain and infection cause disruption to a child's daily life. Children sleep less with untreated dental caries and this can also cause a decline in school performance. Additionally, children with poorer oral health status were three times more likely to miss school due to dental pain and have increased utilization of the emergency department for dental conditions.^{10, 11, 12, 13} Dental pain due to dental caries does not only affect the child but the entire family unit. Severe dental caries has a negative impact on family life in terms of stress, guilt, sleep disturbance and missing work days.¹⁴

Children who receive treatment for caries are shown to have a significant improvement in their oral health related quality of life. Dental interventions for children who have ECC has a positive impact on their physical, mental and social functioning.^{15, 16} Even though ECC is a preventable condition, it still remains one of the most common childhood diseases.¹⁷ Insufficient dental coverage, dental access, and dental utilization contribute to untreated early childhood caries.¹⁶

B. Failed Dental Appointments

No-shows for scheduled appointments are a frequent occurrence, particularly in the Medicaid population, and it can result in delayed dental care, inefficient use of provider time and reduced access to services for others, while increasing medical costs.¹⁹ A study conducted in Iowa found that there were higher appointment failure rates (24% vs 7%) and tardiness rates (5% vs. 4%) amongst Medicaid pediatric dental patients than non-Medicaid pediatric dental patients.²⁰ Reasons for missing pediatric dental appointments included forgetfulness, parents' commitment for work, and patient's health.²¹ In addition to the previously stated consequences, missed appointments may also result in an increase in emergency service utilization.²¹

In Medicaid populations, lack of a phone, high caries risk, poor behavior, and long wait times between appointments were among the reasons for missed dental visits.²² Moreover, age, socioeconomic status, family size and previously missed dental appointments are all factors in predicting future failed appointments.²³ Identifying reasons why patients miss dental appointments and recognizing those at risk can provide insight into how to reduce failed appointments.¹⁹

C. Social Determinants of Health

Current concepts of health recognize the role of family and community-level factors in achieving favorable oral health outcomes. Children of low-income families have the greatest occurrence of oral disease and utilize dental visits for pain relief.²⁴ However, these children have the least amount of overall dental visits.²⁴ Ironically, these families also have the highest proportion of eligible children on dental insurance through Medicaid and SCHIP.²⁴ These children may have insurance coverage, but may face other barriers that keep them from utilizing healthcare services that are available. In the social-ecological model, social determinants such as socioeconomic status, family function and structure, health behaviors, social environment, culture/race/ethnicity, and access to care have an important effect on oral health and missed pediatric dental appointments.²⁵

Numerous barriers thwart access to care for this population such as: difficulties in finding a provider and appointment scheduling, inconvenient transportation, discrimination, and long wait times.²⁶ Additionally, previous studies have also shown that factors that contribute to failed dental appointments are related to caregiver and child psychosocial issues such as anxiety, depression, stress, financial insecurity, community social characteristics, dental history, & oral health beliefs^{21,27,28}. There is a possible relationship between undesirable health outcomes and disadvantaged social determinants. People of low income and education level have worse health and oral health outcomes.²⁹

D. Household Chaos

A component of family function and structure within social determinants of health includes household chaos.³⁰ Chaos is lack of order and routine in modern family life, and it is

characterized by disorganization and high levels of confusion in the home.^{31, 32} Studies suggest that low socioeconomic status (SES) populations have high levels of demands related to their daily living and health-promoting visits are a low priority.²⁷ There is also evidence suggesting that higher household chaos has an association for a number of adverse child, parent, family level outcomes and populations with higher household chaos may lead to poor child development and health outcomes.^{32,33,34}

Using validated scales such as the Confusion, Hubbub, and Order Scale (CHAOS) developed by Matheny et. al, household chaos can be operationalized.³⁵ The “CHAOS” instrument is a validated 15-question survey available in English and Spanish that quantifies the degree of confusion and disorganization in a child’s home. This survey was utilized as a tool in this study to determine the amount of chaos present within a family.^{35, 36} Chaos has been studied in the field of psychology and studies have shown that higher levels of chaos has been linked to learning, attention, and behavioral problems with children.^{33,34,37, 38} The field of medicine has also studied how household chaos can affect asthma and diabetes; higher household chaos has been associated with poor asthma control³⁹ and poor glycemic control⁴⁰ for diabetes. Additionally, higher household chaos has been associated with increased weight, poor sleep, poor dietary behaviors, and less availability of healthy food, causing an increased risk for obesity.^{41,42}

There is a growing belief that household chaos may affect a child’s development and well-being. Research on household chaos spans across multiple disciplines. Clinicians of all types should consider the influence of household chaos on health outcomes for a particular family. Risk factors such as poor diet, obesity, poor sleep, and suboptimal health behaviors should be considered in families with higher household chaos in a dental setting. The availability

of the CHAOS scale allows researchers to identify families with higher levels of household chaos who are at risk of non-adherence to health behavior interventions.³¹

E. Statement of the Problem

Social determinants are known to be barriers to children's oral health, particularly at the family level. One such understudied determinant is "household chaos." Households with high chaos may have competing priorities: a lack of daily routine, lack of order, etc. Regular dental check-ups for these children in these households may have a low priority. To date, a literature search detected no published studies assessing household chaos and pediatric dental appointment compliance. Currently, there is no data assessing CHAOS and pediatric oral health or CHAOS and pediatric dental appointment compliance which leaves room for research.

F. Purpose of the Study and Study Objectives

The purpose of this research was to evaluate the relationship between family/household chaos and children's dental appointment compliance in a pediatric dental population. The aim of this study was to determine if families with high CHAOS scores have low follow-up dental appointment compliance for their children compared to families with lower CHAOS scores. A secondary aim of this study was to describe other demographic and oral health characteristics associated with high CHAOS scores.

G. Hypothesis

H₀: Higher levels of household chaos have no association with failed pediatric dental appointments.

H_a: Higher levels of household chaos have an association with failed pediatric dental appointments.

H_1 : Higher levels of household chaos has no association with unfavorable oral health behaviors among children or caregivers.

H_{a1} : Higher levels of household chaos have an association with unfavorable oral health behaviors among children or caregivers.

II. METHODS

A. Study Approval

This study was approved under expedited review procedures by the Institutional Review Board on May 30th, 2020 (Appendix A) at the University of Illinois at Chicago (IRB #2020-0571), Chicago, IL. An amendment (Appendix B) to add a Spanish questionnaire was approved on July 30th, 2020.

B. General Study Design, Recruitment, and Informed Consent

Caregivers of school-aged children (ages 0-17) presenting to the UIC post-graduate and pre-doctoral pediatric dental clinics for initial, recall, and emergency visits were approached to participate in this study. Prior to approaching the caregiver and patient, the clinic schedule was checked to collect information about the scheduled appointment, type of appointment, patient's name, and patient's birth date. Patients who had appointment types of recall, initial, or emergency visits were approached at UIC College of Dentistry during the PI's allocated research block. Research blocks were on different days of each week from August 2020 to December 2020; surveys were only collected by the PI. The PI looked at the schedule prior to the research block and collected only the patient's name and birth date for all patient's scheduled for an emergency, recall, or initial visit for that day. These patients were approached to participate in the study. The patient's name and birth date were verified and a recruitment script in English (Appendix C) or Spanish (Appendix D) was read to determine if caregiver's were interested in taking the survey and participating in this study. If the caregiver agreed to participate, an informed consent was obtained in English (Appendix E) or Spanish (Appendix F). Questions from the survey were completed on Qualtrics, a secure survey program, in a 2020 software (Qualtrics XM, Provo, U.T., USA). The PI assessed the potential subject's eligibility with a

screening survey in English (Appendix G) or Spanish (Appendix H). If the subject was deemed not eligible, then the screen would prompt them to stop the survey. Reason for ineligibility was recorded and reported in the final data, but no additional information was collected. If the subject was eligible, the subject would move onto completing the demographic, oral health, and CHAOS questionnaire in English (Appendix I) or Spanish (Appendix J). Caregivers were asked to complete all the questions, but were given the opportunity to cease participation at any point.

C. Subject Eligibility

Inclusion Criteria:

- Primary caregiver of a healthy school-aged child (0-17 years old), who had an initial, recall, or emergency appointment at the UIC graduate or pre-doctoral pediatric dentistry clinics.
- The caregiver must have been 18 years of age or older.
- Caregiver must have been able to read in English or Spanish.

Exclusion Criteria:

- Children with any special needs that affected mobility or oral health.
- Children scheduled for GA (general anesthesia) work-up and GA follow-up.
- Children with no subsequent appointment scheduled, although this was not known at the time of survey completion.

D. Demographic and Oral Health Questionnaire (Covariates)

A 25-question demographic and oral health questionnaire was given to subjects in either English or Spanish via a tablet. Figure 1 shows what covariates were collected and what variables were measured. A questionnaire was developed in English, piloted with residents and clinical staff, translated into Spanish by a native Spanish speaker and piloted once again.

Questions covered caregiver and child's age, race, ethnicity, and oral health practices. This information was collected to describe the study population and explore for moderating and mediation effects. Additionally, questions also asked about caregiver's employment status, transportation to appointments, and amount of people in the home.

E. Confusion, Hubbub, and Order Scale (Predictor Variable)

Along with the demographics and oral health questionnaire, each caregiver was asked to complete Confusion, Hubbub, and Order Scale, which consists of 15 items and is validated in English and Spanish^{35, 36}, to assess household chaos. Each of 15 items are scored on a 4-point Likert scale where 1 means 'very much like our home' and 4 means 'not at all like our home'. The final score was a sum of all the responses (15-60) with a higher score indicating higher levels of household chaos. The chaos scale has high internal consistency (Cronbach's alpha = 0.79) and is reliable (test-retest correlation of 0.74) in both English and Spanish⁴⁵.

After the survey was complete, the scores for items 3 (We almost always seem to be rushed), 5 (No matter how hard we try, we always seem to be running late), 6 (It's a real zoo in our home), 8 (There is often a fuss going on at our home), 9 (No matter what our family plans, it usually doesn't seem to work out), 10 (You can't hear yourself think in our home), 11 (I often get drawn into other people's arguments at home) and 13 (The telephone takes up a lot of our time at home) were adjusted by the PI due the phrasing of the statements. A lower score for these statements would indicate higher household chaos. To adjust for that, a score of 4 was converted to a 1, a score of 3 was converted to a 2, a score of 2 was converted to a 3, and a score of 1 was converted to a 4.

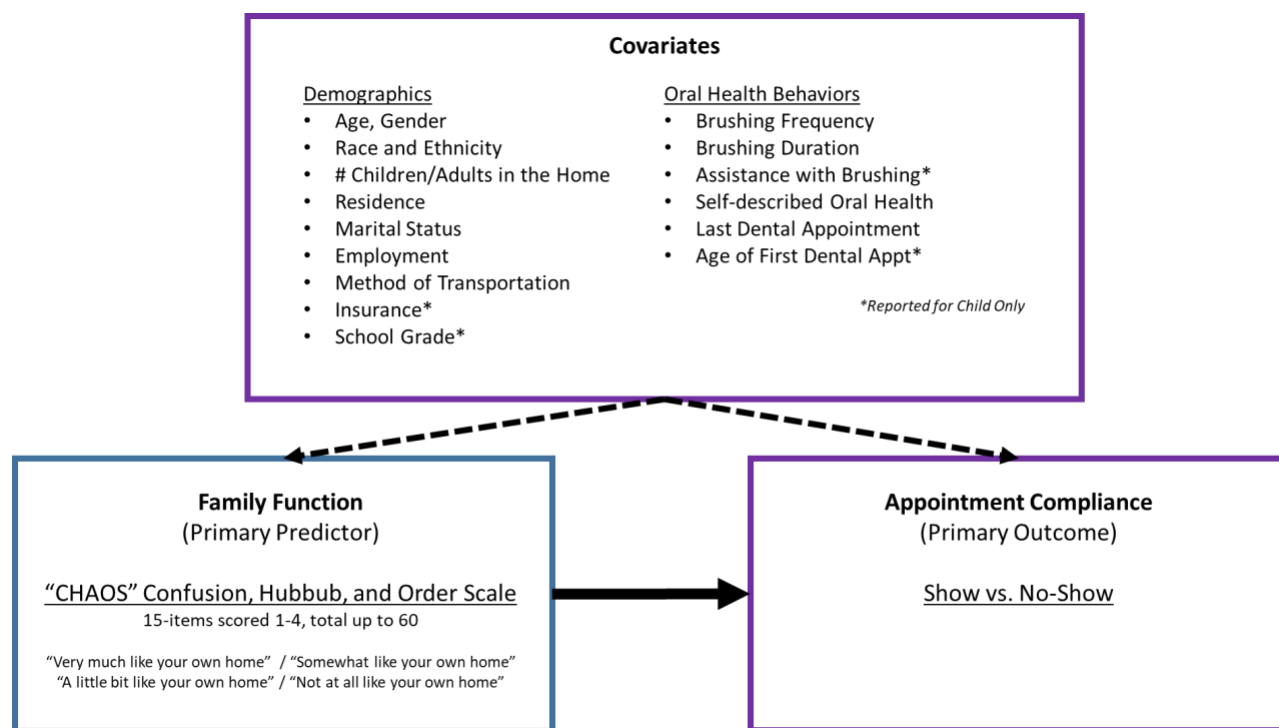
F. Patient Follow-Up (Main Outcome Variable)

Once the survey was completed by the caregiver, a survey number was generated by Qualtrics. This survey number was linked to the patient's electronic chart number which was recorded in a 14.7.7 Excel (Microsoft Excel, Microsoft Corp., Santa Rosa, C.A., USA) spreadsheet. The following information was collected from the dental records after caregiver signed consent and authorization: EHR number, *dmft* score, date of initial appointment, date and type of follow-up appointment, appointment compliance (cancellation, rescheduled, no show, showed), and the number of children's primary teeth (as per submitted data abstraction sheet). Some continuous variables were converted to ordinal variables and some categorical variables were collapsed to aid in statistical analysis. Once data analysis was completed, the identifying data (chart number) was destroyed. Additionally, the data set was kept on a password protected computer in a locked room. Only the PI and Primary Mentor had access to the data. Due to lack of calibration in *dmft* charting, this data was not included in any analysis.

G. Statistical Analysis

Once data collection was completed, the survey data was exported from Qualtrics and entered into a master excel file sheet. The survey data was linked to attendance data in this new excel sheet and was exported for analysis via Statistical Package for Sciences 2020 software (SPSS, IBM Corp., Armonk, N.Y., USA) for further statistical analysis. Descriptive statistics analysis, ANOVA, T-test, Chi-Square Test, and Spearman's Rho were conducted. Caries (*dmft*) was collected, however, statistics were not run on *dmft* due to it being an inconsistently charted indicator of caries risk. Statistical significance was set at a p-value of <0.05 . Due to limited research of CHAOS scores, a power analysis could not be conducted. However, we estimated

that a sample of 100 individuals would be necessary to detect a moderate difference in CHAOS scores if the no-show rate were 30% (historical average).

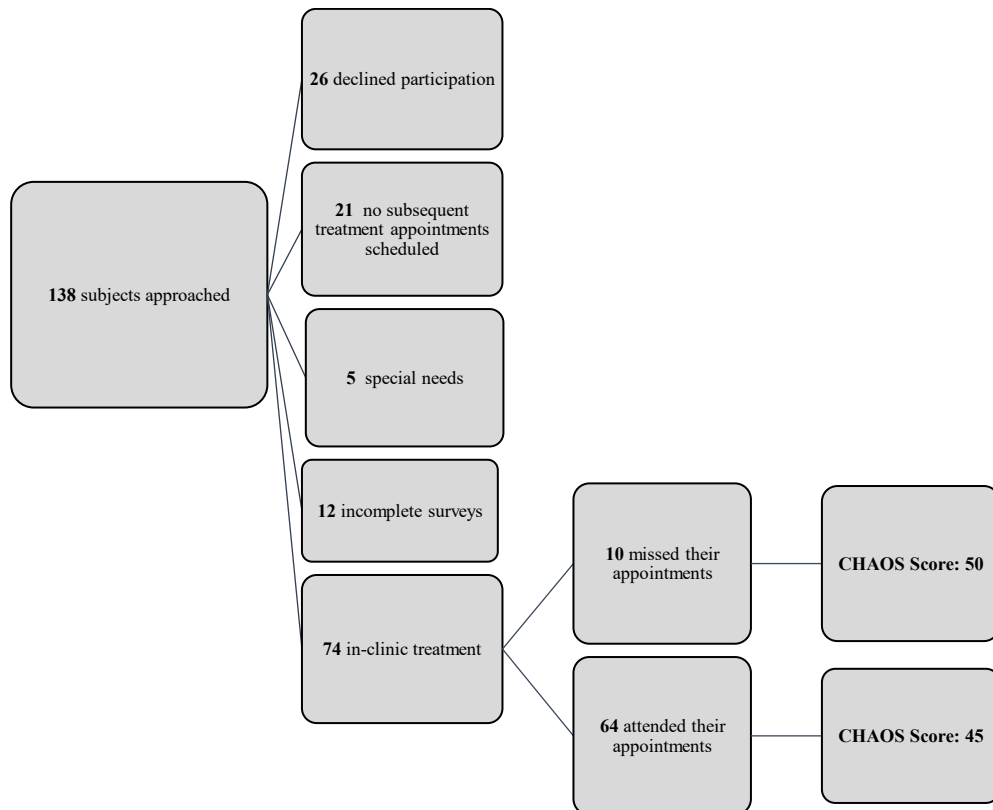


I: Summary of Key Variables

III. RESULTS

A. Study Results

Figure 2 shows the treatment flow. One-hundred and thirty-eight subjects were approached to participate in this study. One-hundred and twelve subjects consented to participating; 5 subjects were ineligible due to their children having special needs, and 12 subjects did not complete the survey. Twenty-one subjects were ineligible due to not having any subsequent appointments scheduled. This was a baseline response rate of 84%. Thirteen participants completed the surveys in Spanish. After removing ineligible responses, 74 were included in analysis, yielding an effective response rate of 53%.



II: Treatment Flow Chart

Tables I and II reference the caregivers, child, and household demographics collected. Average caregiver age was 34 years and 90% of caregivers were female. Majority of the caregivers identified as Caucasian, African American or Hispanic/Latino. Sixty percent of caregivers were single and 58% were employed part-time or full-time.

Average child age was 7 years. Once again, a majority of children identified as Caucasian, African American, or Hispanic/Latino. All children had Medicaid insurance, and a majority (72%) lived in Cook County, IL. Families had a median of 3 adults and 2 children living in the home.

I: CAREGIVER AND HOUSEHOLD DEMOGRAPHICS

*N=74 unless noted	
Caregiver Age	
Mean (SD) 33.88 (7.8)	Median (IQR) 33 (10)
Caregiver Gender	N (%)
Male	8 (10.2%)
Female	66 (89.8%)
# of Adults in the Home (N=71)	Mean (SD): 3.2 (1.7) Median (IQR): 3 (2)
# of Children in the Home (N=73)	Mean (SD): 2.8 (1.4) Median (IQR): 2 (1)
Caregiver Race (N=66)	N (%)
White/Caucasian	27 (40.9%)
African American	18 (27.3%)
Asian	3 (4.5%)
Native American or Alaska Native	3 (4.5%)
Other	15 (22.7%)
Caregiver Ethnicity (N=73)	N (%)
Hispanic or Latino	38 (52.0%)
Not Hispanic or Latino	35 (48.0%)
Survey Language	N (%)
Spanish	13 (17.6%)
English	61 (82.4%)
Caregiver Marital Status (N=73)	N (%)
Single or Never Married	36 (49.3%)
Married or Remarried	24 (32.9%)
Widowed	3 (4.1%)
Divorced	2 (2.7%)
Separated	3 (4.1%)
Unmarried but living with Partner	5 (6.8%)
Caregiver Employment Status (N=73)	N (%)
Employed Full Time	27 (37.0%)
Employed Part-Time	16 (21.9%)
Unemployed Looking for Work	11 (15.1%)
Unemployed and Not Looking for Work	9 (12.3%)
Other/Unable to work	10 (13.7%)

II: CHILD DEMOGRAPHICS

*N=74 unless noted	
Child Age	
Mean (SD) 6.9 (2.6)	Median (IQR) 6 (3)
Child Gender	N (%)
Male	31 (41.9%)
Female	43 (58.1%)
Child Race (N=62)	N (%)
White/Caucasian	25 (40.3%)
African American	19 (30.6%)
Asian	3 (4.8%)
Native Hawaiian/Other Pacific Islander	2 (3.2%)
Native American or Alaska Native	4 (6.5%)
Biracial/Multiracial	9 (14.5%)
Child Ethnicity	N (%)
Hispanic or Latino	39 (52.7%)
Not Hispanic or Latino	35 (47.3%)
Child's School Grade (N=73)	N (%)
Not in school	16 (21.9%)
Pre-K or Pre-school	8 (12.3%)
Kindergarten	17 (23.3%)
Elementary School	18 (24.7%)
Middle School/Junior High School	3 (4.1%)
High School	1 (1.4%)
Child Dental Insurance	N (%)
No Insurance	0 (0%)
Private Insurance	0 (0%)
Medical Card or Other Public Insurance	74 (100%)
Initial Encounter Appointment Type	
Initial	65 (87.8%)
Recall	2 (2.7%)
Emergency	7 (9.5%)

Tables III and IV show reported caregiver and child oral health behaviors. A majority of caregivers (76%) reported they brush their own teeth more than 2 times a day. 65% of caregivers reported that their child brushed their teeth more than 2 times per day while only 12% of caregivers reported they never help their child brush.

Only 5% reported they brushed less than 30 seconds while 19% of caregivers reported that their child brushed less than 30 seconds. Similarly, 8% of caregivers reported their oral health as poor while 18% reported their child's oral health to be poor.

Ninety-one percent reported that their child's last dental appointment was less than 1 year ago while only 65% reported their own last dental visit was less than 1 year ago.

III: CAREGIVER ORAL HEALTH BEHAVIORS

*N=74 unless noted	
Frequency of Brushing	N (%)
More than 2x per day	15 (20.2%)
2x per day	41 (55.4%)
1x per day	18 (24.3%)
Less than 1x per day	0 (0%)
Length of Brushing	N (%)
I don't brush	0 (0%)
Less than 30 seconds	4 (5.4%)
30-60 seconds	38 (51.4%)
60-120 seconds	25 (33.8%)
More than 2 mins	7 (9.4%)
Perception of Oral Health	N (%)
Excellent	4 (5.4%)
Good	36 (48.6%)
Fair	28 (37.8%)
Poor	6 (8.1%)
Last Dental Appointment (N=73)	N (%)
Less than 6 months	21 (28.8%)
6-12 months	32 (43.8%)
1-2 years ago	11 (15.1%)
More than 2 years ago or Never	9 (12.3%)

IIIV: CHILD ORAL HEALTH BEHAVIORS

*N=74 unless noted	
Frequency of Brushing	N (%)
More than 2x per day	9 (12.2%)
2x per day	39 (52.8%)
1x per day	25 (33.8%)
Less than 1x per day	1 (1.4%)
Duration of Brushing	N (%)
Less than 30 seconds	14 (18.9%)
30-60 seconds	41 (55.4%)
60-120 seconds	14 (18.9%)
More than 2 mins	5 (6.8%)
Caregiver Perception of Child's Oral Health	N (%)
Excellent	2 (2.7%)
Good	27 (36.5%)
Fair	32 (43.2%)
Poor	13 (17.6%)
Child's Last Dental Appointment	N (%)
Less than 6 months ago	48 (64.9%)
6-12 months ago	19 (25.7%)
1-2 years ago	3 (4.0%)
More than 2 years ago or 'Never'	4 (5.4%)
Child's First Dental Appointment	N (%)
Before age 1	15 (20.2%)
Age 1	21 (28.4%)
Age 2	12 (16.2%)
Age 3	7 (9.5%)
Age 4	9 (12.2%)
Age 5	8 (10.8%)
Age 6	0 (0%)
More than 6 years of age	2 (2.7%)
Frequency of Caregiver's Assisting their Child with Brushing	N (%)
Always	19 (25.7%)
Usually	20 (27.0%)
Sometimes	26 (35.1%)
Never	9 (12.2%)

V: ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND ORAL HEALTH BEHAVIORS VERSUS CHAOS SCORE

*Statistically significant at p<0.05; independent t-test	Chaos Scores	P-Value
	Mean(SD)	
Caregiver Gender		
Male (n=8)	46.6 (10.0)	0.82
Female (n=66)	45.8 (10.1)	
Child Gender		
Male (n=31)	44.4 (10.7)	0.30
Female (n=43)	46.9 (9.5)	
Caregiver Ethnicity		
Hispanic or Latino (n=38)	45.1 (11.9)	0.60
Not Hispanic or Latino (n=35)	46.4 (7.7)	
Child Ethnicity		
Hispanic or Latino (n=39)	44.9 (11.9)	0.38
Not Hispanic or Latino (n=35)	46.9 (7.5)	
Survey Language		
English (n=61)	48.9 (7.2)	<0.001*
Spanish (n=13)	31.4 (8.8)	
Child Frequency of Brushing		
2x per day or More (n=48)	45.7 (10.5)	0.89
1x per day or Less (n=26)	46.1 (9.2)	
Caregiver Frequency of Brushing		
2x per day or More (n=48)	45.5 (10.6)	0.55
1x per day or Less (n=26)	46.9 (8.1)	
Employment Status		
Employed Full-time/part-time	43.9 (10.4)	0.07
Unemployed/Retired/Cannot Work	48.2 (9.1)	

Table V shows there is a statistically significant difference in the average CHAOS scores for participants who chose Spanish (31.4) as their survey language compared to patients who chose English (48.9) as their survey language ($p < 0.001$) with a higher score in the English speaking subjects.

VI: ASSOCIATION BETWEEN CAREGIVER DEMOGRAPHICS AND CHAOS SCORE

	Chaos Score	ANOVA	Spearman Rho
	Mean (SD)	P-Value (F-Value)	P-Value (Correlation Coefficient)
Caregiver Age			
18-30 (n=28)	51.9 (4.8)	p=0.58 F=0.55	p= 0.47 CC: -0.09
31-40 (n=34)	45.5 (12.2)		
41 or older (n=12)	48.5 (6.5)		
# of Adults in the Home			
One (n=12)	48.7 (9.4)	p=0.31 F=1.20	p= 0.69 CC: -0.05
Two or Three (n=32)	43.9 (11.3)		
Four or More (n=27)	46.7 (8.5)		
# of Children in the Home			
One (n=10)	50.6 (7.9)	p=0.42 F=0.95	p= 0.16 CC: -0.05
Two (n=29)	46.0 (9.4)		
Three (n=17)	45.2 (12.2)		
Four or More (n=17)	44.1 (9.7)		
Caregiver Race			
White/Caucasian (n=27)	46.6 (10)	p=0.31 F=1.21	N/A
African American (n=18)	48.8 (8.1)		
Asian/Native American (n=6)	43.0 (6.6)		
Other (n=15)	42.6 (12.0)		
Marital Status			
Single or Never Married (n=36)	47.6 (9.7)	p=0.18 F=0.46	p=0.10 CC: -0.20
Married/Remarried or Living with Partner(n=29)	45.6 (10.3)		
Widowed/Divorced/Separated(n=8)	40.4 (9.4)		

Table VI shows there were no statistically significant associations between caregiver demographics and CHAOS scores.

VII: ASSOCIATION BETWEEN CHILD DEMOGRAPHICS AND CHAOS SCORE

	Chaos Score Mean (SD)	ANOVA P-Value (F-Value)	Spearman Rho P-Value (Correlation Coefficient)
Child Age			
3-4 (n=11)	43.6 (14.4)	p= 0.71 F:0.46	p= 0.64 CC: 0.06
5-6 (n=29)	45.4 (10.1)		
7-8 (n=17)	45.9 (9.2)		
9 or older (n=17)	48 (7.6)		
Child Race			
White/Caucasian (n=25)	46.0 (10.43)	p = 0.46 F=0.87	N/A
African American(n=19)	49.3 (8.1)		
Asian/Native American/Pacific Islander(n=5)	43.6 (8.8)		
Biracial/Multiracial (n=13)	48.6 (6.4)		
School Grade			
Not in school (n=16)	46.7 (12.6)	p=0.93 F=0.07	p= 0.45 CC: -0.09
Pre-School or Kindergarten (n=25)	45.5 (9.9)		
Elementary School or Higher (n=31)	46.2 (8.7)		

Table VII shows there was no statistically significant association between child demographics and CHAOS scores.

VVIII: ASSOCIATION BETWEEN CHILD ORAL HEALTH BEHAVIORS AND CHAOS SCORES

* Means statistically significant	Chaos Score Mean (SD)	ANOVA P-Value (F-Value)	Spearman Rho P-Value (Correlation Coefficient)
Duration of Brushing			
Less than 30 seconds (n=14)	40.4 (10.5)	p=0.06	p= 0.04*
30-60 seconds (n=41)	46.4 (10.3)	F=2.97	CC: 0.24
More than 1 minute (n=19)	48.6 (7.8)		
Caregiver Perception of Child's Oral Health			
Excellent/Good (n=29)	49.5 (8.5)	p=0.02*	p=0.03*
Fair (n=32)	42.4 (11.3)	F=4.21	CC: -0.25
Poor (n=13)	46.2 (7.1)		
Last dental appointment			
Less than 6 months ago (n=48)	45.9 (10.6)	p=0.22	p=0.54
6-12 months ago (n=19)	48.0 (9.0)	F=1.57	CC:-0.07
More than 1 year ago (n=7)	40.1 (7.6)		
Child's First Dental Appointment			
Before Age 1 or Age 1 (n=36)	46.3 (9.8)		p=0.84
Age 2 or 3 (n=19)	43.6 (10.0)	p= 0.55	CC: 0.02
Age 4 or 5 (n=17)	46.7 (11.0)	F=0.71	
Age 6 or older (n=2)	53 (5.7)		
Frequency of Caregiver's Assisting their Child Brushing			
Always (n=19)	47.3 (11.9)		p=0.76
Usually (n=20)	48.1 (9.6)	p=0.24	CC:-0.04
Sometimes (n=26)	42.6 (9.3)	F=1.44	
Never (n=9)	47.2 (7.8)		
Initial Encounter Appointment Type at UIC			
Initial (n=65)	45.8		p=0.92
Emergency (n=7)	45.0	p= 0.71	CC: -0.01
Recall (n=2)	51.5	F=0.34	

Table VIII shows there was a statistically significant difference ($p=0.04$) between groups who brushed their teeth less than 30 seconds (40) and more than one minute (49). Additionally,

there was also a statistically significant difference ($p=.03$) and a negative correlation between groups who rated their children's oral hygiene excellent/good (50) and fair (42).

IIIX: ASSOCIATION BETWEEN CAREGIVER ORAL HEALTH BEHAVIORS AND CHAOS SCORES

*statistically significant at $p<0.05$	Chaos Score	ANOVA	Spearman Rho
	Mean (SD)	P-Value F-Value	P-Value Correlation Coefficient
Duration of Brushing			
Less than 30 seconds (n=4)	45.8 (8.5)	p= 0.38	p=: 0.32
30-60 seconds (n=38)	44.3 (11.1)	F=0.98	CC: 0.12
More than 1 minute (n=32)	47.7 (9.7)		
Perception of Oral Health			
Excellent/Good (n=29)	49.5 (8.5)	p= 0.35*	p=: 0.32
Fair (n=32)	42.4 (11.3)	F=1.06	CC: -0.12
Poor (n=13)	46.2 (7.1)		
Last dental appointment			
Less than 6 months ago (n=48)	45.9 (10.6)	P= 0.36	p=0.36
6-12 months ago (n=19)	48.0 (9.0)	F=1.03	CC: -0.11
More than 1 year ago (n=7)	40.1 (7.6)		

Table IX shows there are no significant associations between caregivers reported oral health behaviors and CHAOS scores.

X: ASSOCIATION BETWEEN CAREGIVER DEMOGRAPHICS AND APPOINTMENT COMPLIANCE

	Compliance Rate		
	No/Non-Compliant N(%)	Yes/Compliant N (%)	Fischer's Exact Value P-Value
Caregiver Age			
18-30 (n=28)	2 (20%)	26 (40.1%)	2.45 p= 0.19
31-40 (n=33)	5 (50%)	28 (43.8%)	
Older than 41 (n=13)	3 (30%)	10 (6.4%)	
Caregiver Gender			
Male	1 (10%)	7 (10.9%)	Insignificant p=0.71
Female	9 (90%)	57 (89.1%)	
# of Adults in the Home			
One (n=12)	3 (30%)	9 (14.5%)	2.32 p=Value: 0.12
Two or Three (n=32)	4 (40%)	28 (45.2%)	
Four or More (n=29)	2 (20%)	25 (40.3%)	
# of Children in the Home			
One (n=10)	3 (30%)	7 (11.1%)	6.62 p=Value: 0.08
Two (n=29)	3 (30%)	26 (41.3%)	
Three (n=17)	4 (40%)	13 (20.6%)	
Four or More (n=17)	0 (0%)	17 (27.0%)	
Caregiver Race			
White/Caucasian (n=27)	3 (30%)	24 (42.9%)	4.75 p=Value: 0.37
African American (n=18)	5 (50%)	13 (23.2%)	
Asian/Native American (n=6)	1 (10%)	5 (8.9%)	
Other (n=15)	1 (10%)	14 (25.0%)	
Caregiver Ethnicity			
Hispanic or Latino	3 (30%)	35 (55.6%)	Insignificant p=Value: 0.12
Not Hispanic or Latino	7 (70%)	28 (44.4%)	
Survey Language			
Spanish (n=61)	9 (90%)	52 (81.3%)	Insignificant p=Value: 0.44
English (n=13)	1 (10%)	12 (18.8%)	
Marital Status			
Single or Never Married	6 (60%)	30 (47.6%)	0.64 p=Value: 0.38
Married/Remarried or Living with Partner	3 (40%)	26 (41.3%)	
Widowed/Divorced/Separated	1 (10%)	7 (11.1%)	
Employment Status			
Employed Full-time/part-time (n=43)	7 (77.8%)	36 (56.2%)	Insignificant p=0.19
Unemployed/Retired/Unable to work (n=30)	2 (22.2%)	28 (43.8%)	

XI: ASSOCIATION BETWEEN CHILD DEMOGRAPHICS AND APPOINTMENT COMPLIANCE

	Compliance Rate		
	No/Non-Compliant N(%)	Yes/Compliant N (%)	Fischer's Exact Value P-Value
Child Age			
3-4 (n=11)	0 (0%)	11 (17.2%)	0.81 p=0.15
5-6 (n=29)	5 (50%)	24 (37.5%)	
7-8 (n=17)	1 (10%)	16 (25.0%)	
9 or older (n=17)	4 (40%)	13 (20.3%)	
Child Gender			
Male	3 (30%)	28 (43.8%)	Insignificant p=0.32
Female	7 (70%)	36 (56.3%)	
Child Race			
White/Caucasian	3 (30%)	22 (42.3%)	2.52 p= 0.46
African American	5 (50%)	14 (26.9%)	
Asian/Native			
American/Pacific Islander	1 (10%)	4 (7.7%)	
Biracial/Multiracial	1 (10%)	12 (23.1%)	
Child Ethnicity			
Hispanic or Latino	3 (30%)	36 (56.3%)	Insignificant p=0.11
Not Hispanic or Latino	7 (70%)	28 (43.8%)	
School Grade			
Not in school (n=16)	2 (20%)	14 (22.6%)	0.26 p=0.45
Pre-School or Kindergarten (n=25)	3 (30%)	22 (35.5%)	
Elementary School or Higher (n=31)	5 (50%)	26 (41.9%)	

Tables X and XI show there were no statistically significant associations between caregiver/child demographics and appointment compliance.

XII: ASSOCIATION BETWEEN CHILD ORAL HEALTH BEHAVIORS AND APPOINTMENT COMPLIANCE

	Compliance Rate		
	Non-Compliant N(%)	Compliant N (%)	Fischer's Exact Value P-Value
Frequency of Brushing			
2x per day or More (n=48)	7 (70%)	41(64%)	Insignificant p= 0.51
1x per day or Less (n=26)	3 (30%)	23(36.0%)	
Duration of Brushing			
Less than 30 seconds (n=14)	2 (20%)	12(18.8%)	0.28 p=0.46
30-60 seconds (n=41)	6 (80%)	35(54.7%)	
More than 1 minute (n=19)	2 (20%)	17(26.6%)	
Caregiver's perception of their child's oral health			
Excellent/Good (n=29)	7 (70%)	22(34.4%)	4.06 p=0.06
Fair (n=32)	2 (20%)	30 (46.9%)	
Poor (n=13)	1 (10%)	12 (18.8%)	
Child's Last Dental Appointment			
Less than 6 months ago (n=48)	5 (50%)	43 (67.2%)	2.21 p=0.15
6-12 months ago (n=19)	3 (30%)	16 (25.0%)	
More than 1 year ago (n=7)	2 (20%)	5 (7.7%)	
Child's First Dental Appointment			
Age 1 (n=21)	3 (30%)	18 (32.1%)	7.30 p= 0.05
Age 2 or 3 (n=19)	1 (10%)	18 (32.1%)	
Age 4 or 5 (n=16)	6 (60%)	10 (17.9%)	
Age 6 or older (n=10)	0 (0%)	10 (17.9%)	
Frequency of Caregivers Assisting their Child Brush			
Always (n=19)	2 (20%)	17(26.6%)	0.46 p=0.48
Usually (n=20)	3 (30%)	17(26.6%)	
Sometimes (n=26)	4 (40%)	22(34.4%)	
Never (n=9)	1 (10 %)	8 (12.5%)	
Initial Encounter Appointment Type at UIC			
Initial (n=65)	7 (70%)	58 (90.6%)	4.5 p=.10
Emergency (n=7)	2 (20%)	5 (7.8%)	
Recall (n=2)	1 (10%)	1 (1.6%)	

XIII: ASSOCIATION BETWEEN CAREGIVER ORAL HEALTH BEHAVIORS AND APPOINTMENT COMPLIANCE

	Compliance Rate		
	Non-Compliant N(%)	Compliant N (%)	Fischer's Exact Value P-Value
Frequency of Brushing			
2x per day or More (n=56)	7 (70%)	49(76.6%)	Insignificant p=0.46
1x per day or Less (n=18)	3 (30%)	15(23.4%)	
Duration of Brushing			
Less than 30 seconds (n=4)	0 (0%)	4(6.3%)	0.39 p=0.57
30-60 seconds (n=38)	6 (60%)	32(50%)	
More than 1 minute (n=32)	4 (40%)	28(43.8%)	
Perception of Oral Health			
Excellent/Good (n=40)	3 (30%)	37(57.8%)	3.05 p=0.14
Fair (n=28)	6 (60%)	22 (34.4%)	
Poor (n=6)	1 (10%)	5 (7.8%)	
Last Dental Appointment			
Less than 6 months ago (n=21)	2 (20%)	19 (30.2%)	p=0.12
6-12 months ago (n=32)	2 (20%)	30 (47.6%)	
More than 1 year ago (n=20)	6 (60%)	14 (22.2%)	

Tables XII and XIII show there were no statistically significant associations with demographics and appointment compliance and oral health behaviors and appointment compliance.

XIV: DIFFERENCES IN CHAOS SCORES AND COMPLIANCE STATUS

** Scores were adjusted for these statements because a lower score for these statements would indicate higher household chaos. A score of 4 was converted to a 1, a score of 3 was converted to a 2, a score of 2 was converted to a 3, and a score of 1 was converted to a 4.

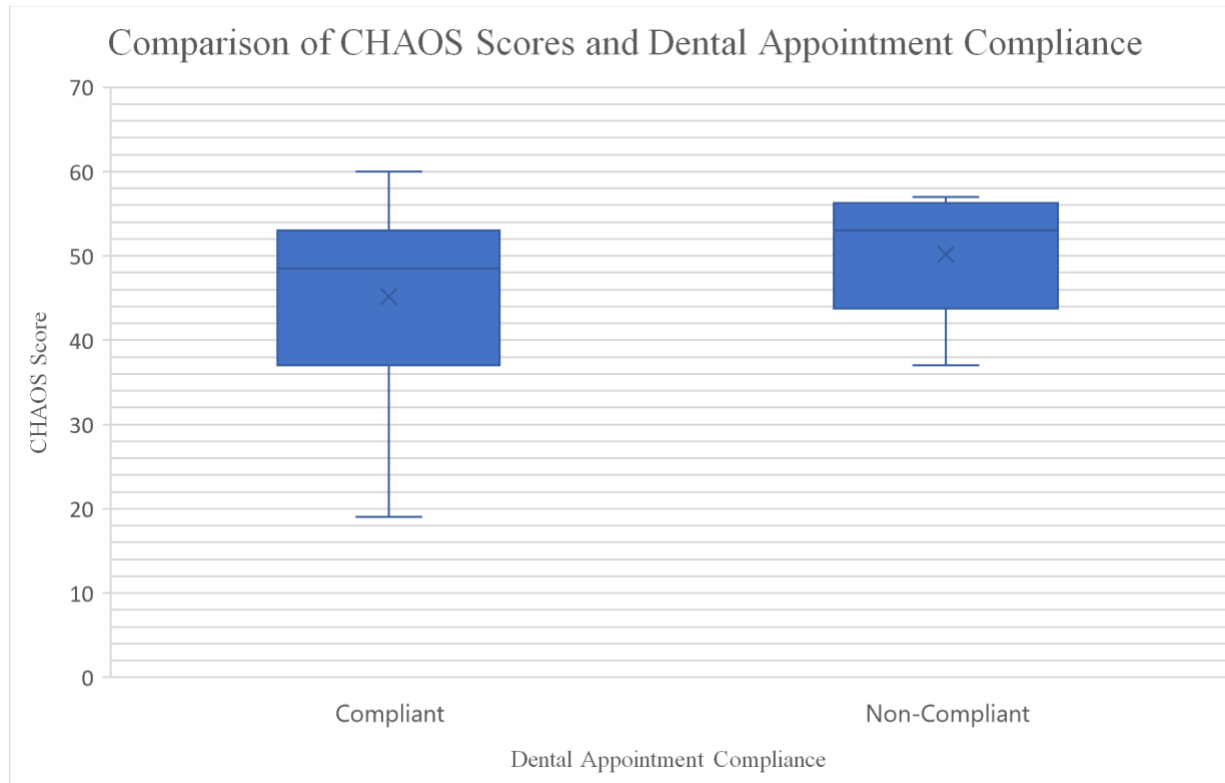
* Statistically Significant at $p < 0.05$, Mann-Whitney test

CHAOS Statement	Total Sample Mean Response (SD) Median (IQR)	“No Show” Mean Response (SD) Median (IQR)	“Show” Mean Response (SD) Median (IQR)	P-value
Item 1: There is very little commotion in our home.	2.6 (1.2) 2 (3)	2.5 (1.4) 2 (3)	2.7 (1.2) 2.5 (3)	0.91
Item 2: We can usually find things when we need them.	3.3 (0.9) 4 (1)	3.5 (1.0) 4 (1)	3.2 (0.9) 3 (1)	0.24
Item 3**: We almost always seem to be rushed.	2.9 (1.0) 3 (2)	3.2 (1.2) 4 (1.5)	2.8 (1.0) 3 (2)	0.18
Item 4: We are usually able to stay on top of things.	3.3 (0.9) 3 (1)	3.3 (1.0) 4 (2)	3.3 (.86) 3 (1)	0.80
Item 5**: No matter how hard we try, we always seem to be running late.	2.9 (1.1) 3 (2)	2.9 (1.2) 3 (2.25)	2.9 (1.1) 3 (2)	0.98
Item 6**: It's a real zoo in our home.	3.2 (1.1) 4 (2)	3.9 (0.3) 4 (0)	3.1 (1.1) 4 (2)	0.02*
Item 7: At home we can talk to each other without being interrupted.	3.1 (1.1) 3 (2)	3.4 (1.1) 4 (1.25)	3 (1.1) 3 (2)	0.18
Item 8**: There is often a fuss going on at our home.	3.1 (1.0) 3 (2)	3.8 (0.4) 4 (.25)	2.9 (1.1) 3 (2)	0.01*
Item 9**: No matter what our family plans, it usually doesn't seem to work out.	3.3 (1.0) 4 (1.50)	3.4 (1.1) 4 (1.25)	3.3 (1.0) 4 (1.75)	0.69
Item 10**: You can't hear yourself think in our home.	2.9 (1.3) 3 (2.5)	3.1 (1.3) 4 (2.25)	2.8 (1.3) 3 (2.75)	0.47
Item 11**: I often get drawn into other people's arguments at home.	3.2 (1.1) 4 (1.5)	3.5 (1.1) 4 (.5)	3.2 (1.1) 4 (1.75)	0.29

TABLE XIV (CONTINUED)

Item 12: Our home is a good place to relax.	3.3 (1.0) 4 (1)	3.6 (0.7) 4 (1)	3.2 (1.1) 4 (1.75)	0.31
Item 13**: The telephone takes up a lot of our time at home.	2.8 (1.0) 3 (2)	3.3 (0.7) 3 (1)	2.7 (1.0) 3 (2)	0.10
Item 14: The atmosphere in our home is calm.	3.0 (1.1) 3 (2)	3.4 (0.8) 4 (1.25)	3.0 (1.1) 3 (2)	0.27
Item 15: First thing in the day, we have a regular routine at home.	3.2 (1.0) 4 (1.5)	3.4 (0.8) 4 (1.25)	3.1 (1.1) 4 (1.75)	0.53
Total CHAOS Score	45.9 (10.0) 49 (16)	50.2 (7.1) 53 (12.5)	45.2 (10.3) 48.5 (16)	0.13

Average CHAOS scores were 45.9/60 (SD=10), with higher scores reflecting higher household chaos. Eighty-two percent of patients showed to their subsequent appointment. There was no difference in the average total CHAOS scores for patients who “showed” compared to patients who did not show; mean CHAOS scores were 45 and 50 respectively ($p=0.13$). The statements, “It’s a real zoo in our home” and “There is often a fuss going on at our home” had significant differences in average scores between the compliant group and the non-compliant group with the higher CHAOS score in the non-compliant group.



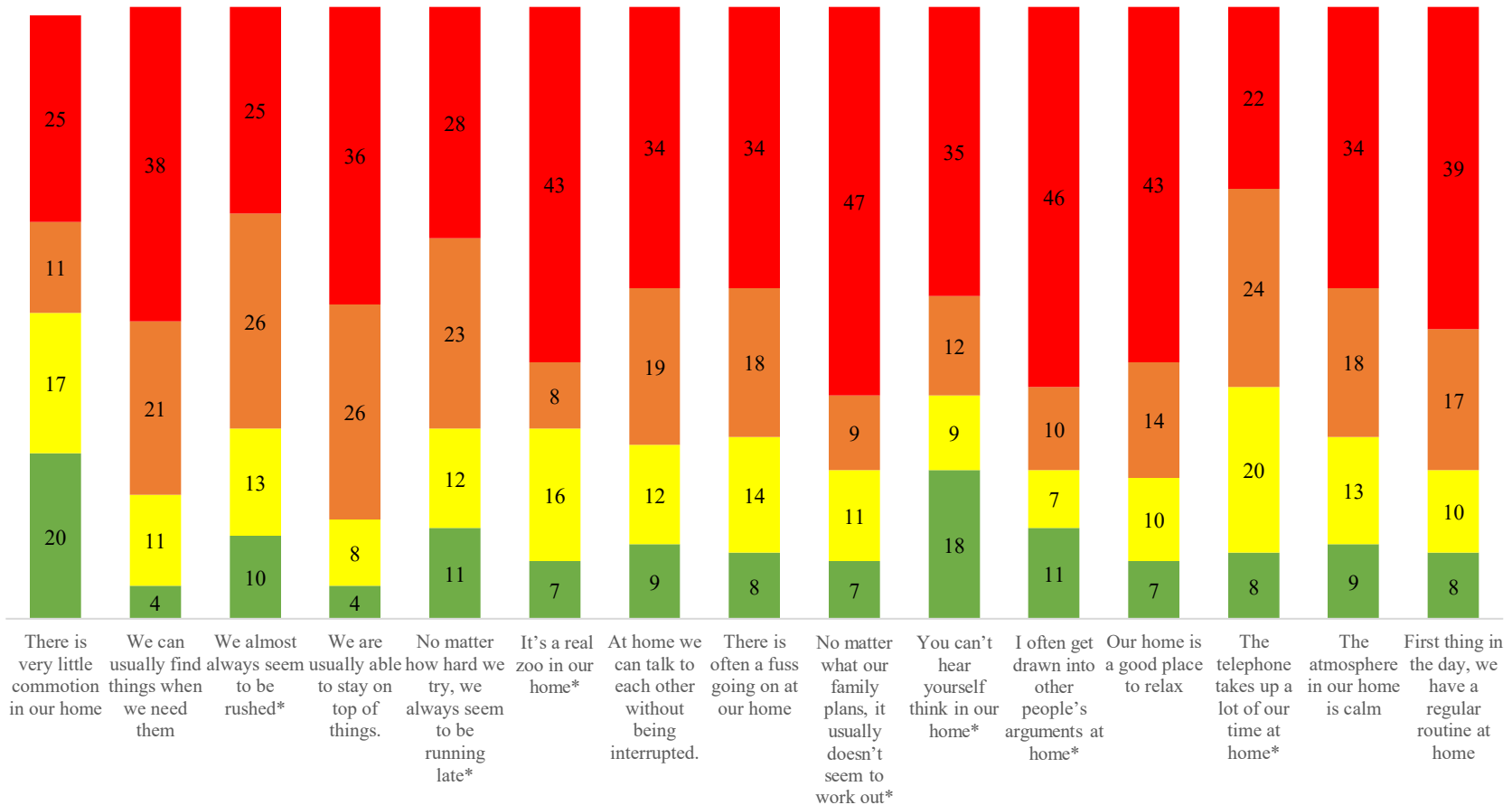
III: Comparison of CHAOS Scores and Dental Appointment Compliance

Figure 3 shows average CHAOS scores for the no-show group were 50 (SD=7) while average CHAOS scores for the show group were 45 (SD=10). The distribution in both groups was negatively skewed but more so in the compliant group. Figure 4 highlights that higher levels of household chaos were reported for each individual question on the CHAOS questionnaire.

Cumulative Responses to the CHAOS Questionnaire

■ 1-Very much like my home ■ 2-Somewhat like my home ■ 3-A little like my home ■ 4-Not at all like my home

*The score is adjusted for these statements so a a higher score will always suggest higher CHAOS. 4 was converted to a 1, 3 converted to a 2, 2 converted to a 3, and 1 converted to a 4.



IV: Cumulative Responses to CHAOS Questionnaire Items

IV. DISCUSSION

A. Summary of Main Study Findings

Seventy-four of 138 caregivers approached were eligible and included in analysis. Twenty-one were ineligible since they did not have a subsequent treatment appointment scheduled, and 12 were ineligible since they did not complete the survey. Five patients had special needs so they were also ineligible to participate. Out of the 74 participants, 65 had come to UIC for an initial visit, 2 had come for a recall visits, and 7 had come for emergency visits. Average caregiver age was 33.9 years (SD=7.8), and 89.2% were female. Average child age was 6.9 years (SD= 2.6), and 58.1% were female. All children had Medicaid insurance, and 71.6% lived in Cook County, IL. This is typical of UIC COD's pediatric population. Families had a median of 3 adults (range 1-7) and 2 children (range 1-7) living in the home. Average CHAOS scores were 45.9/60 (SD=10), with higher scores reflecting higher household chaos, and 86% of patients showed to their subsequent appointment. There was no difference in the CHAOS scores for patients who "showed" compared to patients who did not show; mean CHAOS scores were 50 and 45 respectively ($p=0.13$). Additionally, some oral health behaviors in children such as oral health ratings and how long they brushed their teeth showed a statistically significant difference when comparing CHAOS scores between the groups.

There has been rising attentiveness that household chaos and family function affect a child's well-being and development. To date, literature has explored the relationship between household chaos and pediatric health in the medical realm. Limited literature is available on the effects of household chaos and pediatric health while there have been no studies on pediatric oral health. Furthermore, to our knowledge, there has been no research conducted to determine the

association of household chaos and pediatric dental appointment compliance. Given that recurrently cited reasons for appointment failure stem from family dynamics, this is an important area for research and potential intervention. Research on household chaos crosses over multiple disciplines and clinicians should consider the influence of household chaos' role as a social determinant.³⁰ Risk factors such as poor diet, obesity, poor sleep, and suboptimal health behaviors are affected with higher levels of household chaos^{42,43} and should be considered within a dental setting when considering health behavior interventions. Considering factors of household chaos prior to prescribing interventions would allow for a more rounded approach to support family-function in the framework of the community.

B. Household Chaos and Dental Appointment Compliance

Failed dental appointments cause a myriad of problems because it delays delivery of dental care for the patient and denies another patient from an appointment, thus increasing dental service waitlist times.²¹ Failed dental appointments can lead to untreated decay turning into pain, swelling, or an infection increasing the chances of patients obtaining treatment in the emergency department. This study revealed that there was no difference in the level of household chaos between the group who failed to show to their appointments and the group who showed up to their appointment. Fourteen percent of the sample failed to show to their dental appointment.

Across the nation, Medicaid population appointment compliance rate is about 70-80%. In this study, compliance rate was about 86%. There may have been a few reasons why there was a higher compliance rate in UIC COD's Medicaid pediatric population. Although, it was made clear to the subjects that participation in the survey would not influence their child's care, it is possible subjects who consented to completing this survey may have felt obligated to comply with dental treatment after learning more about the study. To avoid subjects feeling obliged to

participate, the PI was never a provider for any of the subjects. Additionally, many patients that present to UIC have been seen by another outside provider who referred them to UIC to see a specialist. This wait time that patients encounter trying to schedule an appointment can be lengthy. By the time patients come to UIC, they are more likely to be invested in the process and more likely to comply to their appointments. Additionally, only the first subsequent appointment was recorded to check compliance. Patient's may have returned for the first visit to accomplish their treatment needs and may not return later on if they do not feel treatment to be urgent. Lastly, due to COVID-19, many people lost their jobs and children were being home-schooled. This could have allowed for more time at home to come to dental visits. However, both these factors were not measured and would be an interesting study to pursue in the future.

Although compliance rates were high, CHAOS scores were universally high. CHAOS scores were an average of 46 in this sample and had very few outliers with low score. The patient population at UIC is over 90% Medicaid/low-income and predominantly minority populations. Previous studies have shown that there was a negative effect of economic adversity on economic instability on household chaos.⁴⁴ It is concerning that many of our patients reported high household chaos; risk factors such as poor diet, obesity, poor sleep, and suboptimal health behaviors should be considered in families with higher household chaos. These findings suggest that families should receive information about resources and contact information to a social worker, given the high prevalence of CHAOS scores overall. The CHAOS scale looks at whether there is household chaos in the family and it is all relative on a scale of 15-60. There is no value distinction of what a high score or a low score is unless there are other scores to compare it to. However, the chaos scale has high internal consistency (Cronbach's $\alpha = 0.79$) and is reliable (test-retest correlation of 0.74) in both English and Spanish.⁴⁵ It is a good initial measure of

household disorganization; however, more sensitive tools should be used for those working in a population where household chaos is expected to be high such as the Patient-Reported Outcomes Measurement Information System (PROMIS) or the Environmental Screening Questionnaire (ESQ). These tools could help determine what exactly an individual or family needs assistance with.

The CHAOS scale includes 15 validated statements. Interestingly, two statements from the CHAOS questionnaire highlighted a significant difference between the those who were compliant to appointments and those who were non-compliant. They are: “it’s a real zoo in our home” and “there is often a fuss going on at our home.” Higher scores on these questions resulted an increased likelihood to fail appointments. Similarly, a previous study which compared the relationship between glycemic control and household chaos found a strong correlation with higher scores to the statement “it’s a real zoo in our home” and poor glycemic control.⁴⁰ Both of these items suggest there would be a lot of external factors that contribute to the dynamics of family’s home. These items could be screening questions during initial visits to further inquire about levels of chaos in the household.

Additionally, caregivers who took the survey in Spanish reported much lower chaos scores compared to caregivers who took the survey in English. Previous studies have highlighted that social support networks are more available in Hispanic/Latino communities⁴⁵ which would suggest that household chaos would be lower. However, this study does not show a significant difference in CHAOS scores or appointment compliance when comparing Hispanic/Latino populations to non-Hispanic/non-Latino populations. Additionally, the difference in compliance was significant with survey language and not with ethnicity; Spanish speaking families does not necessarily mean they are Hispanic or Latino. Further studies would have to be completed to see

if there is a difference in chaos scores based on comfort language since there were only 13 surveys reported in Spanish. The number of surveys taken in Spanish is very low, so the significant difference between CHAOS scores with language is constrained.

C. Household Chaos and Oral Health Behaviors

There was a negative correlation with CHAOS scores and some of the children's oral health behaviors. Children who brushed more than one minute had higher CHAOS scores compared to children who brushed less than thirty seconds. One would expect higher CHAOS scores to mean that there would be less time during the day to have time to brush; however, the opposite was found in this study. Additionally, caregivers who rated their children's oral health to be excellent/good had higher CHAOS scores compared to caregivers who rated their children's oral health to be fair or poor. It also appears among non-compliant patients, that caregivers who had better self-reported oral health were more likely to miss appointments; however, this is constrained by low number of no-show rates. This could possibly be due to more chaotic households not having enough time to assess their child's oral health and rating it more optimistically. Additionally, this study is all self-reported, so it is possible that these responses are not entirely true. Caregivers could be responding with answers that they felt were socially desirable.

D. Interprofessional Collaboration

In the social determinants of health, there is value to policies which could stabilize economic and family life for children with high chaos. The importance of stability should be considered in policies related to public assistance, housing, employment, immigration, health care, childcare, and child welfare.⁴⁶ Interprofessional education and collaborative practice is a term that has become more familiar over the past few decades and has started to become

introduced into professional healthcare institutions.⁴⁷ It is an approach to health care that involves a team of health care providers to create a positive and helping environment for patient-centered practice.⁴⁸ As dentists, it is important that we can identify, target, and know where to refer in order to effectively reduce household chaos in order to improve child, parent, and family outcomes. This would address social, behavioral, and health problems linked to social determinants, thus making an impact at the family level. Resources and referrals need to be made available from social work services. With interprofessional collaboration, a dentist would more likely be able to provide a holistic approach when providing care.

E. Limitations of the Study

There were several limitations noted in this study. The sample size was smaller, consisting of only 74 participants. When designing this study, we anticipated that approximately 100 responses would be sufficient to detect a moderate difference in CHAOS scores with a 30% no-show rate. With a smaller sample size, there is an increased likelihood of a Type I statistical error—that is, failing to detect a difference when there is a true difference within the sampling groups.

Additionally, the study was self-reported by the caregiver which potentiates an introduction to bias. There are questions such as “how long do you brush your child’s teeth” and “how do you rate your oral health” which received responses which were counterintuitive to what was expected. Caregivers could have reported socially desirable answers. This could have altered responses which were not entirely true.

The study measured compliance as a patient attending their next scheduled visit. It is possible that higher compliance scores could be attributed to patient’s only attending the first

appointment to fulfil their needs. This study did not measure if patient continued to return back to the dental school to complete all the patient's treatment needs.

Furthermore, the surveys given were only in Spanish or English. Although, more than 90% of the patients in the Pediatric Dentistry clinic report speaking Spanish or English, it would have been helpful to include the third and fourth most common languages, which are Mandarin/Cantonese and Polish. There may have been caregivers speaking other languages who were not invited to participate; however, English and Spanish languages make up most of UIC COD's Pediatric Population.

While the CHAOS instrument is validated, there are other instruments that may provide more robust data and highlight opportunities for intervention. These include "Patient-Reported Outcomes Measurement Information System" (PROMIS) and the "Environmental Screening Questionnaire" (ESQ). Each instrument has particular strengths but serve slightly different purposes. CHAOS was selected because it is brief, user-friendly, and validated in two languages; however, it does not provide specific data about which domains of family function may necessitate intervention.

Matheny's CHAOS index does not delineate a CHAOS mean for a high score, moderate score, or low score when determining levels of household chaos. On the other hand, previous studies have used Matheny's CHAOS index; however, they altered it from a Likert scale to a true and false scale. Their studies reported scores from 1-15. Furthermore, these studies also did not have a delineation of high, moderate, or low CHAOS score. For future studies, it would be beneficial to standardize the CHAOS score scale to differentiate what demonstrates a high, moderate, and a low score.

The COVID-19 pandemic may have played a role in altering how patient's valued dental care. Coronavirus transmission occurs through respiratory droplets and aerosol transmission is possible. The COVID-19 pandemic had many implications: family organization, mental health issues, closure of schools, companies and public places, and changes in work routines.⁴⁹ Recommendations by national councils of dentistry only allowed for emergency care to occur for approximately 3 months. UIC COD's patient base is mainly a Medicaid population with high caries risk. Three months of untreated dental decay could have led to pain, infections, and swellings. It is likely that COVID-19 contributed to high chaos; many people lost their jobs during the pandemic which could be a reason for high CHAOS scores in this population.

After re-opening dental clinics in June of 2020 (when this study took place), patients could have been more likely to attend dental appointments due to the fear of a possibility of government shutdown of dental clinics. Additionally, less conflicting factors such as employment and school during the pandemic could have led to the higher appointment compliance rates since patients were available to attend their dental appointments. It is also possible that no-show rates were low due to the health screening mechanisms that provide families to cancel or reschedule their appointments. For this study, appointments that were canceled or rescheduled more than 24 hours in advance were not considered failures because it allowed another patient to be scheduled; however, this contributes to delayed receipt of care for the child. The magnitude of canceled or rescheduled appointments was beyond the scope of this research and is potential idea for future research.

At this time, there is little definitive literature reporting the effects of COVID on children's oral health. Empirical preliminary data suggests a higher frequency of dental

emergencies, limited access to dental offices due to social distancing requirements, and disruption in family dynamics due to school closures, under- or unemployment, among others.

F. Future Studies

Future studies should focus on different dental settings, attempting to get a larger sample size that includes both Medicaid and non-Medicaid populations, and collecting surveys once the COVID-19 pandemic effects on dental offices have minimized. This study was only conducted in a university-based setting; it would be interesting to see results in a private practice setting in a more rural or suburban area. The study sample also only included individuals who have already accessed the dental system. As mentioned above, another study looking at additional instruments (such as the ESQ or PROMIS) as well as other covariates (such as home language) as they relate to household chaos would be a good continuation from this study. Additionally, it would be interesting to study the relationship of diet and household chaos to explore caries risk for a patient. Longitudinal studies are also needed to assess methods to reduce household chaos, evaluating if reduction in household chaos would lead to a positive health outcome for the family. This could be done by implementing interprofessional resources such as a social worker.

V. CONCLUSION

A. Study Conclusion

There was no difference in CHAOS scores with patients who showed for their appointments and patients who did not show

- In this pediatric sample of Medicaid-enrolled children, there was universally high levels of CHAOS.
- The study demonstrated that CHAOS scores did not predict appointment compliance since both CHAOS and appointment compliance were high.
- Furthermore, associations between CHAOS scores and oral health behaviors were weak and not predictive of other outcomes.

APPENDICES

APPENDIX A



Approval Notice Initial Review – Expedited Review

June 3, 2020
Vidhee Shah
Pediatric Dentistry

RE: **Protocol # 2020-0571**
“HOUSEHOLD CHAOS AND APPOINTMENT COMPLIANCE IN A PEDIATRIC DENTAL POPULATION”

Dear Dr. Shah:

Consistent with institutional mandates regarding COVID-19 precautions, an administrative hold has been placed on all UIC human subjects' research meeting the following criteria:

The research is not designed for therapeutic benefit; and

The research involves in-person interactions with investigators or the public.

Since your research meets the above criteria, no in-person research activities may take place until normal operations resume at UIC. Investigators may conduct activities that can be completed remotely (i.e., by phone or online), as appropriate to the research.

For further updates, please refer to the following sources:

UIC Coronavirus Update page:

https://today.uic.edu/coronavirus?utm_source=homepage&utm_medium=website&utm_campaign=covid-19

UIC OPRS Homepage: <https://research.uic.edu/human-subjects-irbs/>

Please direct questions regarding the administrative hold to OPRS: uicirb@uic.edu

Please remember to submit translations of all data collection instruments and recruitment and consent documents for subjects whose primary language is not English. Translations must be accompanied with a statement attesting to the accuracy of translations and translator's credentials when submitted to the UIC IRB. This can be done following the approval of the Initial Review Application as a separate Amendment via OPRSLive but before recruiting and/or enrolling subjects whose primary language is not English; and/or accessing and/or analyzing any data from those subjects.

Please note that OPRS staff has revised the versions and the dates in the footer of the below cited documents to match the versions and dates of the name the documents were saved under, for recording and approval tracking purposes. Please only use these approved documents in conduct of this research.

Please note that as per the revised Federal Regulations (2018 Common Rule) and OPRS policies

APPENDIX A (CONTINUED)



your research does not require a Continuing Review; therefore, the approved documents are stamped only with an approval date. Although your research does not require a Continuing Review, you will receive annual reminder notices regarding your investigator responsibilities (i.e., submission of amendments, final reports, and prompt reports), and will be asked to complete an Institutional Status Report which will be sent to you via email every 3 years. If you fail to submit an Institutional Status Report, your research study will be administratively closed by the IRB. For more information regarding Continuing Review and Administrative Closure of Research visit: <http://research.uic.edu/node/735>.

Members of Institutional Review Board (IRB) #2 reviewed and approved your research protocol under expedited review procedures [45 CFR 46.110(b)(1)] on May 30, 2020. You may now begin your research.

Your research meets the criteria for approval under the following category(ies): Protocol reviewed under expedited review procedures [45 CFR 46.110] Category: 5, 7

Please note the following information about your approved research protocol:

<u>Protocol Approval Date:</u>	May 30, 2020
<u>Approved Subject Enrollment #:</u>	800
<u>Performance Sites:</u>	UIC
<u>Sponsor:</u>	None
<u>Institutional Proposal (IP)#:</u>	None
<u>Grant/Contract No:</u>	None
<u>Grant/Contract Title:</u>	None
<u>Research Protocol(s):</u>	None
a)	Research Protocol: HOUSEHOLD CHAOS AND APPOINTMENT COMPLIANCE IN A PEDIATRIC DENTAL POPULATION, Version 4, 06/01/2020
b)	Initial Review Application: HOUSEHOLD CHAOS AND APPOINTMENT COMPLIANCE IN A PEDIATRIC DENTAL POPULATION, 06/02/2020

Documents that require an approval stamp or separate signature can be accessed via [OPRS Live](#). The documents will be located in the specific protocol workspace. You must access and use only the approved documents to recruit and enroll subjects into this research project.

Recruitment Material(s):

- a) Recruitment Script, Version 3, 05/21/2020
- b) Eligibility Screener, Version 3, 05/21/2020

Informed Consent(s):

- a) (Combined Consent and Authorization), Version 3, 06/02/2020
- b) Exceptions to informed consent/permission/assent for the purposes of recruiting, screening, and determining eligibility of prospective participants has been noted under

Page 2 of 3

APPENDIX A (CONTINUED)



45 CFR 46.116(g).

Assent(s):

- a) A waiver of assent has been granted under 45 CFR 46.116(f); (minimal risk; combined parental consent/permission/authorization will be obtained from parents/guardians at enrollment).

HIPAA Authorization(s):

- a) Review Preparatory to Research Acknowledged [45 CFR 164.512(i)(1)(ii)].

Additional Determinations for Research Involving Minors:

The Board determined that this research satisfies 45CFR46.404, research not involving greater than minimal risk. Therefore, in accordance with 45CFR46.408, the IRB determined that only one parent's/legal guardian's permission/signature and/or authorization is needed.

Please remember to:

→ Use only the IRB-approved and stamped consent document(s) and/or authorizations when enrolling new subjects.

→ Use your **research protocol number** (2020-0571) on any documents or correspondence with the IRB concerning your research protocol.

→ Review and comply with the [policies](#) of the UIC Human Subjects Protection Program (HSPP) and the guidance [Investigator Responsibilities](#).

Please note that the UIC IRB has the right to ask further questions, seek additional information, or monitor the conduct of your research and the consent process.

Please be aware that if the [scope of work](#) in the grant/project changes, the protocol must be amended and approved by the UIC IRB before the initiation of the change.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact the OPRS office at (312) 996-1711 or me at (312) 413-1518. Please send any correspondence about this protocol to OPRS via [OPRS Live](#).

Sincerely,

Alma Milat, BS
IRB Coordinator, IRB # 2
Office for the Protection of Research Subjects

cc: David Avenetti, Faculty Sponsor, Pediatric Dentistry, M/C 850
Marcio Da. Fonseca, Pediatric Dentistry, M/C 850

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APPENDIX B



**Conditions Required to Secure Approval (Formerly Request for Modifications)
Amendment – Expedited Review Procedures
UIC Amendment # 1**

July 29, 2020
Vidhee Shah
Pediatric Dentistry

RE: **Protocol # 2020-0571**
“HOUSEHOLD CHAOS AND APPOINTMENT COMPLIANCE IN A PEDIATRIC DENTAL POPULATION”

Dear Dr. Shah:

PIs who wish to begin or resume research involving activities that have been placed on temporary hold by the University due to the COVID-19 pandemic (i.e., non-therapeutic, in-person research) must complete a COVID-19 Human Subjects Research Restart Worksheet for an assessment of their studies prior to resuming or initiating the research.

Please refer to the Human Subjects Research Restart page on the OVCR website for additional information.

The research restart is being managed by the Office of the Vice Chancellor for Research (OVCR) and the UIC Center for Clinical and Translational Sciences (CCTS). Questions about the campus research restart may be directed to research@uic.edu.

Your application for the following amendment was reviewed on July 29, 2020:
UIC Amendment #1 dated and received July 27, 2020 is an investigator-initiated amendment regarding the following:

- (1) Submit the Spanish translation of the data collection instrument (Spanish Household Chaos and Appointment Compliance in a Pediatric Dental Population Questionnaire, v1, 7/27/2020) and,
- (2) Submit the Spanish translations of the recruitment and consent documents (Spanish Consent, v1, 7/27/2020; Spanish Eligibility Screener, v1, 7/27/2020; Spanish Recruitment Script, v1, 7/27/2020).

The following conditions must be addressed before your amendment may be implemented:

1. **Issues regarding research protocol and /or research protocol application:**
 - 1.1 As noted in the initial approval letter please provide a statement verifying the translator's credentials and the accuracy of the translations.

For information on creating a response to the IRB letter, please refer to the [Research Training Guidelines for OPRS Live](#) before proceeding with the instructions below.

When submitting your response upload the following via [OPRS Live](#):

1. **A cover or response letter:**

Page 1 of 2

APPENDIX B (CONTINUED)



You may either:

- a. **Unlock** the *Conditions Required to Secure Approval* letter from the IRB, **OR**
- b. **Copy** the IRB's conditions to a new document.

Insert your response to each of the IRB's conditions directly beneath that item (i.e., request 1.1, response 1.1; request 1.2, response 1.2, etc.). Save the edits under a new file name and upload it with your response submission packet to the IRB.

2. For conditions that require revisions to previously submitted documents:
 - a. **Upload one file** of the revised document(s) with tracked changes, **plus** one file without tracked changes but with all of the changes incorporated into the document(s).
 - b. Revise (or insert) a footer on each page of each document that includes:
 - 1) the next sequential version number;
 - 2) the latest revision date;
 - 3) a short descriptor (to describe each document and differentiate among various documents in the same research protocol); and
 - 4) page numbers in the X of Y format (Page 1 of #, Page 2 of #, etc.).
 - c. For consent/authorization forms and recruitment materials, leave sufficient blank space for the IRB approval stamp (2-1/2 inches wide by 1-1/2 inches high) in the upper right corner of the first page.
3. **Please note that only new and/or revised documents should be provided.** Previously submitted documents for which no changes have been made do NOT need to be included in the response submission.

Based on your response the IRB 2 has the authority to ask further questions, seek additional information, require further revisions, or refer the response to the convened IRB.

Please note that you **may not** implement the amendment to your research until you receive a **written notice of IRB approval**.

If you do not respond to these conditions within 90 days of this letter, the submission will be automatically withdrawn from the review process and the IRB will not take any further action.

If you have any questions or need further help, please contact the OPRS office at (312) 996-1711 or me at (312) 355-0816. Please send any correspondence about this protocol to OPRS via [OPRS Live](#).

Sincerely,

Alison Santiago, MSW, MJ
Assistant Director, IRB # 2
Office for the Protection of Research Subjects

cc: David Avenetti (Faculty Advisor), Pediatric Dentistry, M/C 850
Marcio Da. Fonseca, Pediatric Dentistry, M/C 850

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APPENDIX C



Recruitment Script

To be read when caregiver's are approached.

Hello, I am Dr. Shah, I am doing a research study at the University of Illinois at Chicago: College of Dentistry: Department of Pediatric Dentistry. I am doing a study of how patients' home life affects their child's oral health. The study involves completing one brief survey and accessing their child's medical records for information. More detailed information will be provided in the consent and authorization form. This survey is completely voluntary. There are no negative effects if you don't want to take it. Your response will have no effect on your child's current or future care.

Caregivers of a healthy school-aged children who have appointments in the Pediatric department of the UIC College of Dentistry are eligible for this study. The caregiver must be 18 years of age or older and be able to read in English or Spanish. The study involves answering a brief questionnaire which will ask questions about your demographics, your oral health, home life, and your child's oral health. The survey will take about 10 minutes.

[Household Chaos and Appointment Compliance
in a Pediatric Dental Population]
Recruitment Script
[Version 3, 5/21/20]

APPENDIX D



Script de reclutamiento

Para ser leído cuando se acerque a los cuidadores.

Hola, soy el Dr. Shah, estoy haciendo un estudio de investigación en la Universidad de Illinois en Chicago: Facultad de Odontología: Departamento de Odontología Pediátrica. Estoy haciendo un estudio de cómo es la vida en el hogar de los pacientes del efecto de la salud bucal de sus hijos. El estudio implica completar una breve encuesta y acceder a los registros médicos de sus hijos para obtener información. Se proporcionará información más detallada en el formulario de consentimiento y autorización. Esta encuesta es completamente voluntaria. No hay efectos negativos si no quieres tomarlo.

Los cuidadores de niños sanos en edad escolar que tienen citas en el departamento de pediatría de la Facultad de Odontología de la UIC son elegibles para este estudio. El cuidador debe tener 18 años de edad o más y poder leer en inglés o español. El estudio implica responder un breve cuestionario que hará preguntas sobre su demografía, su salud bucal, la vida en el hogar y la salud bucal de su hijo. La encuesta tomará unos 10 minutos.

[Household Chaos and Appointment Compliance
in a Pediatric Dental Population]
Recruitment Script
[Version 1, 07/27/20]

APPENDIX E



University of Illinois at Chicago (UIC) and/or
University of Illinois Hospital & Health Sciences System (UI Health)
Research Information and Consent and Authorization for Participation in Social,
Behavioral, or Educational Research
HOUSEHOLD CHAOS AND APPOINTMENT COMPLIANCE IN A PEDIATRIC
DENTAL POPULATION

Principal Investigator/Researcher Name and Title: Vidhee Shah, BS, DDS
Faculty Advisor Name and Title: David Avenetti, MSD, MPH, DDS
Department and Institution: Department of Pediatric Dentistry, University of Illinois at Chicago College of Dentistry
Address and Contact Information: 801 S Paulina MC 850, Room 269; Phone: 312-996-7532; Email: vnshah2@uic.edu

About this research study

You are being asked to participate in a research study. Research studies answer important questions that might help change or improve the way we do things in the future.

Taking part in this study is voluntary

Your participation in this research study is voluntary. You may choose to not take part in this study or may choose to leave the study at any time. Deciding not to participate, or deciding to leave the study later, will not result in any penalty or loss of benefits to which you are entitled and will not affect your relationship with the University of Illinois Hospital and Health Sciences System (UI Health) and/or University of Illinois at Chicago (UIC). **Your decision to participate will not affect the current or future care you are receiving at UIC College of Pediatric Dental Medicine in any way.**

This consent form will give you information about the research study to help you decide whether you want to participate. Please read this form and ask any questions you have before agreeing to be in the study.

You are being asked to participate in this research study because you are a primary caregiver of a healthy school-aged child (0-17 years old), who has an appointment at the UIC graduate or pre-doctoral pediatric dentistry clinics. Additionally, you must be 18 years of age or older and be able to read in English or Spanish.

400 caregivers and 400 children pairs will be enrolled in this research study.

UIC IRB Social, Behavioral, and Educational
Research Informed Consent Template: 11/01/19
Do NOT Change This Field – IRB Use ONLY

Page 1 of 7

[Household Chaos and Appointment
Compliance in a Pediatric Dental
Population]
[Version 3, 06/02/20]

APPENDIX E (CONTINUED)

Important Information

This information gives you an overview of the research. More information about these topics may be found in the pages that follow.

WHY IS THIS STUDY BEING DONE?	We want to learn how CHAOS in a child home impacts a child's oral health. CHAOS is a 15-question survey in English that measures the degree of confusion and disorganization in a child's home and will be used as a tool in this study to determine the amount of chaos is present within a family.
WHAT WILL I BE ASKED TO DO DURING THE STUDY?	You will be asked to complete a survey questionnaire via a tablet that will ask you to provide some demographic information about you and your child as well as questions about your oral health, home life, and your child's oral health and utilization. You will also be asked to authorize the researchers to obtain and use your child's name and date of birth to obtain your child's medical record number and access your child's medical record to obtain following information for research purposes: initial and follow up dates, follow up appointment compliance (such as show, no show, reschedule, cancelled), your child's dmft score (decayed, missing, or filled teeth) and the number of [your] child's primary teeth on record. Please review the appropriate sections of the consent document that contains HIPPA authorization language for more information.
HOW MUCH TIME WILL I SPEND ON THE STUDY?	The survey will take a maximum of 10 minutes to complete.
ARE THERE ANY BENEFITS TO TAKING PART IN THE STUDY?	Being in this research study will not benefit you directly. We hope that your participation in the study may benefit other people in the future by helping us learn about home life and appointment compliance. We hope the results of this study will inform how to improve services to ensure people get the help they need.
WHAT ARE THE MAIN RISKS OF THE STUDY?	The primary risks presented by this research study are breaches of privacy (others outside of the study may find out you are a subject) and/or confidentiality (others outside of the study may find out what you did, said, or information that was collected about you during the study). You may be uncomfortable with some of the questions you may be

APPENDIX E (CONTINUED)

	asked and/or asked to discuss. This research includes some items about home life. You can skip and/or not respond to any questions that may make you uncomfortable. Online electronic surveys are not 100% secure, and your online privacy can never be fully guaranteed. Privacy and confidentiality will be protected to the extent that it is technologically possible.
DO I HAVE OTHER OPTIONS BESIDES TAKING PART IN THE STUDY?	This survey is completely voluntary. You have the option to decide not to take part at all or you may stop your participation at any time without any consequences.
QUESTIONS ABOUT THE STUDY?	<p>For questions, concerns, or complaints about the study, please contact Dr. Vidhee Shah at 312-413-2046 or email at vnshah2@uic.edu or contact Dr. David Avenetti at 312-996-2046 or email at avenetti@uic.edu</p> <p>If you have questions about your rights as a study subject; including questions, concerns, complaints, or if you feel you have not been treated according to the description in this form; or to offer input you may call the UIC Office for the Protection of Research Subjects (OPRS) at 312-996-1711 or 1-866-789-6215 (toll-free) or e-mail OPRS at uicirb@uic.edu.</p> <p>If you have questions or concerns regarding your privacy rights under HIPAA, you should contact the University of Illinois HIPAA Privacy Office at (844) 341-2201 or hipaa@uillinois.edu.</p>

Please review the rest of this document for details about these topics and additional things you should know before making a decision about whether to participate in this research. Please also feel free to ask the researchers questions at any time.

This research will be performed at University of Illinois at Chicago: College of Dentistry 2nd Floor: Department of Pediatric Dentistry.

During this study, Dr. V. Shah and her research team will collect information about you for the purposes of this research. Information about you and your child's age, gender, marital status, race, ethnicity, employment status, preferred language, oral health, access to care, reason for appointment will be collected in the demographic and screening portion of the survey. Information about your home life will be asked with CHAOS tool which is a 15-question survey in English that measures the degree of confusion and disorganization in a child's home and will be used as a tool in this study to determine the amount of chaos is present within a family. Lastly, information about the child's appointments and dmft score (decayed, missing, filled teeth) will be recorded.

APPENDIX E (CONTINUED)

Your identifiable private information collected for this research study will not be used for future research studies or shared with other researchers for future research.

What about privacy and confidentiality?

Efforts will be made to keep your personal information confidential; however, we cannot guarantee absolute confidentiality. In general, information about you, or provided by you, during the research study, will not be disclosed to others without your written permission. However, laws and state university rules might require us to tell certain people about you. For example, study information which identifies you and the consent form signed by you may be looked at and/or copied for quality assurance and data analysis by:

- Representatives of the university committee and office that reviews and approves research studies, the Institutional Review Board (IRB) and Office for the Protection of Research Subjects.
- Other representatives of the State and University responsible for ethical, regulatory, or financial oversight of research.
- Government Regulatory Agencies, such as the Office for Human Research Protections (OHRP).

A possible risk of the study is that your participation in the study or information about you might become known to individuals outside the study. Your personal information, data collected from the survey or records will be stored on a HIPPA protected, UIC Healthbox. Once the survey is completed, a survey ID will be given to each completed survey. The referenced survey ID will link all data collected (the eligibility screener, caregivers' response to questionnaires). Additionally, the survey ID will be recorded in the PHI data abstraction sheet (Post survey information link document). This PHI abstraction sheet will include the MRN (Axium chart number) to access the patient's chart at a later time to obtain information on (1) dmft score; (2) follow-up appointment; (3) appointment compliance (cancelled, rescheduled, no show, showed); and (4) the number of child's primary teeth (as per submitted data abstraction sheet). Coded data and identifiers will be stored and secured separately. The PI will only have access to the identifiable information and will be stored on a HIPPA protected UIC Healthbox All identifiers, including the master list that links your data to your identity will be destroyed after data analysis.

When the results of the study are published or discussed in conferences, no one will know that you were in the study.

What are the costs for participating in this research?

There are no costs to you for participating in this research.

Will I be reimbursed for any of my expenses or paid for my participation in this research?

You will not be offered payment for being in this study.

UIC IRB Social, Behavioral, and Educational
Research Informed Consent Template: 11/01/19
Do NOT Change This Field – IRB Use ONLY

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[Household Chaos and Appointment
Compliance in a Pediatric Dental
Population]
[Version 3, 06/02/20]

APPENDIX E (CONTINUED)

Can I withdraw or be removed from the study?

If you decide to participate, you have the right to withdraw your consent and leave the study at any time without penalty. The researchers also have the right to stop your participation in this study if they believe it is in your best interest. If you choose to no longer be in the study at the later time and you do not want any of your future information to be used, you must inform the researchers in writing at the address on the first page before the researchers destroy the identifiers linking you to your data at the end of the data analyses. The researchers may use your information that was collected prior to your written notice.

The researchers and also have the right to stop your participation in this study without your consent if they believe it is in your best interests.

Will health information about you be created, used or shared with others during this study?

State and federal laws, including the Health Insurance Portability and Accountability Act (HIPAA), require researchers to protect your health information. This section of this form describes how researchers, with your authorization (permission), may use and release (disclose or share) your protected health information in this research study. By signing this form you are authorizing Dr. V. Shah and her research team to create, get, use, store, and share protected health information that identifies you for the purposes of this research.

The health information includes all information created and/or collected during the research as described within this consent form and/or any health information in your medical record that is needed for the research and that specifically includes:

- Personal identifiers such as your child's name, child's date of birth, dental record number, dates of service such as the date and type of the initial appointment, date and type of follow up appointment including follow up appointment compliance (show, no show, rescheduled, cancelled), and # of primary teeth in addition to dmft score

During the conduct of the research, the researchers may use or share your health information:

- With each other and with other researchers involved with the study.
- With law enforcement or other agencies, when required by law.
- Representatives of the university committee and office that reviews and approves research studies, the Institutional Review Board (IRB) and Office for the Protection of Research Subjects.
- Other representatives of the State and University responsible for ethical, regulatory, or financial oversight of research.
- United States Government Regulatory Agencies, including but not limited to the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA).

If all information that identifies you is removed from the research data, the remaining information is no longer subject to the limits of this Authorization or to the HIPAA privacy laws.

APPENDIX E (CONTINUED)

Therefore, the de-identified information may be used and released by the researchers (as permitted by law) for other purposes, such as other research projects.

How will your health information be protected?

The researchers agree to protect your health information and will only share this information as described within this research consent/authorization form.

When your health information is given to people outside of the research study, those agencies that receive your health information may not be required by federal privacy laws (such as the Privacy Rule) to protect it. They may also share your information with others without your permission, unless permitted by laws that they have to follow.

Your authorization for release of health information expires at the end of the data analyses or sooner if you decide to withdraw your permission.

You may change your mind and cancel this Authorization at any time. To cancel this Authorization, you must write to: Dr. Vidhee Shah, 801 S Paulina MC 850, Room 269 or Email: vnshah2@uic.edu

If you cancel this Authorization, you may no longer be allowed to take part in the research study. Even if you cancel this Authorization, the researchers may still use and disclose health information they have already obtained as necessary to maintain the integrity and reliability of the research and to report any adverse (bad) effects that may have happened to you.

Right to Refuse to Sign this Authorization

You do not have to sign this Consent/Authorization. However, because your health information is required for research participation, you cannot be in this research study if you do not sign this form. If you decide not to sign this Consent/Authorization form, it will only mean you cannot take part in this research. Not signing this form will not affect your non-research related treatment, payment or enrollment in any health plans or your eligibility for other medical benefits.

Remember:

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

Consent of Subject

I have read the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I will be given a copy of this form. I agree to participate in this research and authorize for the researcher to use and share my health information for the research.

APPENDIX E (CONTINUED)

If you have not already received a copy of the Notice of Privacy Practices, you should ask for one. Your signature below indicates that you are providing both consent to participate in the research study and authorization for the researcher to use and share your child’s health information for the research.

Parent/Guardian Printed Name	Date
Parent/Guardian Signature	Date
Printed Name of Minor	Date
PI Name	Date
PI Signature	Date

APPENDIX F



**University of Illinois at Chicago (UIC) and/or
University of Illinois Hospital & Health Sciences System (UI Health)
Research Information and Consent and Authorization for Participation in Social,
Behavioral, or Educational Research**

**HOUSEHOLD CHAOS AND APPOINTMENT COMPLIANCE IN A PEDIATRIC
DENTAL POPULATION**

Investigadora Principal / Investigadora Nombre y Título: Vidhee Shah, BS, DDS
Nombre y título del asesor de la facultad: David Avenetti, MSD, MPH, DDS
Departamento e Institución: Departamento de Odontología Pediátrica, Universidad de Illinois en Chicago Colegio de Odontología
Dirección e información de contacto: 801 S Paulina MC 850, Salon 269; Numero de teléfono: 312-996-7532; Correo electrónico: vnshah2@uic.edu

Sobre este estudio de investigación

Se le pide que participe en un estudio de investigación. Los estudios de investigación responden preguntas importantes que pueden ayudar a cambiar o mejorar la forma en que hacemos las cosas en el futuro.

Participar en este estudio es voluntario

Su participación en este estudio de investigación es voluntaria. Puede optar por no participar en este estudio o puede optar por abandonar el estudio en cualquier momento. La decisión de no participar, o la decisión de abandonar el estudio más tarde, no dará lugar a ninguna multa o pérdida de beneficios a los que tiene derecho y no afectará su relación con el Hospital de la Universidad de Illinois y el Sistema de Ciencias de la Salud (UI Health) y / o Universidad de Illinois en Chicago (UIC). Su decisión de participar no afectará la atención actual o futura que está recibiendo en la Facultad de Medicina Dental Pediátrica de la UIC de ninguna manera.

Este formulario de consentimiento le dará información sobre el estudio de investigación para ayudarlo a decidir si desea participar. Lea este formulario y haga cualquier pregunta que tenga antes de aceptar participar en el estudio.

APPENDIX F (CONTINUED)

Se le pide que participe en este estudio de investigación porque usted es el cuidador principal de un niño saludable en edad escolar (0-17 años), que tiene una cita en las clínicas de odontología pediátrica predoctoral o graduado de la UIC. Además, debe tener 18 años de edad o más y poder leer en inglés o español.

400 cuidadores y 400 parejas de niños se inscribirán en este estudio de investigación.

Información importante

Esta información le brinda una visión general de la investigación. Puede encontrar más información sobre estos temas en las páginas siguientes.

¿POR QUÉ SE ESTÁ HACIENDO ESTE ESTUDIO?	Queremos aprender cómo el CHAOS en un hogar infantil afecta la salud bucal de un niño. CHAOS es una encuesta de 15 preguntas en inglés que mide el grado de confusión y desorganización en el hogar de un niño y se utilizará como herramienta en este estudio para determinar la cantidad de caos presente en una familia.
¿Qué se me pedirá que haga durante el estudio?	Se le pedirá que complete un cuestionario de encuesta a través de una tableta que le pedirá que brinde información demográfica sobre usted y su hijo, así como preguntas sobre su salud oral, la vida en el hogar y la salud y utilización oral de su hijo. También se le pedirá que autorice a los investigadores a obtener y usar el nombre y la fecha de nacimiento de su hijo para obtener el número de registro médico de su hijo y acceder al registro médico de su hijo para obtener la siguiente información para fines de investigación: fechas iniciales y de seguimiento, cita de seguimiento cumplimiento (como mostrar, no presentarse, reprogramar, cancelar), el puntaje dmft de su hijo (dientes cariados, faltantes o llenos) y la cantidad de dientes primarios [de su] hijo registrados. Revise las secciones correspondientes del documento de consentimiento que contiene el lenguaje de autorización HIPPA para obtener más información.
¿CUÁNTO TIEMPO PASARÉ EN EL ESTUDIO?	La encuesta tomará un máximo de 10 minutos para completar.
¿HAY ALGUNA VENTAJA DE PARTICIPAR EN EL ESTUDIO?	Estar en este estudio de investigación no lo beneficiará directamente. Esperamos que su participación en el estudio pueda beneficiar a otras personas en el futuro al ayudarnos a conocer la vida en el hogar y el cumplimiento de las citas. Esperamos que los resultados de este estudio informen cómo mejorar los servicios para garantizar que las personas obtengan la ayuda que necesitan.

APPENDIX F (CONTINUED)

¿CUÁLES SON LOS PRINCIPALES RIESGOS DE ESTE ESTUDIO?	Los principales riesgos que presenta este estudio de investigación son las violaciones de la privacidad (otras personas ajenas al estudio pueden descubrir que usted es un sujeto) y / o confidencialidad (otras personas fuera del estudio pueden averiguar lo que hizo, dijo o la información que se recopiló sobre usted durante el estudio). Es posible que se sienta incómodo con algunas de las preguntas que le pueden hacer o discutir. Esta investigación incluye algunos artículos sobre la vida en el hogar. Puede omitir y / o no responder a cualquier pregunta que pueda incomodarlo. Las encuestas electrónicas en línea no son 100% seguras, y su privacidad en línea nunca puede garantizarse por completo. La privacidad y la confidencialidad estarán protegidas en la medida en que sea tecnológicamente posible.
¿TENGO OTRAS OPCIONES ADEMÁS DE PARTICIPAR EN EL ESTUDIO?	Esta encuesta es completamente voluntaria. Tiene la opción de decidir no participar en absoluto o puede detener su participación en cualquier momento sin ninguna consecuencia.
¿PREGUNTAS SOBRE EL ESTUDIO?	<p>Para preguntas, inquietudes o quejas sobre el estudio, comuníquese con el Dra. Vidhee Shah al 312-413-2046 o envíe un correo electrónico a vnshah2@uic.edu o comuníquese con el Dr. David Avenetti al 312-996-2046 o envíe un correo electrónico a avenetti@uic.edu</p> <p>Si tiene preguntas sobre sus derechos como sujeto de estudio; incluidas preguntas, inquietudes, quejas o si siente que no ha sido tratado de acuerdo con la descripción en este formulario; o para ofrecer comentarios, puede llamar a la Oficina de Protección de Sujetos de Investigación (OPRS) de la UIC al 312-996-1711 o al 1-866-789-6215 (sin cargo) o enviar un correo electrónico a OPRS a uicirb@uic.edu.</p> <p>Si tiene preguntas o inquietudes con respecto a sus derechos de privacidad bajo HIPAA, debe comunicarse con la Oficina de Privacidad de HIPAA de la Universidad de Illinois al (844) 341-2201 o hipaa@uillinois.edu.</p>

Revise el resto de este documento para obtener detalles sobre estos temas y cosas adicionales que debe saber antes de tomar una decisión sobre si participar en esta investigación. Por favor, siéntase libre de hacer preguntas a los investigadores en cualquier momento.

APPENDIX F (CONTINUED)

Esta investigación se llevará a cabo en la Universidad de Illinois en Chicago: Facultad de Odontología, segundo piso: Departamento de Odontología Pediátrica.

Durante este estudio, la Dra. V. Shah y su equipo de investigación colectará información sobre usted para los fines de esta investigación. La información sobre usted y la edad, el sexo, el estado civil, la raza, el origen étnico, el estado laboral, el idioma preferido, la salud oral, el acceso a la atención y el motivo de la cita de su hijo se recopilarán en la parte demográfica y de detección de la encuesta. Se le pedirá información sobre la vida de su hogar con la herramienta CHAOS, que es una encuesta de 15 preguntas en inglés que mide el grado de confusión y desorganización en el hogar de un niño y se utilizará como herramienta en este estudio para determinar la cantidad de caos presente. Dentro de una familia. Por último, se registrará información sobre las citas del niño y el puntaje dmft (dientes cariados, faltantes, llenos).

Su información privada identificable colectada para este estudio de investigación no se utilizará para futuros estudios de investigación ni se compartirá con otros investigadores para futuras investigaciones.

¿Qué pasa con la privacidad y la confidencialidad?

Se harán esfuerzos para mantener su información personal confidencial; Sin embargo, no podemos garantizar absoluta confidencialidad. En general, la información sobre usted, o proporcionada por usted, durante el estudio de investigación, no será revelada a otros sin su permiso por escrito. Sin embargo, las leyes y las reglas de la universidad estatal pueden requerir que les informemos a ciertas personas sobre usted. Por ejemplo, la información del estudio que lo identifica a usted y el formulario de consentimiento firmado por usted pueden ser revisados y / o copiados para garantizar la calidad y el análisis de datos por:

- Representantes del comité universitario y la oficina que revisa y aprueba los estudios de investigación, la Junta de Revisión Institucional (IRB) y la Oficina para la Protección de los Sujetos de Investigación.
- Otros representantes del Estado y la Universidad responsables de la supervisión ética, regulatoria o financiera de la investigación.
- Agencias reguladoras del gobierno, como la Oficina de Protección de la Investigación Humana (OHRP).

Un posible riesgo del estudio es que su participación en el estudio o información sobre usted pueda ser conocida por personas ajenas al estudio. Su información personal, los datos recopilados de la encuesta o los registros se almacenarán en un UIC Healthbox protegido por HIPPA. Una vez que se complete la encuesta, se le dará un ID de encuesta a cada encuesta completada. La ID de la encuesta referenciada vinculará todos los datos recopilados (el evaluador de elegibilidad, la respuesta de los cuidadores a los cuestionarios). Además, la identificación de la encuesta se registrará en la hoja de abstracción de datos de PHI (documento de enlace de información posterior a la encuesta). Esta hoja de abstracción de PHI incluirá el MRN (número de tabla Axium) para acceder a la tabla del paciente en un momento posterior para obtener información sobre (1) puntaje dmft; (2) cita de seguimiento; (3) cumplimiento de la

APPENDIX F (CONTINUED)

cita (cancelado, reprogramado, no show, mostrado); y (4) el número de dientes primarios del niño (según la hoja de abstracción de datos presentada). Los datos e identificadores codificados se almacenarán y protegerán por separado. El IP solo tendrá acceso a la información identificable y se almacenará en un UIC Healthbox protegido por HIPPA. Todos los identificadores, incluida la lista maestra que vincula sus datos con su identidad, se destruirán después del análisis de datos. Cuando los resultados del estudio se publican o discuten en conferencias, nadie sabrá que usted estuvo en el estudio.

¿Cuáles son los costos para participar en esta investigación?

No hay costos para usted por participar en esta investigación.

¿Se me reembolsará alguno de mis gastos o se me pagará por mi participación en esta investigación?

No se le ofrecerá un pago por participar en este estudio..

¿Puedo retirarme o ser retirado del estudio??

Si decide participar, tiene derecho a retirar su consentimiento y abandonar el estudio en cualquier momento sin penalización. Los investigadores también tienen derecho a detener su participación en este estudio si creen que es lo mejor para usted. Si decide no participar más en el estudio más adelante y no desea que se use su información futura, debe informar a los investigadores por escrito a la dirección en la primera página antes de que los investigadores destruyan los identificadores que lo vinculan a sus datos al final del análisis de datos. Los investigadores pueden usar su información recopilada antes de su notificación por escrito.

Los investigadores y to también tenemos el derecho de detener su participación en este estudio sin su consentimiento si creen que es lo mejor para usted.

¿Se creará, usará o compartirá información de salud sobre usted durante este estudio?

Las leyes estatales y federales, incluida la Ley de Responsabilidad y Portabilidad del Seguro de Salud (HIPAA), requieren que los investigadores protejan su información de salud. Esta sección de este formulario describe cómo los investigadores, con su autorización (permiso), pueden usar y divulgar (divulgar o compartir) su información de salud protegida en este estudio de investigación. Al firmar este formulario, autoriza a la Dra. V. Shah y su equipo de investigación a crear, obtener, usar, almacenar y compartir información protegida de salud que lo identifique a los fines de esta investigación.

La información de salud incluye toda la información creada y / o recopilada durante la investigación como se describe en este formulario de consentimiento y / o cualquier información de salud en su registro médico que se necesita para la investigación y que incluye específicamente:

UIC IRB Social, Behavioral, and Educational
Research Informed Consent Template: 11/01/19
Do NOT Change This Field – IRB Use ONLY

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[Household Chaos and Appointment
Compliance in a Pediatric Dental
Population]
[Version 1, 07/27/20]

APPENDIX F (CONTINUED)

- Identificadores personales como el nombre de su hijo, la fecha de nacimiento del niño, el número de registro dental, las fechas de servicio, como la fecha y el tipo de la cita inicial, la fecha y el tipo de cita de seguimiento, incluido el cumplimiento de la cita de seguimiento (show, no show, reprogramado, cancelado) y el número de dientes primarios además del puntaje dmft

Durante la realización de la investigación, los investigadores pueden usar o compartir su información de salud:

Entre ellos y con otros investigadores involucrados en el estudio.

- Con la aplicación de la ley u otras emergencias, cuando lo exija la ley.
- Representantes del comité universitario y la oficina que revisa y aprueba los estudios de investigación, la Junta de Revisión Institucional (IRB) y la Oficina para la Protección de los Sujetos de Investigación.
- Otros representantes del Estado y la Universidad responsables de la supervisión ética, regulatoria o financiera de la investigación.
- Agencias reguladoras del gobierno de los Estados Unidos, incluidas, entre otras, la Oficina de Protección de la Investigación Humana (OHRP) y la Administración de Alimentos y Medicamentos (FDA).

Si toda la información que lo identifica se elimina de los datos de la investigación, la información restante ya no está sujeta a los límites de esta Autorización ni a las leyes de privacidad de HIPAA. Por lo tanto, la información no identificada puede ser utilizada y divulgada por los investigadores (según lo permita la ley) para otros fines, como otros proyectos de investigación.

¿Cómo se protegerá su información de salud?

Los investigadores aceptan proteger su información de salud y solo compartirán esta información como se describe en este formulario de consentimiento / autorización de investigación.

Cuando se proporciona su información de salud a personas ajenas al estudio de investigación, las agencias que reciben su información de salud pueden no estar obligados por las leyes federales de privacidad (como la Regla de Privacidad) para protegerla. También pueden compartir su información con otros sin su permiso, a menos que lo permitan las leyes que tienen que seguir.

Su autorización para divulgar información de salud vence al final del análisis de datos o antes si decide retirar su permiso.

Puede cambiar de opinión y cancelar esta Autorización en cualquier momento. Para cancelar esta autorización, debe escribir a: Dr. Vidhee Shah, 801 S Paulina MC 850, Room 269 o correo electrónico: vnshah2@uic.edu

APPENDIX F (CONTINUED)

Si cancela esta autorización, es posible que ya no se le permita participar en el estudio de investigación. Incluso si cancela esta Autorización, los investigadores aún pueden usar y divulgar información de salud que ya hayan obtenido según sea necesario para mantener la integridad y confiabilidad de la investigación y para informar cualquier efecto adverso (malo) que pueda haberle sucedido.

Derecho a negarse a firmar esta autorización

No tiene que firmar este Consentimiento / Autorización. Sin embargo, debido a que su información de salud es necesaria para participar en la investigación, no puede participar en este estudio de investigación si no firma este formulario. Si decide no firmar este formulario de consentimiento / autorización, solo significará que no puede participar en esta investigación. No firmar este formulario no afectará su tratamiento, pago o inscripción no relacionados con la investigación en ningún plan de salud ni su elegibilidad para otros beneficios médicos.

Recuerda:

Su participación en esta investigación es voluntaria. Su decisión de participar o no no afectará sus relaciones actuales o futuras con la Universidad. Si decide participar, puede retirarse en cualquier momento sin afectar esa relación.

Consentimiento del sujeto

He leído la información anterior. Se me ha dado la oportunidad de hacer preguntas y mis preguntas han sido respondidas a mi entera satisfacción. Me darán una copia de este formulario. Acepto participar en esta investigación y autorizo al investigador a usar y compartir mi información de salud para la investigación.

Si aún no ha recibido una copia del Aviso de prácticas de privacidad, debe solicitar una. Su firma a continuación indica que está dando su consentimiento para participar en el estudio de investigación y la autorización para que el investigador use y comparta la información de salud de su hijo para la investigación.

Nombre del padre / tutor por escrito Fecha

Firma del Padre / Tutor Fecha

Nombre del Menor por escrito Fecha

APPENDIX G



Screening:

Are you okay with being asked a couple of questions to determine whether you are eligible to participate in this research study?

PI will determine language by asking the parent:

Are you able to read in English or Spanish? If they say yes, ask what their preferred language is and select either the English or Spanish version of the Consent and Survey.

If they say no, record it as non-eligible.

Question 1 will be asked verbally by PI

What is the reason for your child's appointment today?

- a. Initial (Included)
- b. Emergency visit (Included)
- c. Recall (Included)
- d. Follow-up (other than GA) (Excluded)
- e. GA-follow-up or GA work-up (Excluded)
- f. Treatment (Excluded)
- g. Other: _____ (Likely exclude)

Screening Questions to be answered by Caregiver On Tablet

What is your age? ____ (if response is under 18, then survey will end)

Does your child have any special needs that make it difficult to care for his/her teeth or come to dental appointments?

- a. Yes (ineligible)
- b. No (eligible)

If subject is eligible, this will show up on their screen: "You are eligible to participate in this research study, please click next if you wish to continue with participating in this study"

APPENDIX G (CONTINUED)

If subject is ineligible, this will show up on their screen: "Unfortunately, you are ineligible to participate in this research study; please return the tablet. Thank you for your time"

APPENDIX H



La proyeccion:

¿Estás de acuerdo con que te hagan un par de preguntas para determinar si eres elegible para participar en este estudio de investigación?

PI will determine language by asking the parent:

¿Puedes leer en inglés o español? Si responden que sí, pregunte cuál es su idioma preferido y seleccione la versión en inglés o español del Consentimiento y la Encuesta.

Si ellas dicen que no, regístrelo como no elegible.

Si ellos dicen que no, regístrelo como no elegible.

La pregunta 1 será formulada verbalmente por PI

¿Cuál es el motivo de la cita de su hijo hoy?

- a. Inicial (Incluido)
- b. Visita de emergencia (incluida)
- c. Retirada (incluida)
- d. Seguimiento (que no sea GA) (Excluido)
- e. Seguimiento de GA o análisis de GA (Excluido)
- f. Tratamiento (excluido)
- g. Otro: _____ (Probablemente excluya)

Preguntas de detección que debe responder el cuidador en la tableta

¿Cuál es tu edad? ____ (si la respuesta es menor de 18 años, la encuesta finalizará)

¿Tiene su hijo alguna necesidad especial que le dificulte cuidar sus dientes o acudir a citas dentales?

- a. Sí (no elegible)
- b. No (elegible)

378/5000

APPENDIX H (CONTINUED)

Si el sujeto es elegible, esto aparecerá en su pantalla: "Usted es elegible para participar en este estudio de investigación, haga clic en siguiente si desea continuar participando en este estudio"

Si el sujeto no es elegible, esto aparecerá en su pantalla: "Desafortunadamente, usted no es elegible para participar en este estudio de investigación; Por favor devuelva la tableta. Gracias por tu tiempo"

APPENDIX I

Demographic/Oral Health/CHAOS questionnaire-English

The next question will ask about you, and not your child.

1. What is your gender?
 - a. Female
 - b. Male
 - c. Other or Decline to Respond
2. How many adults or children 18 or over live in your home? ____
3. How many children under 18 live in your home? ____
4. Where do you live?
 - a. In Chicago
 - b. In Cook County but outside of Chicago
 - c. Outside of Cook Country
5. What is your marital status?
 - a. Single (never married)
 - b. Married (or remarried)
 - c. Widowed
 - d. Divorced
 - e. Separated
 - f. Unmarried but living with partner
6. How do you describe your race?
 - a. White or Caucasian
 - b. African American
 - c. Asian
 - d. Native Hawaiian or Other Pacific Islander
 - e. Native American Indian or Alaska Native
 - f. Biracial or Multiracial
 - g. Other: Please Describe ____
7. What is your ethnicity?
 - a. Hispanic or Latino
 - b. Not Hispanic or Latino
8. What is your current employment status?
 - a. Employed full time
 - b. Employed part time

APPENDIX I (CONTINUED)

- c. Unemployed and currently looking for work
 - d. Unemployed and not currently looking for work
 - e. Retired
 - f. Other or Unable to work
9. How often do you brush your teeth?
- a. More than 2 times a day
 - b. 2 times a day
 - c. 1 time a day
 - d. Less than 1 time a day
 - e. Never
10. How long do you brush your teeth?
- a. I do not brush
 - b. Less than 30 seconds
 - c. 30-60 seconds
 - d. 60-120 seconds
 - e. More than 2 minutes
11. How would you rate your oral health?
- a. Excellent
 - b. Good
 - c. Fair
 - d. Poor
12. When was your last dental appointment?
- a. Less than 6 months ago
 - b. 6-12 months ago
 - c. 1-2 years ago
 - d. More than 2 years ago

These questions are in regard to your child being seen today in the dental clinic today.

1. How old is your child? ____
2. What is your child's gender identity?
- a. Female
 - b. Male
 - c. Other or Decline to Respond
3. What is your child's race?
- a. White or Caucasian
 - b. African American
 - c. Asian

APPENDIX I (CONTINUED)

- d. Native Hawaiian or Other Pacific Islander
 - e. Native American Indian or Alaska Native
 - f. Biracial or Multiracial
 - g. Other: Please Describe _____
4. What is your child's ethnicity?
- a. Latino or Hispanic
 - b. Not Latino or Hispanic
5. What level of school is your child in?
- a. My child is not school
 - b. Pre-kindergarten or pre-school
 - c. Kindergarten
 - d. Elementary
 - e. Middle School or Junior high school
 - f. High school
6. What type of dental insurance does your child have?
- a. No insurance
 - b. Private insurance plan
 - c. Medicaid or other public insurance plan (Medical Card)
7. How often does your child brush their teeth or have you brush their teeth for them?
- a. More than 2 times a day
 - b. 2 times a day
 - c. 1 time a day
 - d. Less than 1 time a day
 - e. Never
8. How long does your child brush their teeth or have you brush their teeth for them?
- a. Does not brush
 - b. Less than 30 seconds
 - c. 30-60 seconds
 - d. 60-120 seconds
 - e. More than 2 minutes
9. How often do you or another adult help your child brush his/her teeth?
- a. Always
 - b. Usually
 - c. Sometimes
 - d. Never
10. When was the first time your child saw a dentist?

APPENDIX I CONTINUED

- a. Less than 1 year of age
- b. Age 1
- c. Age 2
- d. Age 3
- e. Age 4
- f. Age 5
- g. Age 6
- h. More than 6 years of age

11. How would you rate your child's oral health?

- a. Excellent
- b. Good
- c. Fair
- d. Poor

12. When was your child's last dental appointment?

- a. Less than 6 months ago
- b. 6-12 months ago
- c. 1-2 years ago
- d. More than 2 years ago

13. How did you get to today's appointment?

- a. I drove in a car
- b. Someone else drove me in a car
- c. I took public transportation
- d. Taxi or Rideshare
- e. Transportation covered by my insurance or medical card
- f. Other

These questions pertain to your home life.

1. There is very little commotion in our home

- a. Very much like your own home
- b. Somewhat like your own home
- c. A little bit like your own home
- d. Not at all like your own home

2. We can usually find things when we need them

- a. Very much like your own home
- b. Somewhat like your own home
- c. A little bit like your own home
- d. Not at all like your own home

APPENDIX I (CONTINUED)

3. We almost always seem to be rushed.
 - a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
4. We are usually able to stay on top of things.
 - a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
5. No matter how hard we try, we always seem to be running late.
 - a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
6. It's a real zoo in our home
 - a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
7. At home we can talk to each other without being interrupted.
 - a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
8. There is often a fuss going on at our home
 - a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
9. No matter what our family plans, it usually doesn't seem to work out.
 - a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
10. You can't hear yourself think in our home

- a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
11. I often get drawn into other people's arguments at home.
- a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
12. Our home is a good place to relax
- a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
13. The telephone takes up a lot of our time at home
- a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
14. The atmosphere in our home is calm
- a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home
15. First thing in the day, we have a regular routine at home
- a. Very much like your own home
 - b. Somewhat like your own home
 - c. A little bit like your own home
 - d. Not at all like your own home

APPENDIX J

Demographic/Oral Health/CHAOS Questionnaire-Spanish

Comenzar encuesta

La siguiente pregunta será sobre usted y no sobre su hijo.

1. ¿Cuál es tu género?
 - a. Hembra
 - b. Masculino
 - C. Otro o negarse a responder
2. ¿Cuántos adultos o niños mayores de 18 años viven en su hogar? _____
3. ¿Cuántos niños menores de 18 años viven en su hogar? _____
4. ¿Dónde vives?
 - a. En Chicago
 - b. En el condado de Cook pero fuera de Chicago
 - c. Fuera del país cocinero
5. ¿Cuál es su estado civil?
 - a. Soltero nunca casado)
 - b. Casado (o vuelto a casar)
 - c. Viudo
 - d. Divorciado
 - e. Apartado
 - f. Soltero pero viviendo con pareja
6. ¿Cómo describe su raza?
 - a. Blanco o caucásico
 - b. afroamericano
 - c. asiático
 - d. Nativo de Hawái u otra isla del Pacífico
 - e. Indio nativo americano o nativo de Alaska
 - f. Birracial o multirracial
 - g. Otro: Describa _____
7. ¿Cuál es su origen étnico?
 - a. hispano o latino
 - b. No Hispano o Latino
8. ¿Cuál es su situación laboral actual?
 - a. Empleado de tiempo completo
 - b. Empleado a tiempo parcial

APPENDIX J (CONTINUED)

- C. Desempleados y actualmente buscando trabajo
- d. Desempleados y que actualmente no buscan trabajo
- e. Retirado
- f. Otro o no puede trabajar

9. ¿Con qué frecuencia te cepillas los dientes?

- a. Más de 2 veces al día.
- b. 2 veces al día
- C. 1 vez al día
- d. Menos de 1 vez al día
- e. Nunca

10. ¿Cuánto tiempo te cepillas los dientes?

- a. No me cepillo
- b. Menos de 30 segundos
- c. 30-60 segundos
- d. 60-120 segundos
- e. Más de 2 minutos

11. ¿Cómo calificaría su salud bucal?

- a. Excelente
- b. Bueno
- c. Justa
- d. Pobre

¿Cuándo fue su última cita dental?

- a. Hace menos de 6 meses
- b. Hace 6-12 meses
- c. Hace 1-2 años
- d. Hace mas de 2 años

Estas preguntas se refieren a que su hijo sea visto hoy en la clínica dental hoy.

1. ¿Cuántos años tiene su hijo? ____

2. ¿Cuál es la identidad de género de su hijo?

- a. Hembra
- b. Masculino
- c. Otro o negarse a responder

3. ¿Cuál es la raza de su hijo?

- a. Blanco o caucásico
- b. Afroamericano
- c. Asiático

APPENDIX J (CONTINUED)

- d. Nativo de Hawái u otra isla del Pacífico
 - e. Indio nativo americano o nativo de Alaska
 - f. Birracial o multirracial
 - g. Otro: Describa _____
4. ¿Cuál es el origen étnico de su hijo?
- a. Latino o hispano
 - b. No latino o hispano
5. ¿En qué nivel de la escuela está su hijo?
- a. Mi hijo no es escuela
 - b. Pre jardín de infantes o preescolar
 - c. Jardín de infancia
 - d. Elemental
 - e. Escuela intermedia o secundaria
 - f. Escuela secundaria
6. ¿Qué tipo de seguro dental tiene su hijo?
- a. Sin seguro
 - b. Plan de seguro privado
 - c. Medicaid u otro plan de seguro público (tarjeta médica)
7. ¿Con qué frecuencia su hijo se cepilla los dientes o usted le cepilla los dientes?
- a. Más de 2 veces al día.
 - b. 2 veces al día
 - c. 1 vez al día
 - d. Menos de 1 vez al día
 - e. Nunca
8. ¿Cuánto tiempo hace que su hijo en cepillar los dientes o que usted le cepille los dientes?
- a. No se cepilla
 - b. Menos de 30 segundos
 - c. 30-60 segundos
 - d. 60-120 segundos
 - e. Más de 2 minutos
9. ¿Con qué frecuencia usted u otro adulto le ayuda a su hijo a cepillarse los dientes?
- a. Siempre
 - b. Generalmente
 - c. Algunas veces
 - d. Nunca
10. ¿Cuándo fue la primera vez que su hijo vio a un dentista?

APPENDIX J (CONTINUED)

- a. Menos de 1 año de edad
 - b. Edad 1
 - c. Edad 2
 - d. 3 años
 - e. 4 años
 - f. 5 años
 - g. 6 años
 - h. Más de 6 años de edad
11. ¿Cómo calificaría la salud bucal de su hijo?
- a. Excelente
 - b. Bueno
 - c. Justo
 - d. Pobre
12. ¿Cuándo fue la última cita dental de su hijo?
- a. Hace menos de 6 meses
 - b. Hace 6-12 meses
 - c. Hace 1-2 años
 - d. Hace más de 2 años
13. ¿Cómo llego a la cita de hoy?
- a. Conduje en un auto
 - b. Alguien más me llevo en un carro
 - c. Tomé el transporte público
 - d. Taxi o viaje compartido
 - e. Transporte cubierto por mi seguro o tarjeta médica
 - f. Otro

Estas frases requieren de su opinión sobre como es vivir en su casa.

1. Hay muy poco alboroto/ conmoción en su casa.
- a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tu propio hogar
 - d. Para nada como en tu propio hogar
2. En general, su familia puede encontrar cosas cuando las necesita.
- a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tu propio hogar
 - d. Para nada como en tu propio hogar

APPENDIX J (CONTINUED)

3. Casi siempre, parece que su familia está de prisa.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
4. En general, su familia puede completar tareas diarias a tiempo.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
5. A pesar de sus mejores intenciones, parece que su familia siempre está atrasado.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
6. Su casa es un relajó. Por ejemplo, hay mucho ruido y desorden.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
7. En su casa, los miembros de la familia pueden hablar juntos sin interrupción.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
8. Con frecuencia, hay peleas en su casa.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
9. Aunque su familia hace planes, normalmente no se llevan a cabo.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar

APPENDIX J (CONTINUED)

10. Usted no puede pensar claramente en su casa porque hay tantas distracciones.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
11. Con frecuencia, es difícil evitar los argumentos entre otros miembros de la familia.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
12. Su casa es un buen lugar para relajarse.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
13. El teléfono ocupa mucho del tiempo cuando están en casa.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
14. El ambiente de su casa es tranquilo/calmado.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar
15. Su familia tiene una rutina/horario regular que empieza por las mañanas.
 - a. Muy parecido en su propio hogar
 - b. Algo como en tu propio hogar
 - c. Un poco como en tú propio hogar
 - d. Para nada como en tu propio hogar

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 Household Chaos and Appointment Compliance in a Pediatric Dental Population: A Review of Literature. University of Illinois Chicago, College of Dentistry, Clinic and Research Day 2020.

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