Characteristics of Patients Seeking Care From a Hospital-Based Infant Dental Clinic

THESIS

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By

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Abstract

**Background:** Dental care in the infant population is critical for several reasons. It allows for parent education and establishment of a dental home. Caries risk can be assessed and appropriate preventative or restorative measures can be taken. Little literature that looks at specific characteristics of children 0-3 ½ years of age as they may relate to oral health care seeking patterns.

**Objectives:** To assess characteristic of the population of infants seen at Nationwide Children’s Hospital (NCH) Dental Clinic ages 0-3 ½ years of age and their relationship to oral health status and likeliness of the patient returning for follow up care.

**Methods:** This is a retrospective chart review study conducted at NCH in Columbus, OH. Children ages 0-3 ½ years of age were included in the study. No participants were excluded based on any factors other than age at first visit. A total of 6,286 patients were included in the study. Variables analyzed included demographic information, dental, and social history. Statistical analysis using chi square analysis and logistic regression was conducted utilizing JMP 11 as well as SAS 9.4 to further analyze logistical regression. Significance was determined by $P<.05$ and odds ratios $\neq 1$.

**Results:** Gender, ethnicity, parental status, number of guardians, zip codes, language, age at first visit, number of referrals, first visit type, visit counts, caries risk assessment at 1st Visit, behavior at initial visit, dental history, and source of drinking water were descriptively analyzed. Ethnicity was found to be significantly related to first visit type,
caries risk status, visit count, and number of guardians. The Hispanic population at NCH dental clinic has significantly greater number of hygiene appointments as their first visit, lower sedation evaluation and emergency visits. Our Hispanic population shows a trend toward higher visit counts along with the Asian population showing a slight increasing trend in number of visits. These two populations when compared to the others also have more family units with 2 guardians. Behavior at first visit correlates to number of visits where children with definitely negative and negative behavior showed less likelihood of having higher visit counts. Also, the patient’s age at their first visit relates to the visit type of the appointment specifically in children age 0-1 year of age. This age group showed significantly more first appointments as emergency visits. Four factors were found to be associated with patient’s likelihood to return for follow up visits: behavior at initial visit, ethnicity, first visit type, and presence of pain at initial visit. Ethnicity correlates with patient’s likelihood to return for follow up, namely the Asian and Hispanic populations. First visit type corresponds to return likelihood. Patients who came as an emergency visit for the first visit type were less likely to return for follow up appointments. Patient who presented with pain at their initial visit were also less likely to return compared to patient who had no pain upon their initial visit. Behavior additionally related to patient return rate with patient who were +/- behavior being more likely to return for follow up compared with patients who were -/- behavior at initial visit according to Frankl scale (appendix A).
**Conclusion:** Ethnicity correlates with first visit type, number of guardians, and likelihood to return for follow up.

- The Hispanic population was shown to have significantly higher number of hygiene appointments as opposed to sedation evaluations and emergency visits.
- The Hispanic and Asian population have a significantly greater percentage of family units with 2 guardians and were found to be more likely of returning for follow up care.

Visit count is associated with ethnicity and number of guardians.

- The Hispanic population has significantly higher visit counts as a population, with our Asian group showing the only other increasing trend.

Behavior at initial visit correlates to number of visits and likelihood to return for care.

- Positive behavior is associated with an increasing trend in the number of visits
- Negative behavior shows a decreasing trend in number of visits

Age correlates with emergency visit type in children 0-1 year of age.

- Ethnicity, first visit type, behavior at initial visit, and presence of pain are factors that play a role in the patient’s likelihood to return for care.
Dedication

This document is dedicated to my family, who is always there to support me in everything I do.
Acknowledgments

I would like to thank Brent Merryman for all the work he put in to access all of the electronic data to make this study possible. In would also like to thank my committee for the knowledge and guidance along the way.
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Fields of Study

Major Field: Dentistry
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Chapter 1: Introduction

Dental care and treatment in the infant population is critical for several reasons. Timing of a child’s initial visit/establishment of a dental home, regular recalls and timely treatment, and reduced broken appointments all play a role in infant oral health status. Initial appointments provide opportunities for parent/patient education and anticipatory guidance to occur. These appointments also allow for caries risk assessments and identification of high risk infants. In such high risk individuals, preventative treatment can be a valuable resource in controlling disease initiation and progression. It has been shown that children who receive preventative dental care at an early age are less likely to require later emergency or restorative treatment and have lower dental related health care cost (1, 2). The AAPD recommends a child have their first dental visit by the age of 1. However, medical visit by 1 year of age still outnumber dental visits 250 to 1 (3). Dental appointments at this young age are important because they provide opportunities for behavior modification in oral hygiene and feeding habits and recognition of the disease in its early stages. Pain can develop and oral disease will progress if disease is left untreated and the sources of the disease are not addressed. However, most children do not have their first dental appointment till they are considerably older. Most parents still believe the common age for an initial dental visit is around the age of three. This belief may still exist because of lack of parent education, other dentists’ lack of willingness to see young children at a young age, and inappropriate instructions or lack of information on the part of the pediatricians. It has been shown that
less than half of general dentists routinely care for infants and toddlers (4) which does not contribute to changing the current belief.

Dental caries is the most common chronic disease of childhood in the US and the largest health care need unmet for children (5). Early childhood caries (ECC) in particular affects over four million children nationwide and 28% of children 2-5 years of age (6). Forty percent of children have caries by the time they begin kindergarten (7). It has been shown that caries has an impact on the oral health-related quality of life of the child and that of their families (8). Parental guilt also increases with the increasing severity of the child’s dental caries (9).

Caries disproportionately affects more venerable parts of our population. Vargas et al found that 30% of children living below the poverty level do not receive dental care for existing caries compared with 6% of their peers who live at 300% of the poverty level or higher (10). In poor US children under the age of 5 the prevalence of caries is increasing (6). Consequences of early childhood caries are numerous and include higher risk of new carious lesions in both the primary and permanent dentitions (11), increased treatment costs (12), emergency room visits and hospitalization (13), delayed physical growth and development (14), loss of school days (15), diminished ability to learn (16), and reduced oral health quality of life (17).

Missed appointments result in decreased office efficiency and wasted time/resources of dental personnel (18) and delays other patients waiting to be seen (19). Studies have identified that 12-17% recalled for free-of-charge dental care do not show (20). The association between dental anxiety in children and missed appointments has been identified
as a barrier to care (21); however, many other factors may play a role as well.

Little literature exists that looks at specific characteristics of children 0-3 ½ years of age that seek dental care. Children in this age group may be particularly susceptible to initiation of dental disease and its progression based on national trends. In a recent study by the CDC, excellent or very good oral health and at least 1 preventative dental visit in the past 12 months in 2011/2012 was associated with white, health insured, patients that have lived in 1 location, had good health status, lived in families who primarily spoke English, lived in families whose income exceed the FPL, and lived with adults who graduated high school (22).

It may be hypothesized that among these characteristics there are many other identifiable factors that may be associated with oral health status and probability of follow up such as the child’s behavior, dmft score and caries risk status at initial visit, oral hygiene, distance traveled from home, presence of pain, reason patient is seeking care, employment status of guardian and what individual has guardianship of the child, gestational age of patient at birth, primary language spoken at home, medical conditions of the patient, history of dental visits and previous broken appointments.

This retrospective chart review is a descriptive study that will analyze characteristics of children 0-3 ½ years of age seen at Nationwide Children’s Hospital Dental Clinic. In particular, looking at factors that may be linked to establishment of a dental home and rate of follow up in this population. With this information resources can be better directed in the future to target and reduce the reasons why parents do not seek care for their young children. This information may also serve beneficial when scheduling recalls and coordinating
provision for care (18).
Chapter 2: Materials and Methods

Participants:

The present study was conducted at Nationwide Children’s Hospital in Columbus, OH. Children ages 0-3 ½ years of age were included in the research study. IRB approval was obtained for this retrospective chart review. It was conducted using information primarily collected upon the patient’s first visit to the dental clinic. A total of 6,286 patients were included in this study based off data that was collected from Fall 2012 to April 2014. No patients were excluded based on individual factors such as demographical information, medical history, dental history or social history.

Variables:

The patient records provided descriptive information on multiple variables that were examined and hypothesized to be related to patient’s return for follow up care and caries prevalence. These included medical and dental history, demographic information, and social history.

Medical and dental history:

Multiple variables relating to patient oral health were evaluated. Caries risk assessment score (low, moderate, high) based on the pediatric dental guidelines set by the AAPD, number of visits, first visit type, behavior noted at the patient’s initial dental appointment using the Frankl Scale (Appendix A), age at first visit, number of referrals to
the Dental Surgery Center, Main OR, or sedation, if the child presented with any pain or swelling at the initial dental visit, previous intraoral trauma, and presence of an intraoral habit.

Demographic Information:

Age, sex, and ethnicity of the patient, whether the patient resides in Franklin county, and primary language spoken in the household were evaluated.

Social history:

Number of guardians the patient has and presence of a mother and/or father in the child life was noted.

Statistics:

Statistical analysis was completed in JMP (version 11, SAS Inc.) to generate descriptive data, logistic regression, and chi-squared tests. SAS (version 9.4, SAS, Inc.) was utilized to further analyze multivariate logistic regression.
Chapter 3: Results

From Fall of 2011 to March of 2014, 6,286 patients ages 0-3 ½ were seen for an initial visit at NCH dental clinic. Four individuals of the 6,286 included are now deceased. Fifty-three percent of these patients were male and 47% females. Three individual of the 6,286 were not included as their gender was not available (Figure 1).

![Figure 1: Gender](image)

Distribution by ethnicity is 46% White, 37% African American, 7% Bi-Racial, and 2% Asian. Bi-Racial includes the 383 individuals that were initially marked as Bi-Racial and includes 115 who identified as Latino/Hispanic/White as well as 279 who identified as Latino/Hispanic/Unspecified. Asian includes those who were charted as Asian as well as those marked as Asian Indian, Pacific Asian and Chinese. 13% were not included because data was unavailable (819 individuals) or marked as “Other” (Figure 2).
Of the 6,286 children, 75% recorded having a father involved while 25% were identified as having no father actively involved in the child’s life (Figure 3). However, 99% of these patients had a mother documented while only 1% reported no mother involved (Figure 3). Two individuals were not included, as this data was not recorded. Step-wise logistic regression analysis showed ethnicity as being a significant factor determining patient likelihood to return for follow up appointments with odds ratio ≠1.
Distribution by number of legal guardians shows that 54% of our study population has 2 guardians, with 45% having 1 single guardian, and 1% have 3 legal guardians (Figure 4). Two individuals were not included as no data was recorded.
Of the 6,286 children in this study, 74% (4,626) live in Franklin county Ohio (Figure 5). Nationwide Children’s Hospital is centrally located in Franklin County perhaps contributing to the fact the majority of our patients reside here.

79% (4,910) of our population are English speaking, 15% (915) Spanish, 3% (192) Somali. The 3% “Other” (198 individuals) category includes 23 amharic, 59 Arabic, 15 French, 9 Fulani, 28 Hakha Chin, 16 Mandarin, 17 Napali, 10 Oromo, 7 Portuguese, 7 Sign language, and 7 Tigrinya speaking families. All other categories that had less than 7 individuals total were neglected from this analysis. These individuals totaled 57 speaking Ethiopian, German, Greek, Hindi, Igbo, Indonesian, Kirundi, Korean, Kuanyama, Kurdish,
Lao, Maay Maay, Mandingo, Persian, Russian, Soninke, Swahili, Tamil, Twi, Ukrainian, Urdu, Uzbek, Vietnamese, Wolof, and Zomi. Seventy-one individuals were not included in the analysis because no data was recorded (Figure 6).

Figure 7: Age at First Visit

Age distribution for patients was broken into the categories: 0-1 years of age, 1-1.5, 1.5-2, 2-2.5, 2.5-3, and 3-3.5. Only 4% of the 6,286 patients were seen initially by 1 year of age. 11% were first seen at ages 1-1.5, 16% from 1.5-2 yrs, 21% at ages 2-2.5, 23% at ages 2.5-3, and 25% at ages 3-3.5 (Figure 7).
Of the 6,286 patients seen, 1,043 patients have been referred to the dental surgery center one time, 56 of these patients were referred to the DSC twice, and 4 patients had 3 referrals. There were 121 referrals to the main OR in this population. Out of 6,286 patients, 401 were referred for sedation once, 47 were referred twice, and 3 patients were referred 3 times (Figure 8). The fact that some children have more than one referral could be due to a number of factors. The child may have had additional treatment needs, the patient may have missed their first appointment for surgery or sedation, or the referral could have been placed and then the clinic could not get ahold of the family to schedule. These are just a few of the major possible reasons. Unfortunately, not knowing the reason is a limitation of this study.
64% of patient first visits were for a hygiene/initial exam appointment. 28% were dental emergencies, 3% consisted of sedation evaluations, 4% were restorative and dental clinic visits, and 1% consisted of dental trauma. Fifty-three individuals were not included in this analysis because data was not recorded (Figure 9). Step-wise logistic regression analysis showed first visit type as being a significant factor determining patient’s likelihood to return for follow up appointments with odds ratio ≠ 1.
Out of all the children seen initially at NCH dental clinic between the ages of 0-3½, 42% of them have only had 1 initial visit, 23% have had 2 visits, 22% of them have had 3 visits, 12% with 5-8 visits, and 1% have had greater than 8 visits (Figure 10).

High caries risk at initial visit was recorded for 32% of these patients, 26% were at medium risk, and 42% were charted as low risk (Figure 11). Risk assessment values determined by AAPD classifications of low, medium, and high risk. Risk assessment measurements were missing for 1,730 initial patient visits in this population. This may be due to the fact that caries risk is usually only recorded for hygiene or exam visits and not
emergency visits.

![Figure 12: Behavior at Initial Visit](image)

Behavior was scaled according to the Frankl Scale (appendix A). 25% of patients were reported to have +/-, 33% had +, 21% -, and 20% had -/- behavior charted at their initial visit. Data was not reported for 919 patients and therefore not included in this analysis (Figure 12). Step-wise logistic regression analysis showed behavior as being a significant factor determining patient’s likelihood to return for follow up appointments with odds ratio ≠1.
Of the 6,286 patients in the study, 88% (4,630) of parents reported that the child had not had any injuries to their teeth while 12% (633) of children had injured their teeth at least once (Figure 13). Data was not recorded for 1,023 patients and therefore not included in this analysis.

87% (4,581) of patients at their initial visit to NCH parents reported the child was having no pain intraorally. However, 13% (687) of parents believed their child was experiencing pain when they presented for the visit. Data was not recorded for 1,018 patients and therefore not included in this analysis. Step-wise logistic regression analysis showed presence of pain as being a significant factor determining patient likelihood to return for follow up appointments with odds ratio $\neq 1$.

For the 6,286 patients, the health care provider recorded 98% (5,147) of these patients having no abscess present at their initial visit at NCH. Two percent or 98 patients the presence of abscess was documented at their first visit. Data was not recorded for 1,041
of the 6,286 total patients (Figure 13).

Oral habits are common in infants and young children. These habits can include non-nutritive sucking habits such as thumb or finger sucking, nail biting, extended bottle use. 21% (1,103) of parents reported that their child had an oral habit while 79% (4,096) of parents denied the existence of one. Data was not recorded for 1,087 of the 6,286 patients in this study (Figure 13).

![Figure 14: Source of Drinking Water](image)

The majority, 54% (2,201) of the patient in this study reported drinking city water at home, 43% (1,758) were documented drinking mostly bottled water, 3% (105) reported their drinking water source is well water, and 1% (29) was documented as unknown. Data was not included for analysis for 2,193 patients because no drinking water source was documented (Figure 14).
Our findings indicate that as a group Hispanics have significantly (p value < .0001) higher amount of hygiene appointments as their first visit type and a much smaller amount of sedation evaluations and emergency visits than the rest of our population groups.
Behavior at initial visit was shown to correlate to number of visits in which patients with definitely positive and positive behavior according to the Frankl Scale (appendix A) at initial visit showed a trend of having more visits. Where children with definitely negative and negative behavior showed less likelihood of having higher visit counts.
The Bi-Racial/Multi Racial group and African Americans showed the lowest caries risk at first visit while the Asian group and whites showed the highest risk. There were more than expected in the high risk and lower than expected for low risk for whites and Asians. African American and Bi-Racial/Multi-Racial groups were found to have lower risk than expected. This is based on chi-square analysis and p<.0001
When looking at visit count by ethnicity, our Hispanic population shows increasing number of visits as a population with a significance of $P<.0001$. The other population groups show decreasing trends in appointment numbers as a population or they stay around the same amount.
Figure 19: Visit Count by Ethnicity

The significant increase in appointment number trend the Hispanic population demonstrates is apparent while all the other ethnicities show decreasing trends except for the Asian group at the very bottom showing a slight increasing trend.
Figure 20: Ethnicity by Number of Guardians

Our Asian population as well as the Hispanic population are significantly higher (P<.0001) in the proportion of patient having 2 guardians as opposed to 1. Our Asian group has 87.3% with 2 guardians and Hispanics have 75%.
Number of guardians was shown to relate to visit count with $P<.0001$, where as visit counts increase the trend is that there are more family units with 2 guardians present.
Approximately 50% (51.1%) of children seen by the age of 1 were brought in as an emergency visit, which was found to be significant (P<.0001).
Four factors were found to have a significant effect on patient’s likelihood to return for follow up. These factors were behavior, ethnicity, first visit type, and pain (Table 1).

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Table 1: Factors Related to Patient Return
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</table>

Table 2: Likelihood Ratios For Patient Return

Behavior was shown to be correlated with likelihood to return for care where children with -/- (4) or – (3) behavior according to the Frankl behavior scale (Appendix A) were less likely to return for follow up when compared to +/- (1) or + (2) behavior at initial visit. First visit type correlated to likelihood to return for follow up where children who presented for an emergency visit as their first visit type were less likely to return for follow
up. Pain was associated with likelihood to return where patients who presented with pain at their initial visit were less likely to return for subsequent care. Ethnicity was also associated with likelihood of return with Hispanics being significantly more likely to return for care (Table 2).

To assure that there was an even distribution of start times for all ethnicities, a chi-square analysis was evaluated between the year of the first visit and ethnicity. There was no significant difference between the ethnicities with respect to the distribution across first-visit year. Therefore, no need to normalize for this factor was found.
Chapter 4: Discussion

The population of children ages 0-3 ½ years of age that are seen at Nationwide Children’s Hospital (NCH) represent a diverse patient group. Many of them come from different backgrounds and cultures, which may play a role in the dental care beliefs and care seeking practices of the family.

Aspects of cultural diversity can influence diet, health beliefs, oral hygiene routines, assess to care, and reaction to pain (23, 24). Some literature exists finding that in certain populations there is still a belief that dental visits are only necessary if pain or a problem existed (25). Our findings support current literature that says cultural beliefs play a role in care seeking practices. The Hispanic population in our study was significantly higher in the number of first visits as hygiene/exam type appointments as well as markedly lower in emergency visits as first appointment type (Figure 15). This population also had much higher visit counts (Figure 18) than any other population. The probability for this population of returning for subsequent follow up appointments was drastically higher than any other ethnic group in our study population upon logistic regression analysis (Figure 19). Our Asian population was the only other ethnic group showing an increase trend in likelihood to return.

The majority of our patients 54% have 2 guardians, while 45% have a single guardian of record (Figure 4). This may be an important contributing factor to care seeking practices because in a recent study conducted by Plutzer et al it was found that
there was no difference between single mother who did not work and two parent families. However, children with an employed single mother were found to have a higher prevalence of dental caries (26). One can speculate that single parents who work may not have readily available time or resources and therefore their children’s dental needs may be neglected. Our data supports this theory showing a trend in the number of 2 guardian family units having increased probability in the number of visits. Families that have more than one guardian may have an easier time bringing the children to their scheduled dental appointments.

Number of guardians was also analyzed by ethnicity in our study population (Figure 20). The data shows that our Asian and Hispanic populations are significantly higher in the proportion of patient having 2 guardians as opposed to 1. Our Asian population shows 87.3% with 2 guardians and 75% for the Hispanics group. It may be hypothesized that this is a contributing factor relating to these two groups having a higher likelihood of having subsequent visits. One limitation in this study is that it is unknown if the guardian is a mother, father, grandparent ect. Our data shows that 75% (4,738) of our children have a father and 99% (6,191) have a mother involved in the child life (Figure 3) but it does not discern if these are the legal guardians on record. It would be interesting to further analyze family dynamic in further studies as it relates to dental care in families that have 2 married parents vs divorced 2 guardian parent families vs. single parent households.

In 2009 43% of US children were found to be of racial/ethnic minority (27). Our data is fairly consistent with this with 54% of our study population considered ethnic
minority (Figure 2). It can be speculated that the higher percentage of ethnic minority patients seen in our clinic is due to the fact that it is in a large majority a Medicaid clinic. Furthermore, our study population has a reported 21% of families that speak a language other than English at home. This is consistent with 2008 US census data reports that have 20% reported (28). Being associated with a hospital, our dental clinic has services that make accessing dental care much easier for certain minority populations such as interpreters and transportation services. This could also contribute to these populations seeking care at our clinic in higher numbers.

The majority 75% of our subject population live in Franklin county which is where NCH is located. This is believed to be an important factor that contributes to patient return to our clinic for follow up care especially for those patients where transportation is a problem. A further analysis could look at the exact percentages of patients that live certain distances away from the hospital based on their zip code.

Only 4% of the children that were seen ages 0-3 ½ were seen by the AAPD recommendation of 1 year of age for establishment of a dental home (Figure 7). There is a trend that children were seen for a first visit as age increased, with the majority of the children being seen between 3-3 ½ years of age. It has been shown that children that are enrolled in a preventative program at a young age have lower caries rates (4, 29). When a child is seen at a young age there is a greater opportunity for prevention, education, and anticipatory guidance to be delivered. It may be hypothesized that many parents are unaware of the AAPD recommendation due to lack of education or the propagation by other health care providers in the community who are not willing to see children until
they have reached a substantially older age than 1. As pediatric dentists, our profession should have an obligation to educating parents, pediatricians, and other dentists of the need for initial dental exams at or around the age of 1 year of age.

While the majority, 64% of the children, seen were seen for hygiene or an initial exam 28% of the children seen were seen initially as an emergency appointment. The majority of patients 0-1 year of age were seen for an emergency appointment as their first visit. This is related to current literature where it was found that trauma and caries impels a child initial dental visit (29, 30). The likelihood of a patient coming for an emergency appointment could be related to the 13% of the patients documented to likely be experiencing pain, 2% that had abscesses documented at the time of the visit, or 12% of our patients whose parents reported previous intraoral trauma (Figure 13). Emergency visit patients were shown to be less likely to return for follow up care upon logistic regression analysis as well as those patients who presented in pain for their first appointment.

Behavior was also significantly related to number of visits. Behavior at initial visit was show to correlate to number of visits and patient’s likelihood to return in which patients with definitely positive and positive behavior, according to the Frankl Scale (appendix A), at initial visit were more likely to return for follow up care. Where children with definitely negative and negative behavior showed less likelihood of having higher visit counts. This could be explained in a few ways. Children with negative behavior who have many dental needs may have been referred to GA initially and had all their needs addressed at one visit and would not require multiple visits. Another
possibility is that patients with negative behavior at initial visit just may have not returned for subsequent visits. It has been show that patient anxiety and fear has a negative effect on return rates for follow up care (31).

In general, this study has limitations due to the fact it is a retrospective chart review study and the results may be interpreted in a number of ways. In addition, some of the data is parent reported which inherently introduces error and bias into the results. To strengthen our findings surveys could be utilized to question parents directly as to some of the results that were found.
Chapter 5: Conclusion

Ethnicity correlates with first visit type, # guardians, and likelihood to return for follow up.

- The Hispanic population was shown to have significantly higher number of hygiene appointments as opposed to sedation evaluations and emergency visits.
- The Hispanic and Asian population have a significantly greater percentage of family units with 2 guardians and were found to be more likely of returning for follow up care.

Visit count is associated with ethnicity and number of guardians.

- The Hispanic population has significantly higher visit counts as a population, with our Asian group showing the only other increasing trend.

Behavior at initial visit correlates to number of visits and likelihood to return for care.

- Positive behavior is associated with an increasing trend in the number of visits
- Negative behavior shows a decreasing trend in number of visits

Age correlates with emergency visit type in children 0-1 year of age.
-Ethnicity, first visit type, behavior at initial visit, and presence of pain are factors that play a role in the patient’s likelihood to return for care.
References


Appendix A: Frankl Scale

-/-  **Definitely Negative.** Refusal of treatment, forceful crying, fearfulness, or any other evidence of extreme negatism.

-  **Negative.** Reluctance to accept treatment, uncooperative, some evidence of negative attitude but not pronounced (sullen, withdrawn).

+  **Positive.** Acceptance of treatment; cautious behavior at times; willingness to comply with the dentist, at times with reservation, but patient follows the dentist’s directions cooperatively.

+/+  **Definitely positive.** Good rapport with the dentist, interest in the dental procedures, laughter and enjoyment.