Why do parents seek care for their child's non-traumatic dental problems in the emergency department?

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DEDICATION

This thesis is dedicated to

My mom for her continued support and encouragement

and

My loving husband who is a perfect source of inspiration and enthusiasm in my life

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TABLE OF CONTENTS

DEDICATION ii

ACKNOWLEDGEMENTS iii

TABLE OF CONTENTS v

LIST OF TABLES vii

LIST OF FIGURES vii

ABSTRACT viii

RÉSUMÉ x

1. Introduction 1

2. Literature Review 3

2.1 Dental caries in children 3

2.1.1 Early Childhood Caries (ECC) 3

2.1.2 Social determinants of dental caries 4

2.1.3 Prevalence of dental caries 4

2.1.4 Consequences of untreated dental caries 5

2.1.5 Prevention and treatment of dental caries 5

2.2 Access to dental care for children in Canada and the U.S. 6

2.2.1 What do we mean by “access”? 6

2.2.2 Disparities in children’s access to dental care 7

2.2.3 Dentists’ perceptions of barriers to access to dental care 8

2.2.4 Caregivers’ perceptions of barriers to access to dental care 9

2.2.5 Recommendations for improving access 11

2.3 Non-traumatic dental emergencies 12

2.3.1 Studies exploring patients’ demographics 14

2.3.2 Studies exploring the reasons for ED visit and access to care barriers 15

2.4 Conclusion 16

3. Aims and Objectives 18

3.1 Aims 18

3.2 Objectives 18

4. Methodology 20
4.1 Research design 20
4.2 Data collection 21
4.2.1 Sampling 21
4.2.2 Recruitment 22
4.2.3 Interviews 23
4.3 Data analysis 24
4.3.1 Data preparation 25
4.3.2 Coding the text 25
4.3.3 Producing the report 27
4.4 Ethical consideration 27
5. Results 29
5.1 Description of the participants 29
5.2 Answering the research question 31
5.2.1 Barriers to care in the community 34
5.2.1.1 Poor access to dental care 35
5.2.1.2 Poor quality of dental care 42
5.2.2 Family context & beliefs 48
5.2.2.1 Parent's understanding of and approach to oral health 49
5.2.2.2 Social & financial challenges 54
5.2.3 Satisfaction with the hospital 58
5.2.4 Summary of the results 63
6. Discussion 65
7. Implications and Conclusion 72
8. References 76
9. Appendix A. Interview guide 90
10. Appendix B. Consent form in English 94
11. Appendix C. Consent form in French 101
12. Appendix D. Study information sheet 109

LIST OF TABLES

Table 1. Demographics of the participants..... 30

Table 2. Demographics of the children and the reason for their ED visit..... 31

LIST OF FIGURES

Figure 1. Outline of categories and subcategories..... 33

Figure 2. Families' pathway to the ED 35

ABSTRACT

Objectives. Over the last two decades, there has been an increasing trend in the number of families using emergency departments (EDs) for treating their children's non-traumatic dental problems. According to the literature, the ED is not an optimal place for emergency dental care because treatment is: (1) more costly for the health care system, (2) time consuming for all involved and, (3) often less definitive than the care provided in a dental office. We do not know why families use the ED and, to the best of our knowledge, there is no research on the "whys" and "hows" behind parents' decision. Thus, this study intended to explore the reasons and processes that lead parents to select the ED over a dental clinic for their child's non-traumatic dental problem.

Methods. Qualitative descriptive is the methodology of choice when a researcher seeks an accurate description of a phenomenon. Through a purposeful sampling strategy, we recruited 15 parents of children aged 10 and under that were seeking care for non-traumatic dental problems in the ED of a university-affiliated pediatric hospital in a large Canadian city. We collected data using semi-structured, open-ended interviews that were scheduled at a mutually agreed upon time and location. Interviews were audio-recorded, transcribed, and coded using a qualitative computer software program (NVivo 9) for inductive thematic content analysis.

Results. Two major thematic categories were identified from the analysis. First, the ED was families' last resort after finding barriers to care in their communities. According to parents, these barriers included poor access to care (e.g., dentists refused to treat the child, instead

referred the family to another dentist or the ED, and dentists' unavailability) and poor quality of care (e.g., parents' perceived dentists lacking patience and competency). Second, parents' understanding of oral health, which included a lack of awareness of the importance of primary teeth, influenced their children's poor oral health. This understanding affected how parents initiated seeking dental care and contributed to their delayed use of dental services.

Conclusion. These findings contribute important evidence needed to help reduce disparities in access to dental care for children. Both parents and community dentists need additional tailored education and support in order to attend to children's dental problems in a timely manner. At present, the current pattern of ED use results in delayed care for children, extra stress for parents, and excessive expense for the health care system. Future work should address the reasons why community dentists refer children out of the community to an ED for non-traumatic dental problems.

RÉSUMÉ

Objectifs. Au cours des deux dernières décennies, il y a eu une tendance à la hausse du nombre de familles utilisant les services d'urgence (SU) pour faire traiter les problèmes dentaires non traumatiques de leurs enfants. Selon la littérature scientifique, le SU n'est pas un endroit optimal pour les soins dentaires d'urgence parce que le traitement est plus coûteux pour le système de soins de santé, demande plus de temps, et est souvent moins définitif que les soins prodigués dans une clinique dentaire. Nous ne savons pas pourquoi les familles utilisent le SU et, au meilleur de notre connaissance, il n'existe pas de recherche sur le « pourquoi » et le « comment » derrière cette décision des parents. Ainsi, cette étude visait à explorer les raisons et les processus qui mènent les parents à choisir le SU plutôt qu'une clinique dentaire pour le problème dentaire non traumatique de leur enfant.

Méthode. Une approche descriptive qualitative est la méthodologie de choix lorsqu'un chercheur souhaite obtenir une description juste d'un phénomène. Grâce à une stratégie d'échantillonnage ciblée, nous avons recruté 15 parents d'enfants âgés de moins de 10 ans, cherchant à obtenir des soins pour des problèmes dentaires non traumatiques au SU d'un hôpital pédiatrique affilié à une université dans une grande ville canadienne. Nous avons recueilli des données à l'aide d'entrevues semi-structurées comportant des questions ouvertes prévues à un moment et dans un lieu choisis d'un commun accord. Les entrevues ont été audio-enregistrées, transcrites, puis codées à l'aide d'un logiciel informatique qualitatif (NVivo 9) afin de réaliser une analyse de contenu thématique inductive.

Résultats. L'analyse a permis d'identifier deux catégories thématiques majeures. Premièrement, le SU constituait le dernier recours des familles après qu'elles aient rencontré des barrières dans l'obtention de soins dans leur communauté. Selon les parents, ces barrières incluaient un manque d'accès aux soins (par exemple, des dentistes ont refusé de traiter l'enfant, le référant plutôt à un autre dentiste ou au SU, et l'indisponibilité des dentistes) et la piètre qualité des soins (par exemple, les parents percevaient que les dentistes manquaient de patience et de compétence). Deuxièmement, la compréhension de la santé buccodentaire des parents, qui incluait un manque de conscience de l'importance des dents primaires, a influencé la mauvaise santé buccodentaire de leurs enfants. Cette compréhension a affecté comment les parents ont initié la recherche de soins dentaires et a contribué à leur utilisation tardive des services de soins dentaires.

Conclusion. Ces résultats apportent des données importantes nécessaires pour aider à réduire les disparités dans l'accès aux soins dentaires pour les enfants. Les parents et les dentistes qui exercent en pratique privée ont tous deux besoin d'éducation adaptée supplémentaire et de soutien afin de s'occuper des problèmes dentaires des enfants dans des délais raisonnables. En ce moment, le patron actuel d'utilisation des SU résulte en des délais dans les soins pour les enfants, du stress supplémentaire pour les parents, et des dépenses excessives pour le système de soins de santé. Les travaux futurs devraient examiner les raisons pour lesquelles les dentistes exerçant en pratique privée réfèrent les enfants en-dehors de la communauté vers le SU pour des problèmes dentaires non traumatiques.

1. Introduction

Dental caries (decay) is a worldwide public health challenge and the most common chronic disease among young children (1). Early childhood caries (ECC) is a progressive form of dental caries affecting primary dentition that leads to severe pain, systemic infection, and abscesses (4). ECC is largely preventable through preventive dental services. However, particularly in Quebec, children suffer from high rates of caries and studies have reported that children in Quebec have 40% to 50% more cavities than other school-aged children in North America (14). In order to tackle these issues, the government of Quebec provides free dental treatments for children under the age of ten (51). Despite the availability of free dental services, one study shows a "surprising" number of Montreal families that chose emergency department (ED) for treating their child's dental caries (102). The ED is not an optimal place to receive dental care, as the care is less effective for the patient (29, 30) and costly to the health care system (93, 94). In 2006, Ontarians' use of hospitals' ED for dental problems represented a cost of $16.4 million (139).

Extant research on dental emergencies provides valuable information on basic characteristics of patients and families who opt for services in emergency departments (e.g., age, sex, race, and type of insurance) (83-105). In addition, a few studies have explored the factors associated with parents' decisions to bring their child to an ED (30, 82). This body of research, however, does not provide in-depth knowledge of the decision-making processes nor the barriers families face in finding oral health care for their children.

We believe that understanding the processes that lead families to seek care in EDs is a crucial step toward improving children's oral health and access to dental care. Through our study we hope to enhance the awareness of public health policy makers about the factors that could potentially lead to high-quality dental care for children.

2. Literature Review

2.1 Dental caries in children

Dental caries is one of the most prevalent chronic diseases of young children worldwide (1). It is reported that more than 50% of both American and Canadian children under eight years old have detectable caries (2, 11, 14). The 2010 Canadian Health Measures Survey reported that 57% of school-aged Canadian children have had a cavity, with an average of 2.5 teeth per child affected by decay (3). Further, the prevalence of dental caries in children has been increasing, in the last decade, particularly in young children aged two to five (2, 11, 14).

Dental caries is a multifactorial disease process initiated by specific infectious bacteria, primarily Streptococcus mutans. These acidogenic microorganisms metabolize ingested carbohydrates and result in acidic substances. The acids demineralize the tooth surface and, if demineralization continues, can result in dental cavities (4).

2.1.1 Early Childhood Caries (ECC)

Early childhood caries (ECC) is a rampant form of dental caries affecting young children (4). ECC is defined as the presence of one or more decayed, missing (due to caries), or filled tooth surface in any primary tooth in a preschool-aged child. ECC may lead to severe pain, systemic infection, and abscesses (4, 13). Early childhood caries have been found to be related to a wide range of factors. One of the most consistently reported forms of evidence is an early acquisition of Streptococcus mutans. A young child will be most likely to develop caries if s/he acquires

Streptococcus mutans at a young age (5). It has been reported that the bacteria can be transmitted from mother to child in the first two years of life (6). Diet also plays an important role in the development and progress of the disease. Research shows that children with ECC typically consume frequent sugared beverages (7, 8, 9). Sugared beverages are metabolized by Streptococcus mutans and result in demineralization of tooth surfaces. The use of nursing bottles (containing milk) during early childhood also enhances exposure to lactose, which contributes to the development of ECC (10). Poor oral hygiene has been also reported as an important risk factor. Hence, development of good oral hygiene habits from an early age is a key factor in preventing ECC (10).

2.1.2 Social determinants of dental caries

Dental diseases are mainly found in disadvantaged individuals such as low income and minority children who are at a greater risk of poor oral health (22). Poor oral health is strongly influenced by social deprivation across many developed countries (15, 44). This phenomenon particularly affects Quebec, where the prevalence of dental caries is inversely correlated with families' incomes (14). Studies (1992, 2005) have demonstrated that decay rates in children from the lowest income families in Quebec are more than twice that of their peers in higher income families (47, 76). According to the Quebec Longitudinal Study of Child Development, socially disadvantaged children have an almost 48% greater risk of not visiting a dentist than their better-off peers (76).

2.1.3 Prevalence of dental caries

Contrary to a major reduction in dental caries of permanent teeth of North American children that has occurred over the last decades, the prevalence of caries among preschool children appears to be increasing (11, 12). For instance, a study of oral health status in America reported an increasing rate of caries among children of two-to-four years of age in the last two decades (11). The prevalence of ECC in preschool children in urban areas of Canada is 6% to 8% but exceeds 90% in some disadvantaged indigenous communities (44). In urban areas of Canada, the highest prevalence and severity of dental caries have been found in Quebec children (137).

2.1.4 Consequences of untreated dental caries

Oral disease has a significant impact on children's overall health and well-being. Dental pain can interfere with growth and may be linked to other social and health problems such as eating, speaking, playing, and learning (16, 17, 18, 19). Untreated dental caries in children can result in emergency room visits and hours lost from school (19, 20). For instance, in the U.S., 51 million school hours are lost each year due to dental-related illness (21). Untreated tooth decay causes pain and infections that may necessitate extractions, intravenous antibiotics, and even treatment under general anesthesia (22).

2.1.5 Prevention and treatment of dental caries

Dental caries in children is largely preventable through preventive services (23). Professional associations' (e.g., the Canadian Dental Association and American Dental Association) current advice is that children should have their first dental visit by the age of one. With early dental care (e.g., applied topical fluorides, proper infant feeding practices, and diet) ECC can be

prevented, which would lead to a reduction of children's suffering as well as potential costs for the health care system (23). Despite professionals' recommendation for early dental visits, access to dental care for a significant segment of society is limited (22, 80). Some children are seen in hospital emergency departments (EDs) for acute pain and swelling caused by progressive dental decay (81-85). While an ED visit might reduce acute pain and infection, the underlying dental problems often remain unresolved and would necessitate an extra visit to a dentist, which contributes to a higher cost to the system (92). In addition, advanced forms of ECC may need treatment under general anesthesia. Patient behavior, age, and the extent of dental caries are major determinants in selecting general anaesthesia as the mode of treatment (24). Importantly, treating ECC under general anesthesia is the most common surgery at most pediatric Canadian hospitals (24). Hence, one way to reduce the child's suffering and also ED/GA potential cost is through improved access to early and timely dental care for children (22).

2.2 Access to dental care for children in Canada and the U.S.

2.2.1 What do we mean by "access"?

The current concept of "access to dental care" reaches far beyond its historic meaning. In the past, access to care was defined as patients' ability to enter into or use of the system (25). The determinants of access were economically defined and mostly assumed to include availability of supply and resources (25). The current concept suggests that access also includes factors internal to patients: their understanding of oral health, their perceived need for care, and cultural attributes (27). This has resulted in multifaceted concept of access to care with five dimensions: availability (the adequacy of the supply of dentists), accessibility (distance and

transportation cost), accommodation (hours of operation), affordability (ability to pay and insurance), and acceptability (patient's attitudes toward characteristics of dentist) (25). These factors act interdependently, and none should be ignored when defining the concept of access to care.

2.2.2 Disparities in children's access to dental care

In recent decades, oral health has significantly improved (28, 60) in many developed countries, including Canada. For instance, the number of American children who never have experienced dental caries has increased over the last two decades (28). However, such improvements have not been occurred equally in the population. For instance, children who are disadvantaged by poverty have been excluded from advancements in oral health (22, 60). These same children experience difficulty in gaining access to dental services (22, 60). In Canada and the U.S, despite qualifying for comprehensive oral health care (e.g., Medicare and Medicaid insurance), children from poor families are reported to receive less dental care than children from middle and upper income families (22, 60). Fewer than one in five children covered by Medicaid are reported to have visited a dentist for preventive care within a year (31).

In Canada, children in low-income families are typically granted some level of coverage for dental services (44, 60). Further, in a few provinces (i.e., Quebec, Nova Scotia, and Newfoundland), there is universal dental coverage for all children under age ten (44). Similar to what American studies have shown, dental insurance programs have not eliminated the disparities in children's oral health and access (48, 49, 60, 76). Studies conducted in three Canadian provinces (Ontario with dental coverage for low-income families, Nova Scotia and

Quebec with universal coverage for children) found disparities among different socioeconomic groups of children with respect to dental caries and the need for urgent dental care (48, 49, 76). These studies showed that children in low-income families remain less likely to visit a dentist. Therefore, they are found to face a higher risk of dental caries compared with their high-income counterparts even when health services are freely available (48, 49, 76). In other words, children who were most susceptible to caries in primary dentition were less likely to receive the required dental care. Several reasons have been suggested as barriers to access to dental care for the low-income population. These barriers can be classified into two general categories: (1) dentists' perceptions of barriers to access to care, and (2) caregivers' perceptions of barriers to access to care (33-41).

2.2.3 Dentists' and dental office personnel perceptions of barriers to access to dental care

Dentists who limit their acceptance of Medicaid patients is one major barrier to dental care for Medicaid-insured children in the U.S. Reasons provided by dentists for their lack of participation in the Medicaid program includes low reimbursement rates, complicated paperwork, missed appointments by parents, and parents' noncompliance (33-38). No Canadian study has looked directly at children's access to dental care. One study explored adult's access to care and found that dentists perceive people on social assistance as "undeserving" (77). Dentists carry negative attitudes toward the poor and express little compassion for people on social assistance and hold high levels of frustration toward them (77). Such attitudes lead to patients' reluctance to visit dentists and the underutilization of freely available dental services (77-80).

Another study conducted in the U.S. addressed the role of front-office personnel in accepting economically disadvantaged families (38). An additional barrier that prevents dental practices from participating in the Medicaid program (38) is that dental office personnel expressed negative attitudes towards Medicaid-insured patients. They perceived families as irresponsible about keeping their appointments and disruptive in the waiting room. The study showed how the beliefs of front-office staff members influenced their actions and led to the denial of care to people who were at a greater risk of experiencing disease (38). These biases and stereotypes toward the Medicaid patients resulted in general office policies to accept privately paying patients over Medicaid-insured patients (38). According to Mofidi and colleagues, such attitudes by dentists and office personnel ultimately harm young children in disadvantaged families. Indeed, professionals' attitude had a negative impact on parents seeking care for their children, thus reducing their access to dental care (38).

To solve the access to care disparities, it is also crucial to understand the caregivers' perception of barriers to obtain dental care for their children. In the next section we will review the studies that have explored caregivers' experiences and perceptions regarding barriers to access to dental care.

2.2.4 Caregivers' perceptions of barriers to access to dental care

According to studies that have mostly been done in the U.S., caregivers perceived barriers in all five dimensions of access to care mentioned above. Starting with availability, it is reported that parents experience difficulty in finding a dentist who accepts Medicaid (39, 40). Many dentists in the U.S. do not accept Medicaid insurance and parents cannot afford to pay the expenses out

of pocket (40, 41). Difficulty in scheduling appointments was reported as the second major obstacle of receiving dental care for children (39, 40, 41). For instance, some parents expressed frustration over needing to wait for a period of three months or more for a dental appointment (39). If parents could overcome these obstacles in locating a dentist and scheduling, access to convenient transportation was another barrier to dental care (39, 40, 41). Several families did not own a car and had to use social service's free transportation, which they reported as "inconvenient and unreliable." (39). This unreliable transportation led to missing the appointment. In addition, school absence policies and difficulties for parents to leave work were other barriers (40, 41).

Acceptability of the services and attitudes of the dental office staff was another perceived barrier to access to dental care. Mofidi and colleagues studied this concept by conducting 11 focus groups of caregivers from 4 diverse ethnic and racial backgrounds (i.e., Caucasian, African American, Latino, and Native American) (38). Their study provided valuable evidence: "Once at the dental care site, families encountered other barriers. Excessive wait times, discrimination because of race or Medicaid and negative interactions with staff and dentist were viewed as the most serious barriers" (38). According to this study, parents (especially African Americans and Latinos) perceived the office staff as judgmental, rude, and believed that they were treated differently because of their race or socioeconomic status. Also, many parents had the perception that the dentist's attitude was disrespectful and that s/he was not patient with their child (38). In another study, families perceived that dentists performed or suggested unnecessary treatments and that they were overcharged (136). It is of importance to note that a negative provider-patient relationship influences rates of utilization (42). Hence, parents' experience at

the dental office and office personnel attitudes discouraged them from continuing to seek dental care for their children (37, 136). They perceived the emotional costs of such visits as outweighing the benefits of getting care, thus reducing their use of dental services (38).

To the best of our knowledge, Canadian studies have focused solely on adults' access to dental care. These results are generally similar to children's studies from the U.S. (77-80). According to these studies, people on social assistance often experience difficult relationships with dentists and they feel poorly understood and sometimes stigmatized or rejected. Such experiences led to their reluctance to visit dental professionals and reducing their use of dental services (77-80).

Parents' oral health knowledge was another barrier to access to care. One study showed that parents' oral health knowledge led to the underutilization of freely available child dental care services (63). Intriguingly, parent's decision to not visit a dentist was influenced by their lay diagnosis of their child's dental problem and as well as their confidence in managing their child's oral health (63).

2.2.5 Recommendations for improving access

Studies suggest a multidisciplinary approach to improve access to care and recommend all professionals responsible for children's health—physicians, dentists, hygienists, nurses, and schools—work together to enhance access to dental care for children (22,27). A variety of programs have been suggested to address access to care disparities. For example, school-based dental programs and targeted interventions by community health centers have been introduced to encourage and support caregivers for routine dental checkups (40, 43). Other studies have

emphasized the importance of preventive oral health procedures and the need for supporting preventive recommendations such as fluoride supplementation (43, 44).

In addition, researchers have suggested that universities should explore ways of increasing dental students' training in pediatric dentistry and establish training opportunities for dental hygienist students in low-income minority areas (43). However, providing access to care for children is a complex problem that cannot be solved easily or quickly. Many steps have been taken and initiatives have been implemented over the years to provide access to appropriate dental care for children. Yet, disparities still exist and many children in underserved segments of the population suffer from inequalities in access to dental care. Studies have shown that due to these disparities many children in minority, low-income, or uninsured families often visit hospital emergency departments for dental treatments (21, 30, 53). In other words, difficulties in access to care have led to an over-utilization of EDs for basic dental care services (30).

2.3 Non-traumatic dental emergencies

Worldwide, the use of hospital emergency departments (EDs) for treating non-traumatic dental problems is a common mode of entry into the dental health care system for children younger than six years (81-85). Over the last two decades, there has been an increasing trend in ED use for children with dental problems unrelated to trauma (56, 86-90). A five-year retrospective study conducted in the U.S. showed that pediatric ED visits have increased substantially, with the majority of visits related to non-traumatic conditions (89). Another American study noted that there has been an increased pattern of non-traumatic dental visits during the ten-year study period (87). Generally speaking, ED is an appropriate place to seek care for traumatic dental

injuries or serious facial infections. The ED, however, has been reported to be shifting to a source of primary care medicine rather than a place for treatment of serious emergencies (56). For instance, it has been estimated that more than 60% of pediatric ED visits are for non-emergency care, including non-traumatic dental visits (56).

The ED is not an optimal place for routine dental care and the literature provides several reasons for the inappropriateness of such visits. First, care provided to young children in dental clinics is more comprehensive than in EDs (29, 30). Indeed, ED physicians can only address the immediate concern and do not provide comprehensive care (29). Research shows that dental treatment provided in an ED is generally less effective than that provided in dental care facilities (29, 30). For instance, Dorfman and colleagues showed that in most cases, rather than a dentist, an attending pediatrician treated the patients in the EDs and adopted temporary treatments (e.g., intravenous antibiotics or abscess incision and drainage) (82). Such care may not solve the underlying cause of the dental problem and the majority of ED visits require follow-up care with a dentist, contributing to a higher burden on the health care system (92).

Second, several studies have raised concerns about cost effectiveness of ED treatments (56, 91, 93, 94, 139). Research show that not only is the dental care in ED incomplete, but it is also expensive and costly to the health care system (95). Nagarkar and colleagues emphasized the burden of such ED visits to the health care system and showed a substantial increase in the total ED treatment costs for non-traumatic dental conditions in their five-year study period (86). Another study found that inpatient and outpatient treatments in the hospital dramatically increase the costs of treatment compared with a routine dental visit in a community dental clinic

(85). Further, the financial and social costs of ED visits are high for families. School days are missed and parents may have to take time off work to bring the child to the hospital (90, 140). To address these issues, Davis and colleagues have suggested that, "public health policy initiatives should be expanded to improve access and to provide alternatives that offer more complete and less costly care for oral health problems than do hospital EDs" (92).

One may think that the limited nature of care in the ED and the social costs of such visits would discourage parents from seeking help in this venue. However, there has been an increasing trend of ED visits for non-traumatic dental problems (86-90). Extant research of emergency dental services in pediatric hospitals has reviewed the demographics of these patients as well as the reasons for care seeking at the ED. This research can be classified into two groups: (a) studies exploring demographics of the patients, and (b) studies exploring the reasons for the ED visit and access to care barriers.

2.3.1 Studies exploring patients' demographics

The majority of studies have reviewed charts to outline the basic characteristics of patients, such as age, race, sex, and type of chief complaint (84, 96-103). Despite differences in the overall health care systems in the countries where these studies have been conducted (United States, Canada, United Kingdom, Trinidad, Australia, Greece, Brazil, and Ireland), results are similar: dental caries is the predominant cause of emergency visits. In all of these countries, more than 60% of dental emergency visits were due to non-traumatic dental problems. Overall, more boys than girls visited the ED in all but one of the studies (97). The mean age of children was five years in some (56, 84, 104), while in the others it was around eight years (90, 97, 101). However, all

of the findings suggest that emergency departments are used mainly by children in the early mixed dentition. Lygidakis and colleagues indicated that primary teeth are more affected (99). Some studies have shown that the ED was the first dental experience for a great percentage of children (84, 100, 102) as their dental problem had been left untreated until emergency care was necessary. An interesting finding of some studies is that families visit the ED on weekdays, when dental offices typically would be open (56, 84, 102). For instance, Oliva and colleagues found that 62% of the children visited the ED during regular dental clinic hours (84).

2.3.2 Studies exploring the reasons for ED visits and access to care barriers

A few studies have investigated the social factors associated with visiting the ED as well as access to care barriers (30, 56, 82, 87). Results showed that racial and income disparities led to children's emergency visits for non-traumatic dental problems. For instance, Zeng and colleagues reported that non-Caucasians were twice as likely to represent caries emergencies compared with other patients (87). Another study showed that African Americans visit the ED two-and-half times more than their representation in the county population (30).

Income disparity and financial factors also influence dental emergency visits (30, 93). A study of pediatric dental emergencies conducted in the U.S. found six times as many uninsured families visiting EDs compared to the surrounding county population (30). In studies exploring social factors associated with an ED visit, Medicaid appeared to be the primary source of reimbursement for a great number of people and the most common payer for caries-related emergencies (30, 56, 85, 87, 93). Graham and colleagues reported that, "Medicaid patients use disproportionately more ED services for dental concerns than those with private third party

coverage" (93). The reason could be Medicaid's insufficient dental coverage: current reimbursement levels for dental care under the Medicaid program are so low that few dentists participate in it (35, 36). This results in families' difficulties in arranging visits to the small pool of dentists willing to accept Medicaid (82). In fact, according to some studies, one of the most common reasons for seeking care at the ED was either having "no dentist" or the dentist's reluctance to treat children with Medicaid (56, 82, 105). For instance, Rowley and colleagues reported that more than one-third of their participant families had no regular dentist, and an additional third had a dentist who was unavailable or refused to provide treatment (56).

In short, families with lower income levels and people from specific racial/ethnic groups are more likely to use the ED and less likely to have more efficient options for dental care. More specifically, a typical child visiting the ED in the U.S. for non-traumatic dental issues is more likely to be from a low-income family, not Caucasian, and either uninsured or under the Medicaid program (30, 82, 87).These children are also considered the most vulnerable in society, with a higher chance of having poor oral health (30). Hence, actions should be taken to provide proper access to dental services for these children and empower their parents to seek the most appropriate and efficient care.

2.4 Conclusion

The current body of research extends our understanding of social factors associated with, and reasons behind, families' decisions to seek care in an ED. Yet, it fails to clarify the care-seeking process or provide us with in-depth knowledge of the barriers families face in finding appropriate oral health care for their children. In the case of Canada, provincial governments

have voiced concern about ED visits for dental problems. Policy makers have started to include these matters in discussions, arguing that these visits are highly inefficient and costly to the Canadian health care system (91). In Quebec, basic dental services for children under the age of ten are free (51). This policy has been in place since the 1970s. And yet, a study by Schwartz (1994) of dental emergencies at the Montreal Children's Hospital (MCH) has shown that there is a "surprising" number of ED visits due to dental caries (102). The study reports that 70% of visits were non-traumatic in origin. In addition, 83% of patients were treated during regular working hours in which most dental clinics would be open. Further, according to a recent MCH report (2014), there has been a 30% increase in total emergency room visits compared with Schwartz's findings (1994) (58). These findings, coupled with high rates of childhood caries in children in Quebec (14) show that there is a need to improve access to care for these children. We believe that these issues cannot be resolved until they are better understood and further work is required to explore the pathways to care for these children and their families.

3. Aims and Objectives

3.1 Aims

The aim of this research is to seek in-depth knowledge of the processes that lead parents to seek care in EDs, as well as the barriers they face in finding other oral health care options for their children. There is no research yet on the "whys" and "hows" behind parents' decisions to seek ED services. To gain insight into this topic, we wanted to specifically provide answers to the following question:

- Why do parents seek care for their child's non-traumatic dental problem in the ED?

Ultimately, through this research, we would like to contribute to the reduction of existing inequalities in children's access to dental care. We hope to enhance government awareness regarding access to care barriers that families face in the process of seeking care for their children. Better knowledge of this process may lead to alternative solutions and actions. Developing such solutions may lead to fewer problems for families and better health for children; for example, enhancing the quality of the care that children receive by employing more appropriate, sustainable care rather than temporary care. In addition, implementing such solutions could result in less crowded EDs by guiding patients to dental clinics rather than emergency departments.

3.2 Objectives

In this study, the following objectives were pursued:

- To better understand the reasons and processes that lead parents to visit the ED rather than dental clinics for their child's non-traumatic dental problem.
- To identify barriers parents face in receiving dental care for their child.
- To identify parents' expectations and goals for receiving dental care for their child.

4. Methodology

4.1 Research design

The nature of our research question makes it pertinent to use a qualitative design. Qualitative research is well suited for "why," "how," and "what" questions about human behavior, motives, views, and barriers (106). The aim of this study is indeed to understand the “whys” behind parents’ decisions to select an ED rather than a dental clinic for their child’s non-traumatic dental problem. Generally, quantitative studies do not allow an in-depth understanding of the meanings people give to events (107). Instead, by using a qualitative inquiry, we would “understand a phenomenon, a process; capturing the views, motivations, and experiences of participants; and explaining the meaning they make of those experiences” (108).

More specifically, we conducted a qualitative descriptive (QD) study. QD methodology produces rich, straightforward descriptions of experiences or events that aim to provide answers to questions that are relevant to practitioners and policy makers (107). Our findings may provide policy makers, dental schools, private dentists, and emergency departments with clear and usable information on the barriers families face in seeking dental care for their children. Further, as Sandelowski claimed, a qualitative descriptive design is the methodology of choice when a researcher asks questions and seeks a straightforward and accurate description of a phenomenon (107). Questions such as “What reasons do people have for using or not using a service or procedure?,” “What are people's responses (e.g., thoughts, feelings, attitudes) toward

an event?," and "Who uses a service and when do they use it?" are suitable question to be answered by QD methodology (107).

4.2 Data collection

4.2.1 Sampling

We adopted a maximum variation sampling procedure, a useful technique to maximize the diversity of participants relevant to the research question (123). For instance, we recruited fathers and mothers from different cultural and social backgrounds (i.e., education, ethnicity, socioeconomic status). Within the frame of this study, we recruited parents of children under age ten seeking care in the ED of a university-affiliated pediatric hospital in a large Canadian city for non-traumatic dental problems.

We aimed for a sample size of approximately 13 to 15 to meet the rigours of an in-depth and detailed pilot study (111, 112). This number originates from the sample size in similar studies (113, 125). We continued recruitment and data collection until we reached saturation (i.e., reaching a point at which additional data does not reveal new aspects of the phenomenon and confirms previous findings) (109, 110).

We used the following inclusion criteria.

Inclusion criteria:

1- Parents of children under age ten (as they qualify for provincial dental insurance coverage);

2- Parents who are seeking care in the ED for their child's non-traumatic dental problems.

4.2.2 Recruitment

The participants were recruited from the division of dentistry of a pediatric hospital from July 2013 to April 2014. The chief of the division introduced the student-researcher to the nurses and dental staff, asking them to invite parents who sought care in the hospital ED and were interested in talking to the student-researcher. Recruiting participants, however, constituted a challenge. Although most parents were interested in the nature of the study and its objectives, few agreed to participate in the qualitative interview. For those who agreed to participate, the student-researcher organized an interview session based on their preferred time and location. However, many of them did not show up at the session or canceled because of financial and social challenges. For over eight months, the student-researcher spent seven hours each day, from Monday to Friday, at the hospital. She asked at least three parents daily to participate in the study.

Because of the poor recruitment, the following strategy was adapted after a few months: First, the student-researcher made sure she was present at the hospital daily. She sat in the room where dentists and staff called their patients and archived clinical data hoping her presence would encourage recruitment. Second, she maximized her flexibility to the preferences of the parents. The student-researcher organized the interviews at different times and locations to improve the participation rate in the study. For instance, when a mother had only a half hour to talk, the researcher organized two sessions at different times and locations according to the parent's convenience. When another parent's only free time was during her daily jog, the

researcher met her at the park on a cold winter day. Finally, after eight months, the student-researcher was able to recruit 15 participants and reached data saturation.

4.2.3 Interviews

The data was collected entirely through interviews that were audio-recorded and transcribed. Interviewing enables an in-depth exploration of the particular topic with a person who has had relevant experience (114). The student-researcher conducted all interviews in English and French. The interviews were semi-structured with open-ended questions in a conversational style and ended with a demographic survey. The demographic questions sought characteristics of the participants such as age, sex, race/ethnicity, education level, employment, family status and income (Appendix A). Open-ended questions allowed the participants to explain their views and concerns in detail and express additional issues that might not be covered by the questions of the interviewer (115). The interview guide was designed and used by the research team for the sole purpose of this study (Appendix A). The interview guide was further modified during the interview process to cover a wide variety of issues that participants shared during the interview sessions. The interview guide was divided into five sections: the child's general oral health condition, the history of the child's current dental problem, the families' experiences of access to dental care and experiences at the ED, and their future approach to obtaining dental care.

Interviews were conducted in ten different locations according to participants' convenience. Six interviews were conducted at the hospital (e.g., in the lecture room, in the ED waiting room, in the library). Nine were conducted in various places such as two at participants' home, one at a

participant's workplace, one at a coffee shop, one at a park, one at a library, two via Skype, and one over the phone. The interviews lasted for approximately 60 minutes varying upon the participant's convenience and responses.

At the beginning of each interview, the student-researcher thanked the participants for collaborating in the study. She then introduced herself to provide a better understanding of her own background. The participants were briefed on the study's objectives and any questions or concerns were addressed. After the initial briefing, all participants were asked to sign the consent form (in English or French) (Appendix B, C). The entire project was approved by the Research Ethics Board of McGill University Health Center. Finally, the student-researcher thanked the participants for their participation and asked if she could call or email them if she had additional clarifying questions.

4.3 Data analysis

Data analysis was an ongoing process that began after the first interview. We employed an inductive thematic-content analysis for analyzing interviews. This is a widely accepted analysis method in health sciences to answer practical questions (108) as well as the analysis strategy of choice in qualitative descriptive studies (107). The goal of thematic analysis is "to provide knowledge and understanding of the phenomenon under study" (116). In addition, it allows the researcher to better understand the social and professional contextual reality of the text (117). The analysis included preparing the data, coding of the complete transcripts into themes and sub-themes, cross-analysis of the transcript, and producing the final report.

4.3.1 Data preparation

The student-researcher transcribed the interviews in Word documents immediately after each interview. This process helped the student-researcher to re-familiarize herself with the data (120). Following the full transcription of the interview, each transcript was entered into NVivo for micro-analysis. We used data analysis software NVivo (version 9), which allows researchers to organize and sort their data, and yields maximum benefits by providing a systematic approach to data storage and handling (119).

The process of analysis started by short debriefing reports following each interview. These summary notes were the first attempt to organize and analyze the data, and were read by all team members. The notes were very useful in assessing the overall effectiveness of the interview and highlighting the main themes.

4.3.2 Coding the text

The second part of analysis was full coding of the transcribed interviews using the constant comparative method (114). This analysis occurred during the data collection stage. This means that "the researcher simultaneously codes and analyses data in order to develop concepts; by continually comparing specific incidents in the data, the researcher refines these concepts, identifies their properties, explores their relationships to one another, and integrates them into a coherent explanatory model" (118). In such analysis, data is constantly revisited after initial analysis until it is clear that no new themes are emerging (114).

In the process of coding, we first read the interviews several times to gain a holistic understanding of the interview content. The transcripts were then read line by line and the parts of the text in which we recognized a concept, event, example, or theme were marked. We summarized and analyzed each transcript in its entirety and condensed the large data set into smaller units called a "unit of meaning" (111). Meaning units were abstracted and labelled with a code. This coding process used the principle of inductive content analysis, which is "a process of coding the data without trying to fit it into a pre-existing coding frame" (121). This meant that we did not have a pre-established list of codes before beginning the coding.

After all interviews were coded, the initial codes were subsequently categorized into themes using the constant comparative method both between and within participants (114). In other words, the various codes were compared based on differences and similarities and sorted into categories. Finally, the underlying meaning of each category was developed into themes. In this way, we identified the relationship between categories and sub-categories based on concurrence, antecedents, or consequences (123). When there was a relation between codes, we grouped them with the most comprehensive phrase for each category to best represent all the codes fitted together under the title of the theme. For example, the code "dentist referral" was joined with "dentist unavailability" under the category of "poor access to dental care." This process went back and forth. We used the same process to code the entire text and repeatedly assessed the coding consistency (124). Consequently, we regrouped the codes and categories into three main groups:

1- Parents' perceived barriers to dental care in the community;

2- Family context and beliefs;

3- Satisfaction with the hospital.

4.3.3 Producing the report

The last step concerned the interpretation of the results and the production of a report. We reported the findings by describing the perspectives, experiences, and barriers that participants described in the interviews. We produced a narrative text using the themes that emerged from the analysis describing the research question.

4.4 Ethical consideration

Several measures were followed to ensure that the treatment of participants and their data in this project met the highest ethical standards. We obtained approval from the Research Ethics Board of McGill University Health Center. All participants read and signed consent forms (Appendix B, C). In the recruitment process, the necessary information regarding the aims and expected outcomes of the project were provided to participants via handouts or face-to-face explanations (Appendix D). The student-researcher assured participants that if some questions during the interviews made them uncomfortable, they had the right not to respond, although this did not happen in our interviews. The participants also had the right at any time to withdraw from the study. All the information collected about participants during the study remained confidential and in a locked office at McGill University. To protect participants' privacy, their information was identified with numbers and letters that were only known to the student-researcher. When the student-researcher shared information from this research with the rest

of the study team, the information did not include names or addresses. Identities remained completely confidential and the transcripts of the interviews did not contain any names.

5. Results

This chapter presents the analysis of the interview data. In the following paragraphs, we will start by a description of our sample and then present the data with regards to answer the proposed research question.

5.1 Description of the participants

The participants included 15 parents (one parent per child), 10 mothers and 5 fathers, each with one child under 10 years of age with whom they visited the ED of an urban children's hospital for their child's non-traumatic dental problem. Parents' ages ranged from 25 to 59 years (with 38.3 years as the mean). With one exception, all parent participants were living with a partner and were either married or common-law. Most were educated, with a college diploma (DEC) or higher. Nine participants were employed and 13 families had an annual household income lower than $50,000. Of the 15 participants, eight were immigrants (from China, India, Pakistan, and Egypt). The participants' children needing dental care included six girls and nine boys whose ages were between three and nine years old (with a mean of 5.1 years). The primary cause of care seeking was dental pain (N=6) and dental abscess (N=9).

Table 1. Demographics of the Participants

Demographics	Number
Age, years	
18-29	1
30-49	13
50-59	1
Gender	
Mother	10
Father	5
Family immigrant status	
Non-immigrant	7
Immigrant	8
Marital status	
Married	12
Common-law	2
Single parent	1
Employment status	
Employed	9
Unemployed	6
Education	
High school diploma or under	4
DEC	5
University degree	6
Total annual household income	
<30,000$	6
30,000-50,000$	7
>50,000$	2
Language	
Bilingual (French/English)	5
Bilingual (English/Other)	4
Trilingual (English/French/Other)	4
Only English	2

Table 2. Demographics of the Participants' Children and the Reason for the ED Visit

Demographics	Number
Age, years	
3-5	7
6-9	8
Child's gender	
Girl	6
Boy	9
Primary reason for ED visit	
Dental pain	6
Dental abscess	9

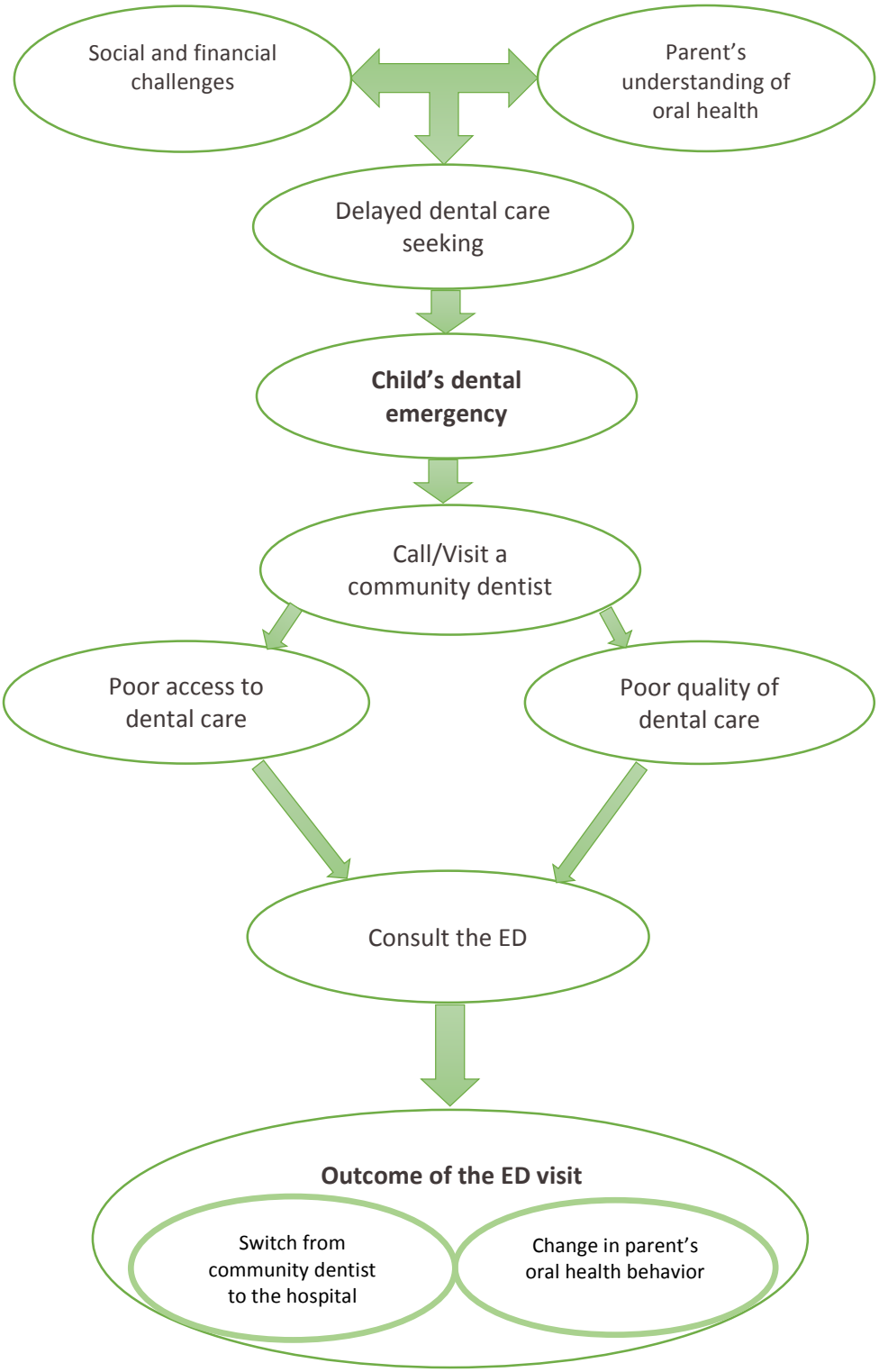
5.2 Answering the research question

With regards to our research question, "why do parents seek care for their child's non-traumatic dental problems in the emergency department?" we identified two major thematic categories from the data: (a) parents' perceived barriers to care in their community; and (b) family context and belief. In addition, parents' positive opinion about treatment they received at the hospital was an interesting topic discussed repeatedly during the interviews. Although this topic does not directly address our research question, it is pertinent in that it contributed to family care-seeking pathways after visiting the ED. Hence, due to its importance, this complementary category will also be described below.

Overview of the categories and sub-categories (in text):

- ❖ Parents perceived barriers to care in the community
  - ➢ Poor access to dental care
    - Dentist referral to the hospital
    - Dentist unavailability
  - ➢ Poor quality of dental care
    - lack of patience from dentist
    - lack of competency
- ❖ Family context and beliefs
  - ➢ Parent's understanding of and approach to oral health
    - Wait & see attitude
    - Lay-diagnosis
    - Cultural beliefs on oral health
  - ➢ Social & financial challenges
    - Employment issues
    - Financial challenges
    - Immigrant status
- ❖ Satisfaction with the hospital

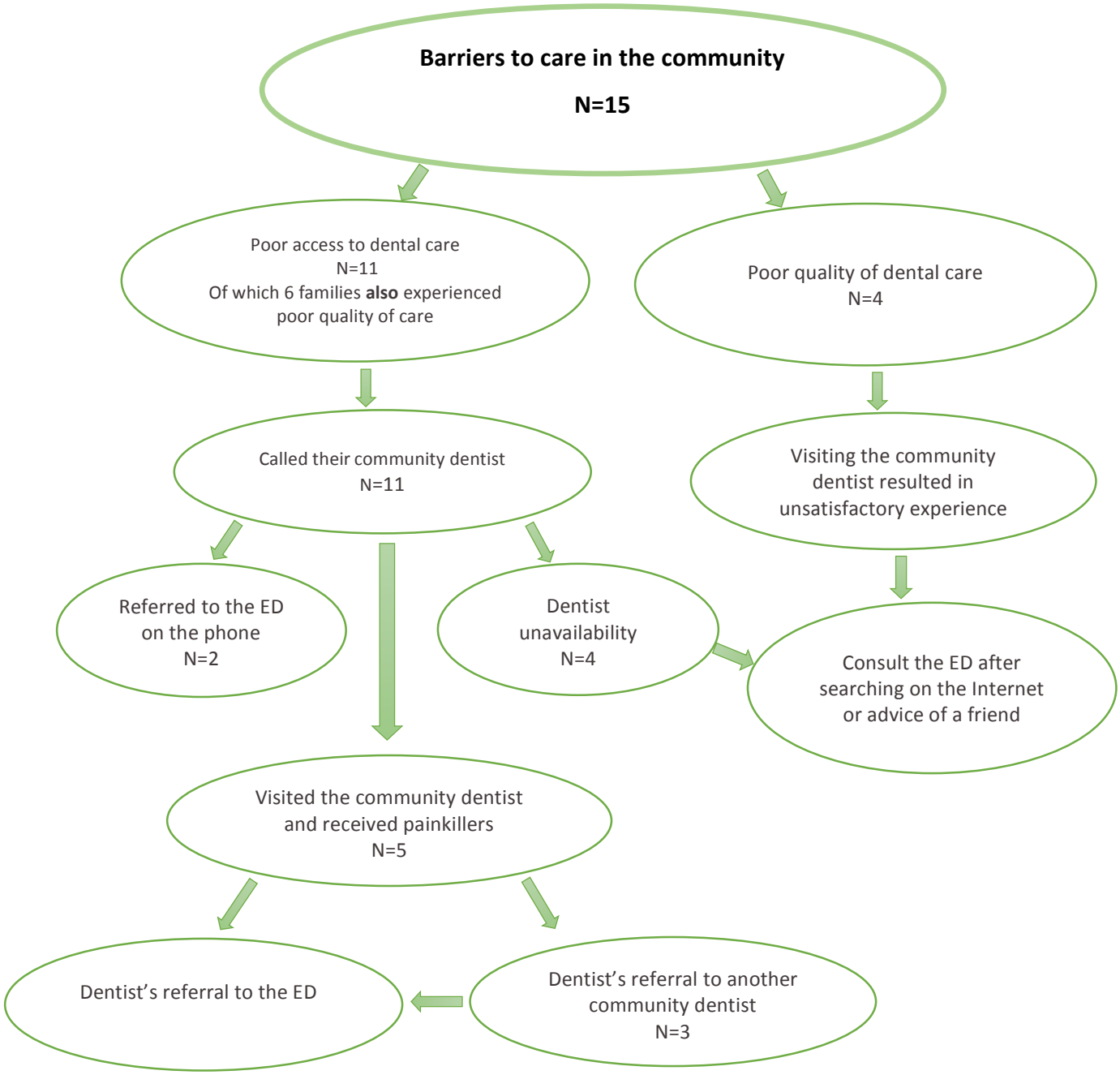
Fig. 1. Overview of the categories and sub-categories.



5.2.1 Barriers to care in the community

According to each one of our 15 participants, barriers to primary care services in their communities were the main reasons for seeking care in the ED. According to these parents, their visit to the ED reflected a lack of other options rather than a belief that the hospital was their first treatment choice. The ED, in fact, was families' last resort after finding barriers to care in the community. According to these parents, these barriers included what they experienced as poor access to dental care (N=11), and poor quality of dental care (N=10) in their communities (Fig. 2).

Fig. 2. Families' pathway to the ED.



5.2.1.1 Poor access to dental care

Despite Quebec's universal dental coverage for children under age ten, according to our participants, access to dental care for children is limited. It is important to differentiate between "access to dentists" and "access to dental services." According to our parents, access to a dentist in Montreal is easy, as lots of dentists accept new patients. As a 45-year-old father said: "As far as accessibility goes, in fact, all of the dentists are more than available. There are so many around. More than any doctor."

Yet 11 families in this study encountered barriers to receiving dental care for their children when they visited some of these "many" dentists. These barriers included:

- The limited number of community dentists willing to treat young patients and their decision to refer the child (seven families).
- Dentist's unavailability at the time parents needed emergency care for their child (four families).

The dentist referred families to the hospital

Many families (N=7) were referred to the hospital's emergency department by a private dentist. These seven families initially called their community dentist for an emergency appointment to resolve their child's pain and dental infection, believing that the dentist would be competent to treat such conditions. They were then told by the dentist to go to the hospital or, after receiving a temporary treatment such as an antibiotic prescription, they were referred. A father of a nine-year-old boy with an abscess said:

He had swelling in one side of his face, and he had a lot of pain. So, we called [the dentist] and he said we should rush right away [to the ED] as it can get worse. And, this is how we ended up at the hospital's emergency.

Importantly, none of these participants considered the hospital as their first source of care; hence, they were surprised when the dentist referred them to the hospital. Generally speaking, parents' perception of dental competency is correct in that dentists are trained in dental schools to deal with dental emergencies and treat dental infections. Only dental infections that do not respond to antibiotics and continue after treatment of the underlying reason for the infection need hospital attention.

There were instances (two out of seven families) when the parents called dentists for an appointment and were referred directly to the ED over the phone. In those cases, upon hearing the child's condition over the phone, the dentist refused to treat the child and instead referred the family to the hospital. In the words of a mother of a four-year-old boy:

When I called, what the dentist pretty much told me on the phone was: "The gas might not work. What if he doesn't stay still? What if he kicks? What if he gets off the chair?" So, he told me that there [the hospital] will be the place that you will go at the end that the work will be done.

Three families were not referred by the first dentist to the hospital. In fact, they were initially referred from one community dentist to another dentist who was expected to be able to treat the child. However, with or without receiving a temporary treatment (e.g., pain killers,

antibiotics), none of those visits were successful and they were referred to the hospital by the last dentist. In all cases, the hospital was their last resort in a pathway of what we could call "failed clinical care."

For example, one mother was told by a dentist to seek another dentist who might be able to perform treatment for the child, but she was not given a specific name, so she searched on the Internet for pediatric dentists. However, as it was a holiday, most dentists were not on duty. She did call two dental offices, which either through a phone conversation or after an examination, referred her to the hospital by arguing that "they [the hospital dentists] know better how to handle him." This mother described their pathway to the ED by saying:

> *It was just that we brought him to regular dentists and tried four different ones and it did not work. It was like a week that I was between dentists and we were out of choices. When the [last] dentist told me to go to the hospital, I went there right away. So, pretty much everybody suggested going to the [the name of the hospital].*

Similar stories recurred in our study. Parents did not originally consider the hospital as a source of dental care, because they trusted community dentists and expected to receive treatment from them. Some parents tried very hard to find a private dentist in the community to treat their child. "I got a reference from my friend and sister and anybody who knows a dentist," stated a 35-year-old mother. This process resulted in emotional distress and feelings of helplessness. Parents' frustration increased when such care-seeking processes delayed care and thus extended their child's pain and caused difficulties eating and sleeping: "[When we arrived at the

hospital], she was in pain, she was crying, she couldn't eat. She was in so much pain, it was very hard." Another parent said:

> *I went to different dentists. They say: "We cannot do it." I took her to the clinic and they say they cannot do anything. Just give her Advil because of the pain. Then, they said I need to go to a specialist. I went to a specialist and they said the same thing: "We cannot do it." Nobody did nothing. It was very hard."*

The story of one family in this group was a bit different, as they ultimately went to the hospital upon the advice of a friend, not a dentist. Importantly, this family's care-seeking process was also frustrating. Prior to consulting the hospital, they were referred from one dentist to another and visited five different dentists in a week for their child. It was a "bad experience" for the family to explore several dental offices yet receive no treatment. Unlike other families in this category, none of the community dentists referred them to the hospital. When a friend heard about their frustration, she recommended that they consult the children's hospital. After their visit to the hospital, the mother wondered why the community dentists did not refer her to a place where she could find help. She explained:

> *They said: "Oh! You should go to this place. And, that one to another one. So I went there, I thought I will get the answer from this place, or I get the answer from the other place. All of them was a very bad experience. Finally, after going to five places, I didn't get any. I didn't know where to go, no answer from nowhere. Yeah…If they cannot do, it was better to refer to a place that can do it. I was here and there and everywhere and not getting anything.*

According to these families, they were referred to the hospital for two main reasons expressed by community dentists: the child's behavior problems, and the child's multiple dental decays, which needed extensive dental treatments. The most frequent reason for referral was the child's behavior. According to parents, community dentists hesitated to treat emergency problems of their young children, and especially when the child was afraid and cried during the examination. Many parents, however, did not accept this reason based on either their child's previous experience at a dentist's office or their own perception of their child's behavior. They were frustrated by what they interpreted as an unnecessary referral. A mother explained her confusion after the referral by saying:

> *[The dentist] told me that my son is young and he will not cooperate for the whole treatment and I need to visit another specialist who can put my son to sleep to do the job. I was so pissed off. How is that possible? My son had several dental visits before with a regular dentist and he was very cooperative. My feeling was that they just didn't want to do anything. They will do whatever is easy for them and make them more money. She didn't do a thing on that visit and my son had abscess and pain.*

Another reason cited for referral was due to the child's extensive treatment needs. Most of the children in the study had many dental caries and thus needed several treatment sessions. According to the parents, the dentists hesitated to treat children with several caries and preferred to refer them to a specialist:

We went to a dentist and the dentist said: "It is emergency thing and it is case for a specialist. I cannot do all that." You know, one filling he did, but the other, he told us: "It is not my job. They are complicated and job of a specialist."

When parents visited a specialist, the latter suggested treatment under general anesthesia (GA). Parents rejected this option either due to financial issues or concerns about GA. As mentioned in Chapter 2, Medicare only covers basic treatments (e.g., fillings, extractions, and endodontics) in private offices. Hence, some families could not afford the cost of a GA in a private office and went to the hospital where they would not have to pay. Other families struggled to accept this mode of treatment because they did not agree that their child was uncooperative. For instance, a father of a five-year-old girl did not see the necessity of GA as he thought that his daughter was a cooperative child: "She is ok for the treatments, she is not scared of the dentists. She enjoys it, in fact. I consulted my wife that whether to go with anesthesia or not. I felt a little insecure with that."

Once at the hospital's ED, the on-call dentist provided temporary treatment for the child and made a follow-up appointment for more comprehensive treatment at the dentistry department of the hospital. Such a facilitated-care process and treatment at the hospital was a surprising experience for parents in light of their expectations of community dental offices. Exemplifying this point, a father asked:

I was surprised by all these things. Because, here or there they should know and do the same thing. How is it that he [the community dentist] could not do it and here [at the hospital] they can? How it is a young dentist [at the hospital] that just started the

work can do the job but the old dentist [in the community] that we went to couldn't? How he thinks with so much experience that he cannot do the treatment that a very young graduated doctor can do? He was such an old experienced dentist.

Dentist unavailability

In four cases, dentists' unavailability prompted parents to seek care in the ED. The unavailability was either due to the dental office being closed or the dentist offering an appointment beyond the time period parents felt comfortable waiting. A mother of a four-year-old boy said: "She accepts but we must wait for one week. I had no other choice than come here for emergency. I think it's a great problem. We couldn't wait. He cannot eat." In the words of another mother: "He works in strange hours, like you know 1 pm on Mondays. Very inconvenient. So, what should I do? It was Monday morning, no dentist."

In such cases, parents discerned the ED pathway by themselves. They either already knew of the hospital from previous experience or searched the Internet for a pediatric care facility: "I searched on the Internet. I searched for emergency dental problems for children and I saw the hospital there. I decided to come here."

5.2.1.2 Poor quality of dental care

Another barrier to dental care that emerged was parents' perception of the poor quality of services their child received from the community dentists. Parents evaluated the quality of care provided to them in various ways. Their perception of dentists' behavior and the treatment their children received strongly affected parents' decisions to leave community dentists and go to the

ED. Most of the parents initially decided to visit their family dentist for their child's dental problem. However, parents' perception of dentist's competency and behavior was different when they visited the dentist themselves, compared to consulting for their children. In particular, they expected the dentist to be more caring and patient when dealing with their child. A father exemplified this by saying:

> *You know with adults, when you are rough with them, saying "Don't be a baby." You know, that might work. But, with kids you can't say "Don't suck your thumb, do not be a baby." They don't do that. They don't get it. So, you need to have a certain way with them.*

For these families, perceived poor quality of care motivated them to search for a dentist whom they could trust and their search resulted in their visit to the children's hospital.

Difficulty finding a trustworthy dentist

As previously discussed, according to the participants, finding a dentist in Montreal is easy. What was challenging for parents, however, was finding a dentist for their children whom they could trust. In other words, parents were careful about choosing a dentist for their child. They sought a trustworthy dentist by asking for references from friends and family members. Our participants did not have positive experiences when they visited a community dentist for their child whom they did not previously know. As two parents recounted:

> *You know, it is not difficult to find a dentist. I can call the dentists in Laval, who accept new clients, but I don't like to do that. Because, I don't know if she is a good dentist. I*

tried for [the child's name] once, it wasn't a good dentist. I chose one near me without knowing him. And, I was not satisfied at all by the way he treated my daughter. [Mother]

I just don't trust any dentist anymore. It's a very hard thing to choose a dentist. I was so... you know, you have to be confident in your professional and it's like that I felt that I was cruel. I mean that you know, it was my child and I don't know why they didn't do the right job. I was really upset about that. So I figure now at last I am in the right place [in the hospital]. So not anymore to the private office. [Mother]

Parents' distrust of the dentists originated from two sources: the dentist's behavior and what they judged to be the technical competency of the dentist.

Perceived lack of patience from private dentist

The dentist's relationship with the child was placed at the top of parent's priorities. Families' satisfaction and trust was influenced by the attitude of the dentist. Some of the parents expressed that a perceived lack of patience in the dentist was one of the most significant factors causing them to change dentists. It was challenging for parents to find a dentist who was "compassionate, caring and gentle" to their children. This expectation reflected the importance of a good child-dentist relationship to control the child's fear and anxiety. Parents placed far greater importance on the behavior of the dentist than on the condition of his/her office and equipment. This pattern held across all the interviews: the value that mattered most was not the physical facilities, but the caring attitude of the dentist. This point is well demonstrated by our participants:

For me, when I come back to the kids, the most important thing is to have somebody compassionate. It is important because you want them, first of all, to feel comfortable and when they are comfortable, they will listen. You know, kids don't listen to their parents, right? So, it doesn't matter how many times we tell them to brush properly or whatever, not to suck your thumb, it doesn't really go in. But, when a stranger they like tells them, they listen more. So that is the biggest thing. And then, of course, the other nice things that come on top of, like television or sort of things that ease the experience for them. But, I wouldn't put the distractions above the people. Having seen both of them right now, the people are by far the most important thing. [Father]

My daughter, she is much more relax here [the hospital] than there [the dental office]. There I couldn't leave her, she was taking my shirt and telling "please mommy tell the doctor to be more careful." Now here, she is happy and tells me: "Go where ever you want." The dentist here is very nice, my daughter is happy here. And it is important for me. When you bring her and she doesn't want, and when she wants to come, it makes a big difference for me. [Mother]

I kind of find that they [private dentists] don't have the patience to deal with him. I guess to deal with kids who are really afraid of the dentists, I find that they don't know how to handle it. [Mother]

Perceived lack of competency

Parents judged a dentist's lack of competency based on the extent to which the dentist could handle their child and perform treatment. Optimal dental service, from the parents' perception,

was when a dentist could resolve their child‘s main problem while s/he was comfortable and happy in the dental chair. They considered this competency as a skill most dentists should have and were surprised when the dentists they visited could not manage to work on their child. As these mothers described:

> *They put him on me, it was like pinning him there. He would cry, they didn't know how to handle him and it wasn't a good experience. [Mother]*

> *I looked for a children clinic because she always says: "I am afraid, afraid." And, two times we went to my dentist. She examined [the child's name] and said "no caries, no caries." But then she developed an abscess and it was so difficult for her. I wanted someone who has the experience. Because of that, I searched on the internet for children's clinic. [Mother]*

Some participants also commented that they had formed the impression that the dentists did not really want to treat children: "This is how they are. They do nothing anyways. They wouldn't do anything for children." In those cases, parents felt helpless and lost their trust in community dentists: "I was like, it could be a better service. If they cannot do it, it was better to refer to a place that can do it. I was here and there and everywhere and not getting anything."

Unsuccessful treatment at the dentist's office

Problems in the care-seeking process resulted in parents' frustration and dissatisfaction. Central to parents' concerns was the safety and well-being of their child. If their child experienced pain

during the dental visit, the parents became distressed, particularly when they perceived their child's suffering to be caused by a professional. A 38-year-old mother of four children said:

> *I went to a dentist. It's not like that I wasn't consulting. [And yet] a 5 year old kid who suffered. Everybody told me "Oh my god, an abscess? It's so painful." You know I was like: "Oh my god, he wasn't able to tell me what was going on." For a week he was in pain, I didn't know, how could I know? I am so upset that it is because of one person who was a professional, who didn't do the right thing. And I think he knew he wasn't doing a right thing, you know. That caused me to be more pissed off. It's crazy. For adult, ok. But for a little kid? How he could do this?*

Later she added:

> *My son had some cavities and the dentist did the fillings. But, after a while the fillings started to fall off. I went to the dentist and he did the replacement fillings. But, it did happen again. I am not a dentist and I didn't know what was going on. I asked him: "Why it's like that?" And he answered: "Because of the food he eats, it breaks the filling." It was not a reasonable answer. My son eats whatever all other kids are eating. Why their fillings would not fall? I knew that something was wrong.*

Another mother said:

> *She told me "everything is well". But, I am not sure now what happened. He has great cavities now. I am not sure why. She didn't tell me there is a problem. She told me: "Ohhh, he is good, and everything is good, everything is ok." And now he has this*

problem. She never takes pictures [x rays] for him. Each year we went and never, never. Just check with the mirror and that's it. I will go there, I will take the pictures from here and let her see and I will ask her what happened to my son, why he is like that and you just told me every time that "everything is ok." And if she cannot give me a correct answer, I will complain to the department she works there. I will ask for their help to complain about her.

Summary

In short, the ED was families' last resort after confronting barriers to care in the community. According to parents, poor access to dental care as well as a poor quality of dental care in community offices were the main reasons for their visit to the ED. Parents initially decided to visit their community dentist for their child's problem. The dentist, however, was either unavailable, or after a dental examination, referred the child to the hospital. Further, parents' perception of the attitudes, behaviour, and competency of the dentist strongly affected their dental care-seeking decisions. In particular, they expected the dentist to be more caring and patient when dealing with their child. It was difficult for parents to see their child in distress when the dentist could not handle the situation. When parents lost their trust and felt they had run out of options, the hospital became their last resort for seeking dental care.

5.2.2 Family context and beliefs

According to Statistics Canada, low-income cut-off levels are derived based upon size of family and location. Families residing in large cities are considered low income when their total income is less than $10,000 per family member (e.g., income of $38,920 for a family of four). In our

study, 13 families met these criteria and were considered low-income. Further, six parents were unemployed and four had low levels of education (i.e., high school or less). Children in families with a higher level of income and education visited a dentist at least twice a year and their parents' level of oral health knowledge was higher than those of disadvantaged children. Interestingly, our two high-income families' pathway was less challenged than low-income families (e.g., the child's pain started at midnight when their family doctor was not available and thus they consulted the ED). In other words, it was mostly disadvantaged families whose daily life challenges and understanding of oral health affected the way they initiated dental care seeking for their children and used the ED as their source of care.

5.2.2.1 Parent's understanding of and approach to oral health

Attitudes toward oral health affected how participants initiated dental care for their children. Parents delayed care seeking due to a number of factors such as a "wait and see" attitude, a lay diagnosis of the dental problem, and cultural beliefs. These approaches and beliefs toward oral health resulted in late care seeking and a need for emergency treatment.

Wait and see attitude

Eight participants minimized the status of their child's dental problem due to their general perceptions about oral health. They believed that dental pain did not need immediate attention because it would diminish over time. They said:

We went to the nearby dentist [for examination]. But, we postponed it [the treatment], thinking that it becomes OK. My wife was not sure and back home, people advised me: "Don't go so many times to dentists, it becomes alright." [Father]

He always says "tooth pain, tooth pain." But, he is too young. I don't give him medicine. We just say: "OK! Stay and wait. Maybe the pain will go." [Father]

She had toothaches before, and with Tylenol she was ok until we got an appointment. So, I gave her Tylenol and thought, it is just a toothache and nothing emergent to take care of. [Mother]

For some parents, the ED experience resulted in a change in their attitude toward oral health. For instance, prior to the ED visit, a 41-year-old mother thought that dental caries did not need special attention and could wait for later treatment. However, after the development of an abscess in her child's mouth and the need to go to the ED, her approach changed. She stated that in the future she would consider any oral health problem as a threat and would seek care immediately. She said:

We waited because we thought it was caries. We didn't think it would be an abscess. If it was caries we would wait. But, now we know that it can result in an abscess. So, if she complains about anything in her mouth, if there is no dentist available, of course we will go to the emergency quickly. [We will do that] before it gets worse and worse until we see a dentist.

Lay diagnosis

The second group of parents (N=5) relied on information obtained from various sources (e.g., Internet, family members) to assess their child's dental problem. Their lay diagnoses led to a delay in care seeking and a potential worsening of their child's dental problem. Some parents diagnosed the condition based upon the absence of any discoloration on their child's teeth. A mother explained that:

> *When the pain started, it was a little atypical. On the exterior surface, the carie was not visible. I looked at the tooth, I am not dentist, but to see if there was any stain or anything. But nothing. And when she was saying: "Oh mama, my teeth!" I was telling her: "No, it's nothing." But, then wow! In less than a month, it was a big carie and the tooth broke.*

Another participant thought that the child should be able to locate the pain specifically in a tooth; otherwise, it was not a dental-related problem: "My son didn't tell me that he has pain in his teeth. I asked him if he has pain in his teeth and he didn't. He had swelling that if you touched, he had pain, not from the teeth."

It is interesting to note that although many of the participants did "diagnose" their child, they hesitated to medicate the child beyond one dose of Tylenol. They believed that medicines had risks and side effects and it was wise to avoid using them. For instance, a five-year-old girl's dental abscess was not reduced after a seven-day course of antibiotics. When she realized the community dentist was not available, the mother took her child to the hospital. She hesitated to use Tylenol despite her child's dental pain. Her answer to the following question confirmed her attitude toward using medicines. Interviewer: "Did you use any home remedies when she

had pain?" The mother: "No, for me maybe. But, for my daughter I am not taking a risk." This mother was not an exception. There were other parents with similar perceptions toward using medicine for their child. A father of a three-year-old boy said, "At that time, he even couldn't sleep or eat. But, he is too young, I don't give him medicine."

Cultural beliefs on oral health

Parents' cultural background is an influential factor on oral health knowledge. Culturally influenced factors such as diet and knowledge about primary teeth affected children's oral health in many ways. For example, some parents believed baby teeth have less value and thus delayed care seeking. Our data shows that these parents were more concerned about their child's immediate dental problems than routine dental check-ups. Prior to an emergency situation, parents did not plan for their child's oral health. They underestimated their child's dental problems because they saw the problems as common childhood issues. For example, a father told us that he thought baby teeth did not need treatment:

> *You don't think that in your country or my country they don't take care of those minute dental problems? And, automatically after some time they will get adult teeth. I remember that when I was a kid like her, I had decayed teeth too. But, my adult teeth came after that and I've never seen a dentist. Only because of tea they are a little yellow and as long as they are OK, it is not important. People get crazy about white teeth.*

A community dentist informed this father of his daughter's need for immediate treatment. However, he chose to consult family members and received contradictory advice:

My sister in law and my family, they were talking back there: "Why you are doing all these extractions for her and all that." She [his sister in law] said: "All my children had the same problem but nothing happened and they are perfectly alright."

Another issue rooted in parents' beliefs on oral health was the role of sugar in developing dental caries. Many of the parents either did not know about the role of a high-sugar diet in oral health problems or felt it was out of their control:

My daughter eats a lot of candies, she has all the teeth, I can see the black, la carie, so I decided to see a dentist. I wanted to stop the candy but she cannot. She uses too many candies, what should I do? Does she have the same problem with the adult teeth if she does not brush and eat candies?

Some parents stated that health professionals did not inform them on the role of diet or breast milk. A father was very surprised by the information he received from the dentist at the hospital:

You say juices are bad too. I didn't know that. I thought juices are good. She also had that problem. And you know she has problem because of mother's milk. Can you imagine? Nobody stated to us that mother's milk can be bad. They always say mother milk is like a medicinal thing.

Parents' beliefs about primary teeth affected their care-seeking behavior, leading to the underutilization of dental services and ultimately the need for emergency services. In contrast, however, some parents' own oral health experiences seemed to be an important determinant

that motivated them to seek dental care for their child. The following mother's dental problems as an adult motivated her to adjust her previous perceptions and take her daughter to a dentist:

> *In my country, we don't have the culture to see a dentist when we are young. So, I didn't see a dentist when I was young and now I have problems. All the teeth you see here in my mouth, they are not my teeth, they are plastic. So, I don't want her to have the same problem. That's why I decided to see a dentist for my daughter.*

It is important to note that out of 15 families in this study, 12 needed emergency care that included an extraction of a primary tooth. Despite the emotional distress of seeing their child under pressure of a tooth extraction, none of the parents felt badly about their child's tooth loss. Losing a tooth was seen as acceptable treatment, as this mother of a four-year-old boy said: "His tooth needed to be pulled out and needed to be done…it got done. And I am happy it was done."

5.2.2.2 Social and financial challenges

In addition to parents' poor understanding of oral health, another barrier to timely dental care was the presence of several immediate difficulties in daily life. Most parents experienced high stress in their life, facing social and financial challenges that interfered with timely care- seeking.

Employment issues

Nine participants had demanding low-paying jobs. Parents with low employment security identified taking a day off work for their child's oral health issues as a prevailing concern. This was particularly true for immigrants who would only consider taking a day off from work when

a critical health issue arose; dental problems were not considered as critical. A 35-year-old father of a three-year-old boy with a huge abscess and high fever said:

> *Any time they had pain, [we come]. Otherwise we don't come, as it takes too much time. For me as long as I get a fast treatment, I am OK. I have a job that I cannot lose it. And here [the hospital], they usually give you fast [treatment]. Where I have a fast treatment, I will go there.*

Finding a balance between family and work duties was a constant struggle for these families. Some parents admitted that their child had dental pain for quite a while (ranging from few days to few months) before they went to the ED and felt badly that their delayed care-seeking led to their child's emergency problem. However, they told us that dental problems were simply not a priority with so many other responsibilities as a parent and an employee. A 25-year-old mother of 4 young children sought emergency care when a tooth infection spread close to her daughter's eye. She lost three days of work but considered it necessary: "You know, I was shocked by the face. The swelling was going to her eye. I want my children to see each other. Eye is very important."

When it was only tooth pain, this mother thought she could wait and not sacrifice her work for a dental treatment. Another mother had just started a new job when her daughter started to have dental pain. She did not feel comfortable detailing the experience because she felt guilty about her child's dental emergency problem. However, she admitted that she did not pay much attention to her daughter's pain due to her highly demanding job. It is a struggle for these parents to pursue their careers and focus on maintaining their children's oral health.

Financial challenges

Thirteen of the 15 families in our study encountered financial hardship. For these parents, financial issues were an ongoing challenge and they had to work for extended or irregular hours. Thus, it was difficult for them to balance what they thought was the best care for their child and their daily stresses. An example was a young mother of two who was on social assistance and worked part time in a housecleaning agency:

> *I know that his teeth are bad. My aunt has a bad habit of giving him junk food, which I don't like very much. She is my babysitter at the moment. So, I cannot change all of my son's oral habit at the moment. It is right that I buy all of his snacks. But, maybe I can ask that she doesn't give him lots of those kind of things. He eats a lot of dried foods and that stuck in the teeth. So, it's [important to] not giving him that sort of food, so much.*

This mother knew that cheap snacks were high in sugar and low in quality. Yet, her financial difficulties meant that she could not buy healthy snacks. It was difficult for these families to adapt to the challenges given their financial concerns.

Immigrant status

Many of the families in this study were immigrants. As newcomers, they lacked information about the health care system including how to find a family doctor or a dentist. When their child started to have dental pain, they did not know where to seek dental care. A father who

immigrated three months prior to an ED visit reacted to his son's pain as he would in his home country. In his words:

> *Before we come here, if he felt some problem about tooth or anything, I would go to the hospital immediately. In [name of the home country], we don't need to have appointments. We just go [to the hospital] and wait for our turn to have the treatment.*

Other immigrants who had been in Canada for a few years were more familiar with the health care system. They were, however, so immersed in their work life and other immediate challenges that they did not plan timely dental visits for their children. The parents believed emigrating from their home countries would benefit their children, yet they faced tremendous challenges and felt distressed. According to what some parents discussed during the interviews, they were most deeply hurt in their new country by a loss of social status, unemployment, a change in children's values, and discrimination. Exemplifying these issues, a father in his late 50s, with tears in his eyes, said:

> *In one of the hospitals, I felt that the doctor didn't take care of my pregnant wife as we were immigrants. It is a very bad feeling. Because of the children, I have to be here. We don't have choice now. And you know, when we go back home, my daughters keep asking to come back. They say Canada is their home. But, no matter how much problem we have over there [back home], my heart belongs there. I have a MBA from home. I was running a school that now my brother does. Our whole family are educated. My bank balance was big and here is zero. And, because of language*

neither my wife nor I got a job. My wife has a hotel management diploma. She worked in the best five star hotels in [the home country]. Here, anywhere she applied, they interviewed her and was interested but just for French rejected her. And French is difficult. At this age, we cannot be fluent in it. We are thinking of going elsewhere, selling our house and running away. It is so hard. All we have is a very small, hopeless business. Business which is not giving us any return. We are so fed up now that we want to run away. My wife's heart is really broken. So far, very bad experience, very bad.

Summary

In sum, parents' understanding of—and approach to—oral health served as a barrier to timely care for their child. Several parents minimized their child's dental problem because they believed it would resolve over time. Also, parents' lay diagnoses led to delays in dental care seeking and potentially worsened their child's dental problem. Culturally influenced factors, such as knowledge of primary teeth, was another important issue affecting children's oral health. In addition, parents' challenges of daily life posed barriers in prioritizing their child's dental problems.

5.2.3 Satisfaction with the hospital

Importantly, we found that one outcome of seeking emergency care at the hospital was families' overall satisfaction with the care. All participants expressed positive reactions. It is important to elaborate on how parents defined their satisfaction as it resulted in switching from their private dentist to the hospital's clinic for further dental treatments. Some determinants emerged as

measures of families' satisfaction, the most important being the care and respect they received at the hospital, their child's comfort, the staff's behavior, what they saw as good quality, and the speed of the services. Some parents valued these factors more because they were dissatisfied with their community dentist. In the words of a father:

> *I have got a very good experience here. The hospital, the staff are really good. They have a very good place to play for kids. They are too good. It is a place that you can rely on. So, I got very high opinion about it and we will never try another place.*

Hospital staff behavior and attitude was one of the most significant determinants of parents' satisfaction. Parents expressed their feelings by saying:

> *Actually, everybody that saw him was tremendously compassionate. And, it's the thing that for us about the [the name of the hospital] is important. You know, on top of that [the child's name] has autism. So, he sometimes needs a health care professional that is a bit more understanding and we always find that at [the name of the hospital]. So, everybody that we saw in initial visit and yesterday follow up was tremendously patient, very compassionate, and very good with him. And, yeah! It goes very well. So, the whole experience was very positive. [Father]*

> *Very satisfied. The way we were treated at the hospital was very professional. And, [they had] very good, wonderful, very patient nurses. They treated us very humanly. [Mother]*

> *Mother: They are a lot better for the kids.*

Interviewer: Why do you think that they are better? What did you see there?

Mother: They talk more with the kids. They didn't just put their hand in the mouth. The one that I went, just said: "open the mouth" and put the hand in the mouth. Looking at them? Talking to them? Nothing. I grew up in [the name of the city] and went there [the hospital]. I know how it is in the hospital. Their behavior, yes, is much better.

Moreover, as previously discussed, the child's comfort was the parent's priority. They believed that a good child-dentist relationship would ensure their child's adherence to the dentist's recommendations and attention to oral health. Exemplifying this issue, a father said:

You know, my daughter is not the most courageous person. She came back and she was so happy and said so nice about the dentist and all the stuff. So, that is what we need to find with them. You know, when they have anxiety and do not want to see the dentist. It makes it so difficult for everybody. In fact, you know, my daughter is a thumb sucker and she liked the dentist so much that since then, knock on wood, she hasn't sucked her thumb. Because the dentist said: "it's not good." It makes a whole difference for us, you know.

Most of the families came to the ED after a failed pathway at private clinics and their only expectation was relief of their child's pain. When they received complete treatment from what they experienced as a compassionate dentist at the hospital, they greatly admired the clinic and the staff:

They [the private dentist] only told me to pay $275 and put him on the list for general anesthesia. But, here at [the hospital], they did root canal and then put him on the list for anesthesia for the rest of his teeth. I am happy that they fixed the main problem. He is not complaining of anything. He can eat now…I wasn't expecting them to do any treatment right away. But I was happy that they did it.

Considering all the positive experiences families had in the hospital, most of them said they would not go back to the community dentist for further treatments. When dissatisfaction with the private dentist already existed, families switched to the hospital's clinic even more readily:

Yes, very satisfied. Even, I changed the dentist of [name of the child] to come here. The dentist here told me that I can continue the treatment with my dentist. But, I saw [name of the child], she was really relaxed. I was also really happy to be here. So, I decided to change the dentist. My daughter, she is more relax here than there. There, I couldn't leave her. She was taking my shirt and telling: "Please mommy! Tell the doctor to be more careful." Now here [the hospital], she is happy and tells me: "Go where ever you want." The dentist here is very nice… my daughter is happy here. And, it is important for me. When you bring her and she doesn't want, and when she wants to come, makes a big difference for me. [Mother]

I will go to the hospital. I just don't trust any dentist anymore. It's a very hard thing to choose a dentist. I was so... you have to be confident in your professional but it's like that I felt I was cruel. I mean that you know, it was my child and I don't know why they didn't do the right job. You know, I was really upset about that. So, I figure I am

in the right place finally. So, I do not go anymore to the private office. There were very stressful moments in my life. I am happy that it's over now. [Mother]

Participants' experience and satisfaction also correlated with their willingness to recommend the hospital to friends and family members. A mother did not want her friends to undergo the same "stressful moments" she faced and was "scared" of seeing other children visiting her son's private dentist.

Well now, I always say them to go to the hospital. You know, I have some friends that go to the same dentist that didn't do the right fillings. I am telling them stop going there, "Don't go there anymore and take an appointment with [the name of the hospital]". And, the dentist we have now in [the name of the hospital] is good. I will gave them her name. Yeah, it's very scary. I was really scared, she [a friend] brought her kids there [the private clinic] too.

In other words, participants struggled to find appropriate care for their child and ultimately the hospital provided them with the desired treatment. Participants thus hoped to influence their friends' pathway and recommended the hospital's clinic for future oral health inquiries. A father said:

Next one is, if they are not sure of a dentist in their area or something like that, I would tell them to go and take a look over there [dentistry clinic of the hospital]. Everybody we saw were professionals at [the name of the hospital]. We've been there a lot and

every one through out there always were fantastic. So, chances of finding [a dentist] who likes to work with children at [the name of the hospital] is virtually 100%.

It is important to note that for some parents, high satisfaction did not necessarily indicate that they had a good experience in all aspects of the care. For instance, while a mother appreciated the hospital's clinic for helping her child, she had to leave the room because she could not tolerate seeing her son's distress:

For the certain part I didn't see. They strapped him to the chair. He was screaming and crying. They were talking to him, that I liked. Telling him they are taking it out, everything's going to be fine. I liked that they didn't let him scream and do not talk… it is hard to see a child being strapped to get the teeth done. But, there, they know how to do it. He had to be strapped down. I didn't like that part. But, his tooth needed to be pulled out and needed to be done and that was no other choice. So in the end, I can't say anything bad. I am happy it was done.

5.2.4 Summary of the results

This study reveals that families face many challenges in their dental care pathways. Within our sample, two principal groups of barriers can be identified: (1) factors related to dental care providers, and (2) factors related to the family context and beliefs.

First, according to parents, poor access and poor quality of care in the community dental offices were the main reasons for their visit to the ED. All of the families in this group initially visited or called their community dentist for their child's emergency problem. The dentist, however, was

either unavailable, referred the child to another dentist, or referred the child to the hospital. In some cases, what parents judged as lack of patience and competency prompted them to change dentists. In their pathway of visiting multiple dentists, either a community dentist referred them to the hospital or they learned of it after searching the Internet or asking friends. In all cases, parents were frustrated, lost their trust with community dentists, and the hospital became their last resort for seeking dental care.

Second, parents' understanding and approach to oral health significantly impacted their dental care-seeking behavior. Several parents placed less importance on their children's dental problem because they believed it was a common issue in childhood. Some parents assessed the dental problem by themselves. Their lay diagnosis hindered them from seeking professional dental care.

In addition to parents' poor understanding of oral health, their social and financial challenges influenced their care-seeking behavior. Parents who were preoccupied with immediate family issues and their work situation had difficulty in arranging a timely dental visit for their child.

Further, all participants expressed high satisfaction with their experience at the hospital. They were mainly satisfied with the staff's attitudes and behaviors, which they saw as leading to their child's comfort during the dental treatment. Such positive experiences led to parents' decision to cancel appointments with community dentists and continue with the hospital's clinic for further treatments. Families believed that the hospital was the best place for children's dental care and intended to spread the word and recommend the hospital's clinic to their friends and family members.

6. Discussion

Our study was designed to better understand the reasons and processes that lead parents to select the emergency department (ED) rather than a dental clinic for their child's non-traumatic dental problems. Several salient themes emerged from the data: (1) barriers families faced in finding oral health care options for their children prior to their visit to the ED; (2) family context and beliefs that contribute to parent's care-seeking behaviors and ultimately led to delayed care and need for emergency; and (3) parent's high satisfaction with the hospital as an outcome of seeking emergency care at the hospital.

Barriers to care in the community

Our study showed that parents find it relatively easy to organize a dental appointment for their child. Indeed, most of our participants had a private dentist in the community whom they visited before consulting the hospital. This is in contrast with American studies that found the major barrier to access to care is that dentists limit their acceptance of Medicaid patients (33- 40).

However, in the process of obtaining dental care, our parents faced other challenges that led them to visit the ED for a dental problem. Our study explicitly reflected on the degree of dentists' motivation to welcome young children and also children with extensive treatment needs. According to several families, community dentists refused to treat their child and referred the family to the hospital for dental emergency care. The literature provides three reasons for dentists'' unwillingness to treat children and their emergency referrals. Our findings supports two reasons and contradicts one reason.

First, our result echoes what is found in the existing literature as the most frequent reason dentists provide for referral (52-54): behavior management issues. For instance, more than 85% (i.e., over 300 dentists) of Ontario dentists named behavior management problems as the primary cause of pediatric referrals (54). In our study, several parents did not find behavior issues to be a convincing reason for referral. Based on either their child's previous experience at a dentist's office or their perception of their child's behavior, these parents felt that their child could be managed by the community dentist. Thus, they were concerned and frustrated by what they interpreted as an unnecessary referral. Other studies support this finding that parents and dentists have limited agreement about the main reasons for child's uncooperative behavior (52). For instance, Mejàre and colleagues showed that parents tend to blame dentists and vice versa (55). Parents in that study indicated that dentists' lack of empathy and the child's experience of pain during the dental visit (e.g., due to an injection) were crucial points for children's uncooperativeness (55). According to the dentists, however, the most prevalent reasons for the child's behavior were parents' own level of anxiety and fear (55).

Successful treatment of an uncooperative child requires appropriate behavior management techniques in which dentists should be trained during dental education (127). However, in general, during dental education, students mainly treat children of four years of age and older, who are generally "well-behaved" and have minimal treatment needs (126). Previous evidence shows that due to the lack of pediatric dental training in schools, dentists feel that they lack competence to provide care for children (52, 53). In other words, dentists who feel they have adequate pediatric dental training are more likely to treat children (53).

Second, young age (3-5 years) has been reported as a predisposing factor for pediatric emergency referrals in the U.S. (53, 56). According to these studies, community dentists referred young children to hospitals; older children mostly received emergency treatments in dental clinics (56). Our participants' children, however, were between three and nine years of age (with a mean of 5.1 years) and more than half were school-aged.

The third reason for pediatric referrals is the availability of a reference option (57). In other words, general dentists do not treat young children if someone else can do it. This is exactly what we found in our study. According to our participants, the community dentists recommended they go to the hospital as it is "the place" to get treatment for their child. This ED sees over 1,700 emergency visits annually. Therefore, availability of a valuable treatment source may contribute to dentists' tendency towards referral.

It is important to note that while referral is sometimes inevitable, it is not necessary in all cases (52). Dentists' referrals in our study resulted in families facing challenges in trying to obtain dental care. Some families visited multiple community dentists prior to their ED visit, yet none of those visits were successful and after receiving temporary treatment (e.g., pain killers, antibiotics) or not receiving treatment at all, they ended up at the hospital. In those cases, parents experienced emotional distress when they could not find the appropriate treatment. A study on dental emergency referrals reported similar parental emotional distress after their visits to multiple practitioners (50). It was difficult for parents to visit multiple dentists while

their child was in pain. Our participants expressed a wide range of emotions, from despair to anger to blame, in describing the poor access and poor quality of dental care they received.

Parents perceived poor quality of care in the community dental offices as another barrier to access to dental care. What parents judged as a lack of patience in the private dentist prompted them to change community dentists and go to the ED. Several researchers reported that the quality of the provider-patient relationship is an important factor influencing utilization (38, 42, 59). Mofidi and colleagues showed that some parents elected not to return to offices where they perceived a lack of patience in the dentist (38). Similar to these studies, our participants reported that seeing their child in distress resulted in their decision to not return to community dental clinics. When parents lost trust in the community dentists, they felt they had run out of options and the hospital became their last resort.

Family context and beliefs

Our study showed two family-related themes that influenced parent's care-seeking process: (1) parent's understanding of and approach to oral health, and (2) a family's social and financial challenges.

With respect to the first theme, parents' understanding of oral health affected the way they initiated dental care seeking and used the ED as their source of care. An influential factor in parents' oral health knowledge is their cultural background (75). Culturally influenced factors such as diet and knowledge about primary teeth may affect children's oral health. For instance, some cultures place little value on primary teeth and consider dental caries a normal childhood

disease that affects all children (61). Our participants' low degree of perceived seriousness about primary teeth was an obstacle to seeking early treatment. A survey of Vietnamese caregivers of preschool children in Canada suggested that parents attributed a low value to the health of primary teeth (62).

Our participants' visit to the ED was also a consequence of their lay diagnoses of their children's dental problem. This is consistent with the results of a study conducted by Muirhead and colleagues. It showed that low-income parents' lay diagnoses and confidence in managing their children's oral health resulted in an underutilization of free dental services (63). There is no research on assessing the accuracy of parental lay oral health diagnoses or whether such diagnoses are beneficial. Our findings showed that parental lay diagnoses led to delays in dental care seeking and potentially worsened their child's dental problem.

With respect to the second theme, our findings are consistent with those studies (64-66) that found family's socio-economic status associated with oral health knowledge and attitudes. In our study, disadvantaged families' (i.e., those with low levels of education and income) social and financial challenges interfered with timely care seeking for their children. For instance, participants with low-employment security identified the need to take a day off from work for their child's oral health issues as a prevailing concern. In one American study, caregivers also reported that their lives were too busy and complicated to overcome the barriers they faced in obtaining dental care for their children (39). In that sense, daily stresses are associated with negative consequences on parenting practices and children's oral health (67). For instance, a Quebec longitudinal study of child development reported that children from disadvantaged

families were less likely to visit a dentist and more likely to have poor oral health than their peers in high-income families (76).

In short, parents living in deprived areas and parents with lower levels of education and income tend to visit dentists less regularly. Williams and colleagues (64) suggested that children who belong to these groups are more likely to have higher levels of dental disease. In our study, the high rate of dental caries in these children coupled with their late dental care seeking and challenges to find appropriate care resulted in a need for the child's emergency treatment.

Satisfaction with the hospital

In addition to the themes that directly answer our research question, parents repeatedly brought up an additional topic: their high opinion about the hospital. Almost all participants expressed positive reactions on the care they received at the hospital and their satisfaction resulted in switching from their private dentist to the hospital's clinic for further dental treatments. The literature defines satisfaction as an ``evaluation based on the fulfillment of expectations'' (68). The most important determinants of satisfaction after receiving health care services are physical comfort, emotional support, and respect for patient preferences (69, 70). In accordance with these studies, our participants described their satisfaction based on the care and respect they received at the hospital, their child's comfort, the staff's behavior, what they saw as good quality, and the speed of the services. Interestingly, literature shows that patients who are least satisfied with their physicians are more likely to seek health care at EDs rather than at private clinics (71). Similarly in our study, when parents were dissatisfied with the private

dentist, they sought care at the ED and said they would not go back to the community dentist for further treatments.

Furthermore, literature suggests that satisfied patients are more adherent to physician recommendations and more loyal to their physicians (71, 72, 73). Our participants believed that when a good child-dentist relationship existed, children would listen more to the dentist's recommendations and be more attentive to their own oral health. Finally, satisfaction is highly associated with a willingness to recommend the hospital in which treatment is received (70). Our participants recommended the hospital to their friends to prevent other children from undergoing the same "stressful moments" they experienced in their community.

Limitations of the study

It is important to note the limitations of this study. First, our findings may not be generalizable to other social, political, and cultural contexts beyond the urban environment and this tertiary care pediatric hospital in Quebec. Nevertheless, if other provinces or countries share some of the characteristics of the Quebec health care system and its regulations, our results may be transferrable to their contexts. Finally, we only focused on parents' perspective and experiences of their child's emergency dental care seeking. Therefore, we do not have children's perspectives on their experience. Also, our study did not address dentists' perceptions and opinions on pediatric emergency problems and the reasons for their referral. Further research should explore the perspectives of dentists and other health professionals providing primary dental care to children and children's own perspectives

7. Implications and Conclusion

Implications

Considering that dental caries is a preventable disease and treatable by a community dentist when diagnosed early, the large number of young children visiting the ED for dental treatment is discouraging (85, 86). The pain and suffering of the child, the stress to the family, and the additional expenses to a tertiary care hospital and the health care system could be prevented by early and timely dental treatment at a community dental clinic. Difficulty in accessing dental services as a consequence of dentists' unwillingness to treat young children as well as a lack of oral health knowledge among parents contributed to families' visits to the ED for dental treatments in this study.

The availability of universal dental insurance for young children in Quebec is an important step towards improving access to dental care. However, our findings show that providing universal coverage is not sufficient because it falls short of addressing other obstacles that families face in obtaining dental care. We need a variety of interventions for both parents and professionals to reduce the disparities in children's oral health.

To begin, we need to promote parents' oral health knowledge as a way of establishing adequate oral health habits in families. A number of oral health education interventions for parents of young children at risk of developing caries have been developed (132-135). Literature suggests that "traditional health education" (i.e., advice-giving sessions conducted by professionals and the dissemination of information via pamphlets) is not effective in reducing the caries rate (134,

135). Therefore, new approaches of oral health education have been developed (132, 133). For instance, a paper published in collaboration between the University of British Columbia (Canada) and the University of Washington (U.S.) showed that motivational interviewing (MI) intervention enhanced the preventive behavior of mothers of young children, resulting in significantly less caries in their children (133). This paper suggested that MI counseling could be easily learned by both lay health care workers and professionals, for example via a workshop setting. MI is thus appropriate not only for dental personnel, but also for community workers who frequently visit families with young children (133).

Another important strategy in improving disparities in children's oral health is to increase the number of general dentists who are comfortable treating challenging patients, such as young children. It is reported that children who have a "dental home," that is, a dentist whom they visit regularly, rarely need to access an ED for dental emergencies (56). Hence, efforts should be made to increase dental students' pediatric trainings. Important initiatives have been undertaken worldwide to enhance pediatric dentistry education (129-131). The University of Manitoba (Canada) applied a specific clinical education system for third and fourth-year dental students that, compared with the previous system, enhanced the students' trainings in complex pediatric dentistry procedures. In the new system, students were assigned procedures that prepared them to take the pediatric clinical competency exam (129). Assigned procedures in the third year included treatment planning, preventive care, and conventional restorations. Fourth-year students were required to complete stainless steel crowns, endodontic procedures on primary or young permanent teeth, space maintainers, and case presentations (129). A complementary component involved developing a partnership with several underserved areas

in the province and creating a “bussing program” to transport and provide dental treatment to children from ten different areas. A study evaluating the beneficiaries of this new education system showed that dentists who graduated after the program changes provided “complex pediatric dentistry care to a greater number of patients and referred fewer patients to pediatric dentistry specialists when compared to the dentists who graduated before the changes” (130).

Another practical strategy for improving access to care for children and reducing oral health disparities is training “dental therapists” in the health care system (131, 138). This strategy has been introduced in several developed countries (including New Zealand, Canada, and the U.S.) in which students are trained in a two-year program to be qualified as pediatric oral health therapists and provide dental care services to children (131). It is reported that this strategy is a practical and cost-effective way to reduce oral health disparities and improve dental care access to children (131, 138).

In summary, the literature suggests that by training dental students with skills to manage pediatric dental emergencies, the hospital ED could be used more appropriately—that is, for serious infections and trauma (85). This would minimize the costs to the health care system, reduce child’s pain, reduce families’ stress and anxiety, and ultimately ensure a much better standard of care for children.

Conclusion

This study was designed to understand why parents seek care for their child’s non-traumatic dental problems in the emergency department. Despite the availability of free dental services

in Quebec, there are a considerable number of families who chose the ED for treating their child's dental caries (58, 102). The extant research on dental emergencies confirmed children's difficulties to access to dental care. Yet, a detailed explanation of the care-seeking process and the barriers families faced to find appropriate care for their children has been lacking. Thus, we sought an in-depth knowledge of the reasons and processes that lead parents to select the ED over a dental clinic for their child's non-traumatic dental problem.

Overall, our findings fall into three main categories: firstly, the barriers to care in the community were the main reasons for care seeking at the ED; secondly, family context and belief resulted in delayed care seeking and potentially worsened the child's dental problem; and thirdly, parents' satisfaction with the hospital affected their future dental care seeking.

Families' challenges in obtaining dental care confirm the need for action from a wide range of parties, including the dental schools, researchers, and dentists themselves. Both parents and community dentists need additional tailored education and support in order to attend to children's dental problems in a timely manner. Future work should address the reasons why community dentists refer children out of the community to the ED for non-traumatic dental problems.

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9. Appendix A- Interview guide

Introduction

First of all thank you so much for giving me the opportunity to speak with you. Thanks for your valuable time. I greatly appreciate it.

I am Azadeh Mostajer Haqiqi, a graduate student at Faculty of Dentistry, McGill University. I will be asking you questions about the circumstances that lead you to go to the Emergency Department for your child. Before we begin, I would like to give you two important documents: the Letter of Information and Letter of Consent. Please read them now and let me know if you have any questions.

I will then ask you to sign the consent form before we start the interview.

[Presenting the LOI and Letter of Consent before starting]

The interview contains a number of questions. As you read on the consent form, your contributions will be confidential and anonymous.

Please do not hesitate to let me know if you have any questions related to this interview or if you need any clarification of my questions. Also, please let me know if you ever want to take a break from the questions.

Before we start the discussion, do you have any specific question?

Sample of questions for semi-structured interviews, Open ended questions (or each question, the interviewer will probe and/or ask follow-up questions):

1. You recently consulted the hospital because your child had a dental problem. Could you tell me what happened to your child?

- When did your child first experience [pain/discomfort]? What was it like for child? For you/your family?
- What did you do to help your child?
  - Have you used home remedies? Could you describe what you did and how it worked?
  - Have you tried to go to [CLSC? family doctor? Dentist?]
    - Could you explain what happened when you tried to go to any of these locations?
    - [if it did not work] Could you explain why you were not able to consult the […]?
    - What was your experience at each of these locations?
- At what point did you decide to go to the Emergency Room of the hospital?

2. Could you tell me about how you generally manage your child's dental problems?

- Visit a dentist's office or clinic?
  - How often? For what reasons would you take child to a dentist?
- Do you always go to the ED for dental problems? When else have you gone to the ED?
- Why did you choose ED this time?

3. I would like to now talk specifically about your visit to the ED: Could you tell me about the ED visit?

- What were your expectations before you were treated? Were these expectations met?
- How long did you wait?
- What kind of treatments did you receive?
  - Were you satisfied?
  - How did you feel the staff treated you and your child?

4. Overall, how easy is it to find dental care for your child in Montreal?

- Did you know that you could receive free dental treatment outside the hospital too?

- ❖ Could you describe any barriers or difficulties that you have encountered?
- ❖ As you look back, are there any specific events that stand out in your mind? Could you describe [each one] it? How did this event affect the way you decide to seek care for your child?

5. Now, since being in the ED, what will you do next time your child has an oral health problem?

- ❖ Back to the hospital? Dental clinic?

6. After having these experiences, what advice would you give to other families?
7. Is there anything else you think I should know to understand your experience better? Is there anything you would like to ask me?

The interview will end by asking the participants basic demographic questions. The questions will seek characteristics of the participants such as age, sex, race/ethnicity, education level, employment, family status and income.

Finally, we will thank them for their participation and ask them if we can call or email them if we have additional clarifying questions.

Demographic Questions

I would like to ask you some background information about you and your family.

Please be assured that the answers you give will be kept confidential. If some questions make you uncomfortable, you have the right not to respond.

1. What is your relationship to child?
2. What is your age?
3. What is the age of your child whom you visited ED for?

4. What is the gender of your child whom you visited ED for?

5. What is your primary language?

6. What is the highest level of education you have completed?

7. How would you classify your primary ethnic identity?

8. What is your current marital status?

9. What is your employment status?

10. In which district of the city you currently reside?

11. How many adult/children live in your household?

12. What is your total household annual income in Canadian dollars?

    Less than $30,000

    $30,000 to $49,999

    $50,000 or more

    Would rather not say

10. Appendix B - Consent form in English

Information about the study

Title of the Study: A study to better understand why parents seek care for their child's non-traumatic dental problems in the emergency department.

The Investigator(s) in Charge of the Study: Dr. Mary Ellen Macdonald, Dr. Christophe Bedos, student: Azadeh Mostajer Haqiqi, Oral Health & Society Unit, Faculty of Dentistry, McGill University

The MUHC Study Code: 3086

Name of the Sponsor, Sponsor/Investigator or the Granting Agency: Centre de recherche de Montréal sur les inégalités sociales et les discriminations (CREMIS)

Introduction: You are being invited to take part in this study because you have visited the emergency room with your child for dental problems. Before deciding to participate, you should understand the content of this consent form, the risks and benefits to make an informed decision, and ask questions if there is anything you do not understand. Please read this entire consent form that contains a full explanation of the study and take your time to make a decision. If you decide to participate in this study you will be asked to sign and date this form, and a copy will be given to you.

Background: Dental cavities are a worldwide public health challenge and the most common chronic disease amongst young children. Despite the availability of free dental service for children under 10 years of age, children in Quebec have 40% to 50% more cavities than other

school-aged children in North America. The use of emergency departments (EDs) has increased over the past decades for treating non-traumatic dental problems for children younger than 6 years. The ED however is not an optimal place for emergency dental care and the care is generally less effective than that provided in a dental clinic.

Purpose of the study: The purpose of this study is to better understand the reasons that lead parents to select the emergency department of the hospital for their child's dental problems. Approximately 13 - 15 subjects will take part in this study at the McGill University Health Centre.

Study Procedures: If you agree to take part in this study, you will be asked to participate in an individual interview consisting of an open discussion (qualitative descriptive study) with the student researcher. During the discussion, there are no right or wrong answers. All the information gathered during the interview will be important for the study analysis. The interview will last approximately 60 minutes and will be held at a location of your preference, i.e., your home, in a public place, or in an office in the Hospital. The discussion will be recorded with an audio recorder so that the student can capture all the information relevant to the research during the interview. Once we have completed the interview, the audio tape will be transcribed and then destroyed once the study has been completed and the publication finalized. As part of the interview, we will collect demographic (e.g., age, gender, ethnicity) directly from you.

Participant Responsibilities: Participating in an interview

Confidentiality of interviews: All information concerning the confidentiality, use and disclosure of your health information will be confidential. The information directly identifying you will not be included in the transcription and will be coded and the code will be kept in a secure system with limited access.

Potential benefits: There may or may not be any direct benefits to you for participating in this study. However, it is hoped that the gained knowledge will benefit future patients.

Potential risks and discomforts: There are no foreseeable risks associated with your participation in this research study.

Confidentiality: All information (demographic, medical history, etc.) will be kept strictly confidential by identifying you by a code to which only authorized personnel will have access. The results from this study may be published, and other physicians participating in this research study may have access to your records related to this research study; however, your identity will not be revealed in the combined results. The tape recordings will be transcribed and subsequently destroyed. The transcript will however be kept for a period of 5 years to ensure that the data is accurate following publication. In order to verify the research study data, monitors from the McGill University Health Centre Research Ethics Boards may review these records. By signing this consent form, you give us permission to release information regarding your participation in this study to these individuals, and to inform your treating physician of your participation in the research

study. Your confidentiality will be protected to the extent permitted by applicable laws and regulations.

Voluntary participation: Your participation in this study is strictly voluntary. You may refuse to participate or you may discontinue your participation at any time without explanation, and without penalty or loss of benefits to which you are otherwise entitled. If you decide not to participate, or if you discontinue your participation, you will suffer no prejudice regarding medical care or your participation in any other research studies. You may refuse to answer any question you do not want to answer. The study doctor may end your participation for administrative reasons unrelated to the purpose of the study. In addition, the McGill University Health Centre Research Ethics Board may terminate the study.

Identification/compensation in the case of injury: If you should suffer any injury following your participation in the research project, you will receive the appropriate care and services for your medical condition without any charge to you. By accepting to participate in this project, you are not waiving any of your legal rights nor discharging the researchers (the granting agency, if applicable, depending on the type of research) or the institution of their civil and professional responsibility.

Compensation: You will not receive any reimbursement for participating in this study.

Funding of the research study: The research study is being funded by CREMIS and is being run by Ms. Azadeh Mostajer Haqiqi, a Master's student under the supervision of Dr. Mary-

Ellen MacDonald and Dr. Christophe Bedos. The study doctor is not being paid for including you and looking after you during your participation in this study.

Control of the ethical aspects of the project: The Ethics Research Board of the MUHC has reviewed this research project and ensures its follow-up. In addition, it will first approve any review and amendment made to the information/consent form and to the study protocol.

Quality assurance program: The MUHC implemented a Quality Assurance Program that includes active continuing review of projects (on site visits) conducted within our establishment. Therefore, it must be noted that all human subject research conducted at the MUHC or elsewhere by its staff, is subject to MUHC Routine and Directed Quality Improvement Visits.

Questions and contact Information: If you would like further information or details of this project, or if you wish to advise us of a change of address, you can contact Dr. Mary Ellen Macdonald at (514) 398-7203 ext. 089405, or Ms. Azadeh Mostajer Haqiqi, the Master's student at (514) 435-5663. If you wish to discuss your rights as a study participant with someone not directly involved in the project, we invite you to contact the Ombudsman of the McGill University Health Centre at 934-1934 ext 35655. If you believe you have been injured as a result of participating in this study, you may contact the Director of Professional Services at 934-1934 ext. 22223.

Declaration of consent

The Research Participant's Consent: I have read the contents of this consent form, and I agree to participate in this research study. I have had the opportunity to ask questions and all of my questions have been answered to my satisfaction. I have been given sufficient time to consider the above information and to seek advice if I choose to do so. I understand that I will be given a copy of this consent form. By signing this consent form, I am not giving up any of my legal rights.

Research Participant Name (printed)	Research Participant Signature	Date of consent dd mm yyyy	Time of Consent hh:mm

Translator in Case of Participant and/or Representative not fluent in French or English: I have witnessed the accurate reading and translated the information to the potential research participant or research participant's representative and he/she had the opportunity to ask questions that I have translated as well as the answers. I confirm that the individual has given consent freely and translated his consent to the person(s) who obtained the consent. Signed and dated at…

Research Participant Name (printed)	Translator Name (printed)	Relation to the Participant (no connection with study team)

Translator Signature	Date of consent dd mmm yyyy	Time of Consent hh:mm

Consent documentation of the person(s) who obtained the consent: I have explained to the participant the conditions of taking part in the study as stated in this Consent Document and I answered all her/his questions. Signed and dated at…

Name of the person who obtains the consent (printed)	Study Role of the person who obtains consent

Signature	Date of consent dd mm yyyy	Time of Consent hh:mm

11. Appendix C- Consent form in French

Information sur l'etude

Titre l'etude: Une étude visant à mieux comprendre pourquoi les parents recherchent des soins pour les problèmes dentaires non-traumatiques de leur enfant dans le service des urgences.

Le chercheur (s) en responsable de l'étude: Dre Mary Ellen Macdonald, Dr Christophe Bedos, étudiante: Azadeh Mostajer Haqiqi- Santé bucco-dentaire & Unité de la société, Faculté de médecine dentaire de l'Université McGill

Le Code d'étude du MUHC: 3086

Nom du promoteur, promoteur / investigateur ou l'organisme subventionnaire: Centre de recherche de Montréal sur les inégalités sociales et les discriminations (CREMIS)

Introduction: Vous êtes invités à prendre part à la présente étude parce que vous avez visités la salle d'urgence avec votre enfant pour des problèmes dentaires. Avant de décider d'y participer, vous devriez comprendre le contenu de ce formulaire de consentement, les risques et les avantages de prendre une décision éclairée, et poser des questions s'il ya quelque chose que vous ne comprenez pas.

S'il vous plaît lire le formulaire de consentement entièrement qui contient une explication détaillée de l'étude et de prendre votre temps pour prendre une décision. Si vous décidez de participer à cette étude, vous serez invité à signer et dater ce formulaire, et un exemplaire vous sera remis.

Contexte: Les cavités dentaires sont un problème de santé publique dans le monde et la maladie chronique la plus fréquente auprès des jeunes enfants. Malgré la disponibilité des services dentaires gratuits aux enfants de moins de 10 ans, les enfants du Québec ont 40% à 50% plus de caries que les autres enfants d'âge scolaire en Amérique du Nord. L'utilisation des services d'urgence (SU) a augmenté au cours des dernières décennies pour le traitement des problèmes dentaires non-traumatiques pour les enfants de moins de 6 ans. Les services d'urgence ne sont cependant pas un endroit optimal pour les soins dentaires d'urgence et sont de manière générale moins efficace que ceux prévus dans une clinique dentaire.

But de l'étude: Le but de cette étude est de mieux comprendre les raisons qui poussent les parents à sélectionner le service des urgences de l'hôpital pour des problèmes dentaires de leurs enfants. Environ 13 à 15 sujets participeront à la présente étude au Centre universitaire de santé McGill.

Procédures d'étude: Si vous acceptez de prendre part à cette étude, vous serez invité à participer à un entretien individuel consistant à une discussion ouverte

(étude descriptive qualitative) avec l'étudiant chercheur. Au cours de la discussion, il n'y a pas de bonnes ou mauvaises réponses. Toutes les informations recueillies pendant l'entrevue seront importantes pour l'analyse de l'étude. L'entrevue durera environ 60 minutes et aura lieu dans un endroit de votre choix, soit à votre domicile, dans un lieu public ou dans un bureau à l'Hôpital de Montréal pour enfants. La discussion sera enregistrée avec un enregistreur audio afin que l'étudiant puisse capter toutes les informations pertinentes à la recherche au cours de l'entrevue. Une fois que nous ayons terminé l'entrevue, l'enregistrement audio numérique sera transcrit puis détruit une fois que l'étude soit terminée et la publication finalisée. Dans le cadre de l'entrevue, nous recueillerons démographiquement (l'âge, le sexe, l'origine ethnique) venant directement de vous.

Responsabilités des participants: Participer à une entrevue.

La confidentialité des entretiens: Toutes les informations concernant la confidentialité, l'utilisation et la divulgation de vos informations de santé seront confidentielles. Les informations qui vous identifient directement ne seront pas incluse dans la transcription et seront codées et le code sera conservé dans un système sécuritaire ayant un accès limité.

Confidentialité: Toutes les informations (démographiques, les antécédents médicaux, etc.) resteront strictement confidentielles en vous identifiant par un

code dont seul le personnel autorisé aura accès. Les résultats de cette étude peuvent être publiés, et d'autres médecins participant à cette étude peuvent avoir accès à vos dossiers liés à cette étude, mais votre identité ne sera pas révélée dans les résultats combinés. Les enregistrements audio numériques seront transcrits et détruits par la suite. La transcription sera cependant conservée pendant une période de 5 ans afin de s'assurer que les données sont exactes pour publication suivante. Afin de vérifier les données de l'étude de recherche, les moniteurs du Centre universitaire de santé McGill – du Comité d'Éthique peut consulter ces documents. En signant le présent formulaire de consentement, vous nous donnez la permission de divulguer des renseignements concernant votre participation à cette étude pour ces personnes, et d'en informer votre médecin traitant de votre participation à l'étude. Votre confidentialité sera protégée dans la mesure permise par les lois et règlements applicables.

Participation volontaire: Votre participation à cette étude est strictement volontaire. Vous pouvez refuser de participer ou vous pouvez interrompre votre participation en tout temps sans explication et sans pénalité ou perte aux prestations auxquelles vous avez droit autrement. Si vous décidez ne pas y participer, ou si vous cessez votre participation, ne vous souffrirez pas de préjudice en ce qui concerne les soins médicaux ou de votre participation dans d'autres études. Vous pouvez refuser de répondre à toute question que vous ne voulez pas

répondre. Le médecin de l'étude peut mettre fin à votre participation pour des raisons administratives sans rapport avec l'objectif de l'étude. En outre, le Centre du Comité d'Éthique de l'Université McGill de recherche en santé, peut mettre fin à l'étude.

Identification / compensation en cas de blessure: Si vous éprouvez des blessures suite à votre participation au projet de recherche, vous recevrez les soins et les services appropriés concernant votre condition médicale sans aucun frais de votre part. En acceptant de participer à ce projet, vous ne renoncez à aucun de vos droits ni d'exempter. les chercheurs (l'organisme subventionnaire, le cas échéant, en fonction du type de recherche) ou de l'établissement de leur responsabilité civile et professionnelle.

Compensation: Vous ne recevrez aucun remboursement pour participer à cette étude.

Financement de l'étude de recherché: L'étude de recherche est financée par CREMIS et est dirigé par Mme Azadeh Mostajer Haqiqi, étudiante en maîtrise sous la direction du Dr Mary Ellen Macdonald et le Dr Christophe Bedos. Le médecin de l'étude n'est pas rémunéré pour veiller sur vous pendant votre participation à cette étude.

Contrôle des aspects éthiques du projet: Le Conseil d'éthique de la recherche du MUCH a révisé ce projet de recherche et assure son suivi. En outre, il devra d'abord approuver toutes révisions et amendements apportés à la fiche de renseignements/consentement et au protocole de l'étude.

Programme d'assurance qualité: Le MUCH a mis en place un programme d'assurance de la qualité qui comprend l'examen actif continu des projets (visites sur place) mené au sein de notre établissement. Par conséquent, il convient de noter que toutes les recherches impliquant des sujets humains au MUCH ou ailleurs par son personnel, sont soumis à la routine du MUHC et des visites d'amélioration réalisées.

Questions et informations sur la communication: Si vous souhaitez plus d'informations ou des précisions sur ce projet, ou si vous souhaitez nous informer d'un changement d'adresse, vous pouvez communiquer avec le Dr Mary Ellen Macdonald au (514) 398-7203 poste 089405 ou Mme Azadeh Mostajer Haqiqi, étudiante en maîtrise, au (514) 435-5663.

Si vous souhaitez discuter de vos droits en tant que participant à l'étude avec une personne qui n'est pas directement impliquée dans le projet, nous vous invitons à communiquer avec l'ombudsman du Centre universitaire de santé McGill au 934-1934, poste 35655. Si vous croyez avoir subi des blessures à la suite de la

participation à cette étude, vous pouvez communiquer avec le directeur des services professionnels au 934-1934, poste 22223.

Le consentement du participant aux recherches: J'ai lu le contenu de ce formulaire de consentement, et je suis d'accord pour participer à cette étude. J'ai eu l'opportunité de poser des questions et toutes mes questions ont été répondues à ma satisfaction. J'ai reçu suffisamment de temps pour examiner les renseignements ci-dessus et de demander conseil si je choisis de le faire. Je comprends que je recevrai une copie de ce formulaire de consentement En signant ce formulaire de consentement, et je ne renonce à aucun de mes droits légaux.

Nom du participant pour la recherche (Imprimé)	Participant pour la recherche signature	Date du consentement mmm jj aaaa	Moment du consentement hh: mm

DÉCLARATION DE LA DOCUMENTATION DE CONSENTEMENT

Traducteur dans le cas du participant et / ou de son représentant et qui ne parlent pas couramment en français ou en Anglais: J'ai assisté à la lecture précise et traduit l'information au participant potentiel à la recherche ou son représentant participant à la recherche et il / elle a eu l'occasion de poser des questions que j'ai traduits, ainsi que les

réponses. Je confirme que la personne a donné son consentement librement et traduit son consentement à la personne (s) qui a obtenu le consentement. Signé et daté le…

Signature de la personne (s) qui a obtenu le consentement: J'ai expliqué au participant les conditions de participation à l'étude comme indiqué dans le présent document de consentement et j'ai répondu à toutes ses / ses questions. Signé et daté le…

Nom de la personne qui obtient le consentement (imprimé)	Rôle de l'étude de la personne qui obtient le consentement

Signature	Date du consentement jj mm aaaa	Moment du consentement hh: mm

12. Appendix D - Study information sheet

Principal Investigator: Dr. Mary Ellen Macdonald

Student Principal Investigator: Azadeh Mostajer Haqiqi

Faculty Supervisor: Dr. Christophe Bedos

I am Azadeh Mostajer Haqiqi, graduate student at Faculty of Dentistry, McGill University; I would like to invite you to participate in a research project.
The purpose of this research project is to better understand why parents bring their children to emergency department for dental problems. Should you choose to participate, your participation includes an interview to discuss about your experience and the circumstances lead you to go to the Emergency Department for your child. The meeting will take place at a mutually agreed upon time and place, and should last about 60 minutes. Please be assured that all the information collected about you during the study will remain confidential.
If you have any questions, please feel free to contact me (see below for contact information).

Thank you,
Azadeh Mostajer Haqiqi, Masters Student
Oral Health & Society Unit,
Faculty of Dentistry, McGill University
3550 University Ave
Montréal, Qc, H3A 2A7
E-mail: azadeh.haqiqi@mail.mcgill.ca

This study has been reviewed and received ethics clearance through McGill university health centres Research Ethics Board.