Child Management in Clinical Dentistry

Ashwin Jawdekar

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CHILD MANAGEMENT IN CLINICAL DENTISTRY

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To

All the children whom I have treated and shall be treating...

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Preface

Dentistry for children has been a satisfying, rewarding and exciting profession for me! The satisfaction comes to me when I see a child getting benefited from the treatment, the rewards are mainly financial and the excitement is entirely because of the child management skills that I have acquired and am still eager to learn!

Often, I hear my colleagues in dentistry talking negatively about pediatric dentistry. Many of them feel that treating children is difficult and time-consuming. Often, I am asked a question when I meet them, or whenever I interact with a group of dentists: *How do you manage children for their dental treatments?* This question is not an easy one to answer! The reason being that it cannot be answered in a sentence or in a minute!

Dentistry now has many advances that have been learnt and practised by most general dentists reasonably well. Endodontics, for example, has been the mainstay of most clinical practices due to a fact that most dentists are now assured of a certain predictability of endodontic success and are able to impart the confidence to their patients who opt for endodontic treatments. Why is endodontics successful and predictable? There exist a few rules, 'ABC's of its success such as: adequate anesthesia, proper case selection, good access preparation, thorough cleaning and shaping, apical seal, and so on. As most dentists are now well versed with these ABCs of endodontics, the treatments are successful and yield predictable outcomes. Similarly, the 'Child Management in Dentistry' has its own set of rules (ABCs) that have to be studied and implemented for attaining similar success. What are these rules?

I have learnt these rules (ABCs) observing children while treating them, reading a few books and articles of eminent Pediatric Dentists from the Western world, and through interaction with my friends and seniors who are pediatric dentists.

Dental caries and its complications in children continue to be a serious health problem all over the world. The onus of treating most of them lies upon the general dentists who, therefore, need to be adept at child management in dentistry. The dentists, unfortunately, may not get enough knowledge and experience of pediatric dentistry during their training (graduation). Also, the use of sedation and general anesthesia for dental treatments is neither taught nor practiced much in many parts of the world for various reasons. As a result, the children, to a great extent, are deprived of comprehensive, quality dental care.

I have been practicing dentistry exclusively for children at my clinic Little Smiles (Dental Care Center for Children) in Thane (near Mumbai in Western India). My clinical practice involves treating children non-pharmacologically (between ages 0-14 years) for their dental needs. Over the past seven years in practice, I have been implementing many skills learnt from different sources and I have, myself developed some methods and protocols for managing children requiring dental care. I feel happy and proud to see that most of the child management techniques that I practice work well for me as well as for those with whom I have shared them.

I have written several articles and delivered lectures on the practical aspects of child management in dentistry based on my personal experiences, and received a good feedback from dental surgeons and pedodontists all over India. (Most of the articles have appeared in the national bulletin of Indian Dental Association—'IDA Times'.) This work is a compilation of these articles with a lot of additions and editing to make a concise book – *Child Management in Clinical Dentistry*.

This book provides a reader practical information related to various topics like the fundamentals of child management, assessment of child behavior, non-pharmacological behavior modification methods, controlling disruptive child behavior, designing child-friendly dental clinics as well as dealing with difficult situations in day-to-day practice such as treating children having hypersensitive gagging reflex, considerations for 'Special Care Needs', pediatric dental practice management, etc. in a step-by-step manner. The book, however, omits a few topics such as use of sedation and general anesthesia for dental treatments of children since I feel that it is inappropriate to include the same in 'Clinical Dentistry' as these procedures have to be necessarily performed in hospitals due to legal and safety concerns. This book aims at helping clinicians as well as students of dentistry acquire the skill of decision-making and problem-solving in relation to child management in clinical dentistry and can be regarded as a "practitioners' handbook" on Child Management in Dentistry.

Ashwin Jawdekar

Acknowledgments

The process of writing this book has really been enjoyable for me and I have to acknowledge all those who have been my companions in this journey. The contributors Dr MS Muthu, Dr Bhushan Pustake, Dr Amit Vanka, Dr Amar Katre, and Dr Sharat Chandra Pani have expressed their own views through their writing. Child management practices in dentistry can vary from person to person, place to place and situation to situation. Thus, on topics such as how to administer local anesthesia to a child, whether parents should remain present with children during their dental visits; the reader is presented with different approaches of dealing with these issues.

The staff of M/s Jaypee Brothers Medical Publishers (P) Ltd. has been very courteous and extremely professional in the making of this book especially Shri Jitendar P Vij, CMD, and his team of publishing professionals, in particulars, Mr Tarun Duneja (Director–Publishing), Ms Chetna Malhotra (Sr Manager: Business Development), Mr KK Raman (Production Manager), Ms Seema, Mr Nitin Maheshwari, Mr SK Choudhary, Mr Gopal Sharma and other staff of Delhi office and Mr Ramesh and other staff of Mumbai office.

Dr Jimmy Pinkham (Emeritus Professor of Pediatric Dentistry, University of Iowa, US) has written 'INTRODUCTION' to this book. A pat on my back by none other than the FATHER OF PEDIATRIC DENTISTRY means a world of happiness to me! I humbly accept his remarks on my work as blessings.

The entire book has been carefully read and evaluated by two very close friends Dr Sreenivasan V (who also taught me Oral Medicine and Radiology during my graduation) and Dr Rahul Rao (an Endodontist and Conservative Dentist practicing in Thane).

I am thankful to Dr SG Damle (my guide), for working as a student under him, immensely helped me writing this book. I am also thankful to my teachers of post graduation Dr Sunanda Sujan, Dr Shobha Deshpande, Dr Amita Tiku and Dr Adesh Kakade for inspiring me to practice dentistry exclusively for children through their training. I have been interacting with my seniors, PG colleagues and other Pedodontists frequently over the past eight years or so. The interactions with Dr Harsh Vyas, Dr Meenakshi Kher, Dr Uma Dixit (my UG teacher), Dr Asha Singh (my UG teacher as well), Dr Rupali Kale, Dr Sanchali Kapadia, Dr Prashant Bondarde, Dr Bhavsar, Dr Steven Rodrigues, Dr Vikas Bendgude, Dr Ujwal Kontham, Dr Vishal Arya, Dr Madhuri Joshi, Dr Tejashri Wadke, Dr Ritesh Kalaskar, Dr Mala Jagtiani, Dr Thejokrishna, Dr Shrirang Sevekar, Dr Subhadra, Dr Ashish Jain, Dr Sachin Gunda, Dr Rahul Choughule, etc. have been inspiring, too!

I am extremely thankful to Indian Dental Association Secretary and Editor of IDA Times, Dr Ashok Dhoble, for encouraging me to write articles in IDA Times, and the Maharashtra State Branch President Dr Pramod Gurav and Secretary Dr Jayant Deshpande for making IDA a great platform for different academic activities.

I owe a lot to all the dentists with whom I worked or have been working as a Pediatric Dentist during the past eight years of practice: Dr Pravin Kshirsagar, Dr Shrikant Hegde, Dr Anish Naware, Dr Subodh Phadke, Dr Prakash Tekwani, Dr Priti Mehta, Dr Navin Kulkarni, Dr Nitin Bhat, Dr Sonali Bhat, Dr Ashok Parekh, Dr Ashok Shah, Dr Hemant More, Dr Kiran Patil, Dr Sanjay Mali, Dr Jyoti Jagasia, late Dr Paresh Dalal for keeping faith me and the science of Child Management in Dentistry.

I have been lucky to have a team of people that not only helps me practice dentistry for children but also actively contributes to its success. The doctors: Dr Sheetal Nipane, Dr Chirag Bagadia (presently working with me), and those who worked in the past (Dr Vinod Kudupudi, Dr Hemant Yadav, Dr Vishal Karkamkar and Dr Shweta Kulkarni) and the present auxiliary staff Sudhakar Takalkar, Pallavi Pawar, Prachi Champanerkar, Ashwini Dalvi have been contributing to my success in practice.

I express my gratitude to the Director Dr Sudhir Kadam and Dean Dr Poonja of MGM Dental College and Hospital, and the staff of the Department of Pediatric Dentistry Dr Sonal Patil, Dr Munita Naik, Dr Aarju Deshmukh, Dental Hygienist Sonali and the sister-in-charge Alice Vergis for helping me in all my activities.

My family has been looking forward to the release of this book. My wife Dr Prachi (a dental surgeon by profession), Ovee and Ukti (daughters) have appeared in many photographs of the book! My parents, Dr Muralidhar Jawdekar and Mrs Lalita Jawdekar, my elder brother Yogendra (Pediatrician) and his wife Savita (Surgeon), my brothers Abhinav and Kumar and their wives (Pradnya and Vishakha respectively), my in-laws Mr Sadanad Patkar and Mrs Sandhya Patkar, my brother-in-law Dr Vivek (Onchourgeon) and his wife Dr Kanchan (Anesthesiologist) – all have been responsible for the academic environment that we share in our family.

My dear friends Dr Kedar Bakshi, Dr Prasad Nayak, and Dr Bhushan Pustake have always kept me motivated for all my ventures. My neighbors Mr Parag Amin, Mrs Manjusha Amin and their son Hrishikesh and daughter Rama have all volunteered for the cause of this book by featuring in the photographs. Mr Shailesh Salvi has designed an attractive cover-page. Dr Chirag and Dr Radhika have helped correcting the final proof.

Lastly, I must thank all the children whom I have come across as a Pediatric Dentist, and their parents with whom I have interacted during all these years of practice. This book is an outcome of the trust and confidence they have shown in me while practicing dentistry for children. I sincerely dedicate this book to the children whom I have treated and shall be treating.

Contents

Introduction

Dear Dr Jawdekar,

I had the opportunity to read your manuscripts again this afternoon. I have reviewed them critically... which means I wanted to find omissions, controversies, or other problems that might be useful to you as you prepare for publication of your book. I am delighted to respond that I enjoyed your writings, endorse your basic assumptions and assertions, and am certain that your publication will be well received by other critical eyes. Congratulations on your well done efforts. I share the following only for your consideration for I believe you have very adequately covered this complex dentist/child patient interface and "linguistic dance."

1. It may be useful to your students for you to emphasize how quickly children change and develop with age. Fears, vocabulary, communication skills and strategies, regard for parental protection or even observation, etc. change fast and so must the approaches of the dental team. Actually some 3 year olds who were determined to sabotage their dental appointment (NO MATTER WHAT!) may at 4 years behave simply because other children are appointed at the same time and they wish to show their best effort. (It is not a bad strategy to appoint a likely misbehaving child at the same time as reliably good children. This can also be advantageous to parent management if they see such well behaved children and their relaxed parents.)
2. I completely endorse your advice for young practitioners to visit offices where proficient practice of dentistry for children can be observed. I would coach such visiting dentists to ask for visits when behavior management of misbehaving children is going to occur and to embrace the following facts: initially in an appointment misbehavior is not dependent on the dentist... it is the child's with his parental, developmental, and social histories; there is no perfect child's dentist, i.e. a dentist's sex, age, parental status, facial appearance (other than a smile), or any other variable are predictors of success in this field of dentistry... The important factors are desire, tenacity (Don't give up), reasonability and resiliency (Not every encounter is going to be even close to what was hoped for), education in this domain (Read your book), and experience. Bundle all of this into an enthusiasm to help children and success becomes a promise and not a hope.

Sir, you have done a good job and the children of India will benefit from your enthusiasm and desire to help your profession.

Sincerely,

Jimmy Pinkham
Emeritus Professor of Pediatric Dentistry
University of Iowa, USA

1

CHAPTER

At the Beginning....

Pediatric dentistry is an age–specific specialty that deals with the dental care needs of children. It is probably the only specialization in dentistry that is age defined and not specific to any treatment modality. Unlike restorative dentistry, endodontics, periodontology, oral and maxillofacial surgery, orthodontics, etc., pediatric dentistry encompasses a variety of procedures, at times touching these other fields of dentistry, too. The main job of a dentist dealing with children is to identify the treatment need and devise a suitable treatment plan keeping in mind the child's age. The treatment to be delivered to the child must be acceptable to the child. Therefore, the dentist must possess child management skills to be in a position to do the needful.

All pediatric dentists even today do not practice dentistry exclusively for children. But a few who do, believe that they have the necessary knowledge, skill of and love for the subject they had been taught. Many general dentists are willing to practice dentistry for children but encounter difficulties due to lack of practical training on key areas in 'child management' in dentistry.

If all pediatric dentists 'believe' in the art and science of 'child management' in dentistry, most dental surgeons would 'believe' in the same. This would also create belief (trust) in the people's minds that children can be and have to be dealt with a different approach for their early dental care. The practice of dentistry for children would then be accepted better by people and respected more in the society.

A dental surgeon willing to practice dentistry for children must understand following considerations of child management in dentistry:

1. To desire, decide and learn the practice of dentistry for children is a great step in terms of patient care in dentistry.
2. The dentist willing to practice dentistry for children should possess good skills of general dentistry including restorative procedures, extractions, endodontic treatment and above all diagnosis and treatment planning.
3. He/she must have dealt with children to an extent during his graduation or during initial years of association with senior practitioners to understand what difficulties can be encountered while dealing with children.

4. To learn the art and science of child management in dentistry, he/she must either observe the work of a pediatric dentist or a dentist with reasonable skills of practicing dentistry for children.
5. The most difficult hurdle to overcome while beginning to practice dentistry for children is 'to believe' that child management principles work! Those who do, accept that like most sciences, in spite of limitations, 'child management' can be practiced with certain predictability.
6. The dental surgeon must develop a team that he/she heads, for practicing dentistry for children. The team must continuously acquire knowledge and learn from experience while dealing with children. It is also important to decide policies in practice pertaining to specific child management techniques or aspects (for example: whether parent/s should be present in the operatory during the dental treatment of a child; whether a technique such as Hand-Over-Mouth is to be used).
7. Most children beyond a certain age are potentially cooperative for most dental procedures. They cannot be just classified as 'cooperative' or 'uncooperative'.
8. The 'child management methods' apply to all children- cooperative as well as initially uncooperative. It is therefore mandatory to learn them for successful management of most children.
9. Children account for approximately one-third of the population; thus the onus of practicing dentistry for children remains on general dental surgeons practicing dentistry for children.
10. Practicing dentistry for children is a rewarding, satisfying and challenging profession.
11. Children are not small adults. They behave and relate to surroundings differently. They have their preferences, likes and dislikes. A dentist for children has to have an insight into their demands.
12. There are certain rules/ABCs of any dental practice; for example: achievement of adequate anesthesia is a rule prior to an extraction; a correct instrumentation technique, working length determination, use of proper irrigation, etc. are the ABCs of endodontic success. The success story of practicing dentistry for children begins with good child management.
13. It is important to have patience and sustained interest for success in practice of dentistry for children.

The frequently encountered but *not* commonly asked questions regarding 'Child Management in Dentistry':

What is 'Child Management in Dentistry'?

'Child management in dentistry' means:

- Guiding children through their dental experiences
- Instilling in children a positive attitude towards dentistry
- Controlling and modifying child behavior effectively while carrying out treatments for the children in an efficient and comfortable manner.

Is 'Child Management in Dentistry' same as 'Behavior Management of Children in Relation to Dental Care'?

Child management in dentistry is a broader concept than the behavior management. Behavior management is one aspect of child management. The other aspects such as practice management, designing a child-friendly dental clinic and a system of functioning (with related aspects such as time management), etc. are included in the concept of 'child management'.

Child management in dentistry is a skill to be acquired by a clinical practitioner of dentistry. It is both an art and science.

Can only 'Pediatric Dentists' Learn and Practice 'Child Management in Dentistry'?

Children account for about one third of a population. There will always remain a scarcity of pediatric dentists catering to such a large population. Although pediatric dentists are trained in child management as a part of their curriculum, dentists with a keen interest and thorough efforts can train themselves in this area. In India, the onus of child management in dentistry lies with dentists practicing general dentistry.

Are Children 'Difficult' to Manage?

Children are not small adults! Dentistry for children is not '*difficult* but is a bit *different'* from what is practiced for adults!

Why 'Child Management in Dentistry'?

It opens doors to a new field in dentistry that has not been ventured by many a general dentist till date. In the era of competitive dentistry and struggle, acquisition of knowledge of child management in dentistry can prove a value addition to the services offered by a clinical practitioner of dentistry. Children are 'keys to future' and are the best practice builders!

How to Learn Child Management in Dentistry?

- Observe children
- Interact with children
- Read books on behavior management, child psychology, practical methods to deal with children
- Share clinical experiences with people practicing child management in dentistry, observe clinical work of pediatric dentists/dentists adept in child management
- Learn continuously *from children* while working with them
- Be positive in approach: believe it works!

WHAT IS THE PURPOSE OF THIS BOOK?

This book is aimed at providing readers experience-based information related to child management in dentistry that has practical application. At any stage while reading, if the reader feels like applying the techniques in actual practice, and the same results in successful outcome of the treatment, the objective of the book is fulfilled.

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CHAPTER

Are Children Difficult Dental Patients?

Children are perceived as difficult dental patients by most dentists. Even the parents of children as dental patients generally feel that it would be difficult for their children to undergo dental care. Dentists usually give following reasons to call children 'difficult' dental patients:

- Children are not readily cooperative
- Children cry during dental treatments
- Children do not always accept instructions and follow orders
- Children may consume a lot of time on dental chair (more than anticipated)
- Children are unpredictable
- Children pollute the environment of the dental clinic with noise, etc.

I always presume that the dentistry for children is not more 'difficult' than dentistry for adults but certainly is a bit 'different' from dentistry for adults! (Figure 2.1) The following table summarizes a few such 'differences:

Figure 2.1: Dentistry for children is different from that is for adults

Dentistry for Children	*Dentistry for Adults*
A child may/may not have knowledge of dentistry	Most adults seem to have some awareness of dentistry
A child may not be willing to be seen by a dentist; visit a 'clinic'	Most adults willingly visit a dental clinic
The dental team has to communicate with the child as well as the parents (1:2 communication)	1:1 communication between the dentist and the adult
The dental team takes the initiative	The adult patient takes the initiative
The goal is to begin well, setting small goals to achieve first, the end is kept in mind but is not achievable in the early steps	The goal is to begin as well as end well with a definite end in sight
Initial visits – more preparatory than productive	All visits productive
Simple tasks have to be performed differently: administration of LA, retraction of tongue, isolation, holding suction-tip – all require a difference in the approach of the dental team	Most procedures are routine and standardized
The dentist's relation to the child is more like a teacher, guardian, friend	The dentist's relation to the patient is more professional and like a service provider
Needs removal of fear and developing trust	Needs understanding the patient demands
Interaction more emotional	Interaction healthy professional
The dentist has to be imaginative, spontaneous and flexible in approach	The dentist has to be systematic, rational and a bit straight forward in approach
The child seeks explanations for pain, actions, instruments, attire of the dentist but not related to treatment modalities	An adult seeks explanations for treatment modalities, fees, sterilization protocol, etc.
A child can be 'conditioned' i.e. once the 'behavior' is modified, complies with most demands of the dentist without questioning further	An adult remains his/her own self, even though compliant
A child accepts dental environment better if praised and offered certain privileges like toys, gifts, watching cartoon films	An adult accepts dentistry out of need
A child wants to maintain friendship, takes pride in performing, exhibiting talents to attract attention	An adult wants to be on good terms with the dentist
A child starts dominating and demanding if given undue importance and freedom	An adult response is usually matured
A child demands continuous attention and likes to remain involved either in conversation or an activity such as playing or watching a cartoon serial	An adult usually takes care of himself/herself, engages in his/her own thoughts
A child likes to please those who please him/her	The relation of an adult patient and a dentist is just like any two adults who know, understand and accept each other out of mutual requirement

Not only the dentists but also the parents of the children as dental patients, are often anxious regarding the dental care for their little ones. Parents often express ignorance about their young child's dental conditions requiring complicated treatments. At times, treatments are sought only after the child gets

pain that does not go away even after consuming medicines. Also, many parents are unaware that prolong bottle feeding and/ or prolong, on-demand breast feeding continued beyond weaning age results in severe destruction of teeth. It is not uncommon to hear from parents statements like "we never knew children's teeth require treatments"!

The ignorance regarding the need of early care as well as the anxiety related to dental procedures are the contributing factors for the perception of the parents that children rarely require dental care.

Often people have preconceived ideas regarding dentistry. Also, they are not always aware of scientific facts and rely, many a time, on information provided to them by their relatives, friends or gathered by them during their previous visits to dentists (and of course, from internet)! It is also not unusual to hear from some fellow-colleagues (medical professionals including surprisingly some dental surgeons, family physicians and pediatricians) that milk teeth would eventually fall off and not necessarily require treatment. Such misinformation further confuses them.

Some information and experience-based knowledge could be inadequate and irrelevant; for example, a root canal treatment may be remembered by a parent as a multi-visit treatment since he/she underwent it a few years ago and thus he/she may not be aware of the fact that the same can be completed in most child patients in a single visit, or in two. The same may hold true for a crown as doing a stainless steel crown in a child is a single visit job, much simpler and less time-consuming as compared to doing a cast metal or a PFM crown in an adult. After attaining necessary skills to carry out certain pediatric dental procedures like pulp therapy, stainless steel crown for instance, one realizes that the procedures *per se* are not really difficult. The difficult (rather the 'different') aspect is in carrying out the same in 'children' who are behaviorally different.

The parents of children requiring dental care have to be made aware of the fact that the dentist who is willing to take up the responsibility of comprehensive dental care of a child has acquired the necessary training in Behavioral Pedodontics and developed skill for child management in dentistry. The approach of the dental team catering to children would be *different* from that practiced for adults. The dental care for children can be an enjoyable and satisfying experience for everyone: the child, the parent and the dentist who understand this '*difference*'.

3

CHAPTER

Fundamentals of Child Management in Dentistry

The success of dental care for children depends on the child management skills of the dentist operator and his/her team. The team includes the dentists as well as the receptionist and the auxiliary staff. The dental team must learn various skills for communication with children, counseling of parents, performing treatment procedures, time management, etc. so that the child's dental experience is pleasant one. This text discusses the basics of child management in dentistry that are to be kept in mind while dealing with children as dental patients.

The fundamentals of child management in dentistry are:

1. Preparedness to deal with children
2. Knowing children better
3. Understanding parents of children requiring dental treatments
4. Protocol-making
5. Positive, patient and flexible approach
6. Active learning and learning through experience
7. Striking a balance

PREPAREDNESS TO DEAL WITH CHILDREN

A crying child often puts an average dentist ill at ease. The crying of children just irritates him/her. He/she thus feels embarrassed, at times even frustrated due to the fact that he/she is either unable to do justice to his/her work or does not enjoy the overall experience.

Often, such dentists consider children just as other patients who come, sit on the dental chairs, follow instructions, get treatments done and leave the office! However, the fundamental difference in the approach of a 'pediatric dentist' is in taking active interest in getting children to do all that or guiding them well to undergo the dental experience! It does need a lot of mental preparation to deal with children effectively and efficiently.

Children cry, move, run around, shout, at times vomit or even urinate in dental offices, in spite of us 'managing' them with our knowledge and expertise in Behavioral Pedodontics. Children shall

never behave like adults! One must like them just as they are and deal with them. *Accepting children as they are and getting prepared for their dental care is the first fundamental of child management in dentistry.*

KNOWING CHILDREN BETTER

Once we accept them as they are, it is easier for us to get a little closer look into their minds! We must know what they may like/dislike in the dental office. The table here summarizes the usual likes/dislikes of a child, mainly in relation to dentistry (Figures 3.1 to 3.6).

Children like	*Children may not like*
A playful environment	Clinic, hospital environment
Fresh, bright and bold colors like red, yellow, orange	Wooden, tiled walls; Dull grey, black, brown colors
Open spaces to move around	Restricted seating position
Being received with smile on the faces of people who meet them, being called by names	Being unnoticed, ignored or not greeted
Touch, feel and play with objects	Asked not to touch here and there
Humor, compliments, praise, positive comparisons	Criticism, verbal ridicule, negative comparisons
Being termed as 'grown-up's (big boys/girls)	Being termed 'small', immature, young
Shake-hands, a pat on the back, receiving and giving claps	Too little or too much of physical closeness
Eye-to-eye contact while talking	Indirect talks
Cartoon films, magic shows, advertisements on TV	News, serials, films, other TV-programmes
Talking about games, friends, school, TV-programmes, movies, etc. Listening to stories, answering puzzles	Talking only related to dentistry
'I' message type communications such as "I like children who listen to me carefully and follow my instructions"; "I like children who do not move hands while I'm working"	Communication styles such as "why don't you stop crying and listen to me" or "don't move your hands when I'm working"
To occupy and be in a 'comfort zone'; e.g. a comfortable child engages himself in watching cartoon film while the dentist is treating him/her (at the same time following all instructions like keeping mouth open, rinsing with water when told to do so, etc.)	Too many instructions, orders, suggestions; too many distractions
To win prizes, rewards, 'stars' (for good behavior)	Being actually punished or verbally ridiculed (*criticize the behavior and not the person*)
Friendly gestures, simple attire of doctor/staff	Staff attire-Apron, mask, gloves, caps, eye-shields
Dental chair moving up/down, ease of getting in and out of it, spittoon, tumbler operations, light buttons	Dental chair moving backward, too bright light, too many arms (of instrument tray, X-ray), too many noises (compressor, air-rotor drill, ultrasonic cleaner, suction)

Contd...

Contd...

Instrument tray with minimum things on it; only 1-2 mouth mirrors for initial examination	Tray loaded with sharp instruments- needles, RC-instruments, burs, scaler tips, being shown a needle while injecting
Simple words-tooth bug, germs, paste-medicine, shower to clean, white paint that fills a tooth, light torch to shine teeth white	Words like pain, blood, injections, drill, pulling out teeth
Attention; quick and graceful approach to work	Too long appointments, too long waiting time, made to sit for long without interaction
Honest, clear, simple talks; for example, being told that to clean the tooth, you need to put medicine near it to put it to sleep. It may pain only as much as an ant/mosquito-bite	Being cheated; for example, being told that he/she would not get pain at all (before receiving injection) and then actually experiencing it at the time of being injected!

Figure 3.1: A typical dental clinic waiting area
(Photo: Dr Prachi Jawdekar's Dental Care Centre)

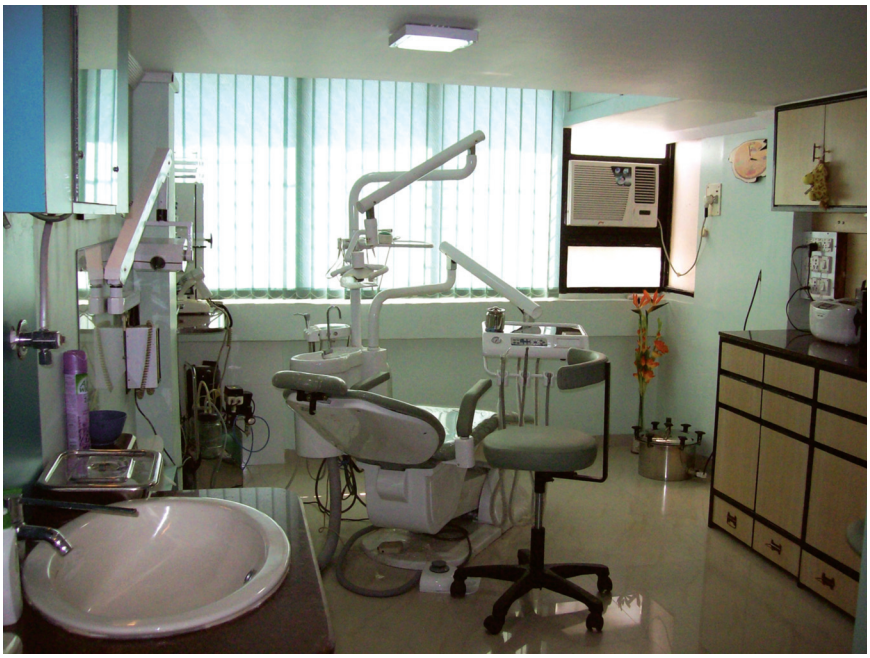

Figure 3.2: A typical dental clinic operatory (Photo: Dr Prachi Jawdekar's Dental Care Centre)

Figure 3.3: A child-friendly waiting area (Photo: Dr MS Muthu's clinic - Pedo Planet)

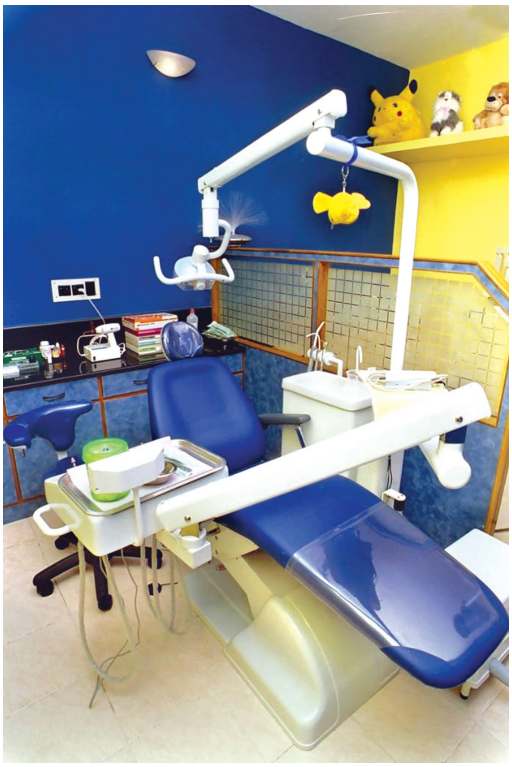

Figure 3.4: A child-friendly dental operatory (Photo: Dr MS Muthu's clinic - Pedo Planet)

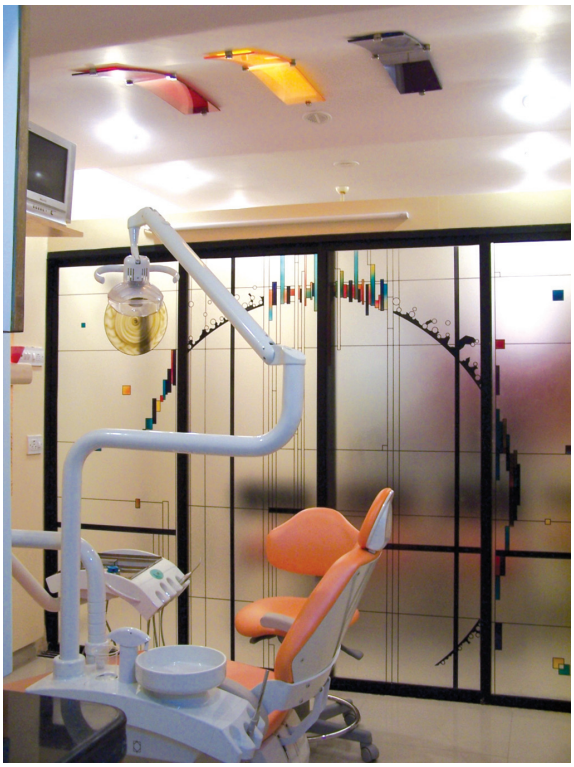

Figure 3.5: Child friendliness with a TV set in front of chair, multi-colored lights on roof (Photo: Dr Ashwin Jawdekar's clinic - Little Smiles)

Figure 3.6: Colorful and mint flavored gloves add to child-friendliness

UNDERSTANDING PARENTS OF CHILDREN REQUIRING DENTAL TREATMENTS

Often, parents meet dentists with specific complaints regarding their teeth. Dentists as trained professionals do their best to satisfy them regarding the same; however, some questions (as mentioned below) may be difficult to answer and time consuming, and may demand more communication skills on the dentist's part than professional expertise! A few of these are mentioned below.

Parents

- "My child eats a lot of chocolates… and he has a lot of cavities, too. Doctor, please tell him to stop chocolates."
- "We don't give him chocolates and sweets. He still has a lot of cavities."
- "His teeth erupted decayed and ever since his condition has been deteriorating."
- "He wants a milk bottle every night. He does not eat much at night and hence feels hungry at mid-night."
- "He eats his meals for two hours. I have to feed him for two hours."
- "He does not like milk. Doc, tell him to have milk."
- "We brush his teeth, we never give him chocolates; he still has so many decayed teeth!"
- "We never had any dental problems... Why his teeth are so bad?."
- "We showed him to a doctor earlier. He said those are milk teeth and would fall later."
- "We are both working parents. The child is with grand parents/ in a crèche. How do we control his habits?"
- "Doc, I'm ready to stop his bottle. Nobody at home is..."
  (Regarding the treatment plan)
- "Isn't the treatment too much?"
- "Doc, I don't want my child to go through a root canal..."
- "What is root canal? Is it painful? Does it affect new teeth? Do you cut the nerve of the tooth?"
- "How would the tooth grow with a cap on it?"
- "What do you fill in teeth?"
- "How long does a filling last?"
- "Why the treatments are so expensive?"

The dentists must learn to address these questions and lead such discussions effectively as the ultimate satisfaction of parents may depend on this. It is an acquired skill to be patient while listening actively and interact sufficiently with parents on such issues. Some of the discussions can get boring, do not lead anywhere and are unproductive.

We should understand the apprehensions of the parents and not disregard their concerns. Only 'convinced' parents can prepare their children appropriately for the dental treatment. As a matter of fact, it is important to team up with parents prior to actually beginning with the dental treatment of a child. Furthermore, by questioning us, they actually allow us to get an insight into their style of 'parenting'.

Most parents have a normal rational approach towards understanding the dental needs and related aspects. However, some parents are not easily satisfied with our explanations and demand more answers to some of their queries. At times, some parents feel that some treatments are unnecessarily recommended

or over-recommended to them (like RCTs, crowns for example)! Some parents try to dictate terms by insisting on what we should be doing instead of following what the dentist tells them to do.

Parental attitudes reflect their expectations from us, their level of motivation regarding dental care and their approach towards various aspects of care. It is important to learn presentation skills to devise a treatment plan with a preventive regime while satisfying their concerns. Usually, after a routine of history taking and a brief clinical examination of a child with early childhood caries, an actual discussion with parents may start. A part of it may be done in absence of the child (while allowing the child to play in the waiting area). The discussion is usually complete after all necessary investigations (e.g. radiographs) and other related information (e.g. the child's general health status) are available.

An example of presentation to parents is given below:

Dentist

"I wish to present to you the dental needs of your child. I would like to discuss three main issues with you-what treatment is required for your child, what preventive care is necessary for him/her, and how to render the treatment as well as some preventive care to him/her.

Children often have teeth problems. In fact as per our national statistics, 50% children by age 5 years have decayed tooth/teeth. It may be due to various reasons like improper feeding/eating habits, early transmission of the bacteria causing it, low immunity against such infections, incomplete/no treatment received in past, insufficient fluoride exposure to teeth, etc. Now that we identify your child's susceptibility to tooth decay, we must think about preventing and treating the same.

The child's dental needs may include cleaning of teeth, fluoride application, a few cavity fillings, root canal treatments or pulp therapies, caps, extractions, space maintainers, etc. All the treatments depend on the condition of his/her teeth, the extent of decay in his/her teeth and are routinely carried out at this age.

The treatments for children are carried out either in the dental chair if their cooperation is suitable or in a hospital set-up under sedation/GA if the same cannot be achieved.

The first aim is to relieve his/her symptoms such as pain/swelling and ascertain whether any emergency treatment is required. In most cases, however, some medicines help control the discomfort.

Some children are pre-cooperative or uncooperative. We require enough time to assess a child's cooperation, to modify his/her behavior so that the treatment is carried out comfortably. More than 90% children above age 4 years and many below this age, can undergo dental treatments in the dental chair. Most children even enjoy treatments and all get benefited from them!

Certain behavior management techniques such as distraction (by engaging the child in a conversation or by allowing to watch cartoon films), modeling (showing another child undergoing treatment), demonstrating procedures in simple words in a tell-show-do manner (such as cleaning a tooth with a shower), rewarding good behavior by giving some toys, etc. are employed by us. At times, it may be necessary to restrict unwanted movements of children by holding their hands or stabilizing the head. Also, it may be necessary to modulate voice to praise good behavior and shun unwanted commotion. Only if the cooperation is not enough to carry out treatment in a comfortable manner, or an emergency situation (such as a space abscess or trauma) does not permit us enough time to do behavior modification, the need for GA/sedation in a hospital set-up may arise."

The information relevant to them may also be given to the parents through a brochure and appropriately displayed on the clinic notice boards. At times, a dentist may be in a hurry or feel disturbed by the continuously questioning parents or simply a little too tired to discuss everything at length. The brochures in such instances are useful.

PROTOCOL-MAKING

The child management in a dental clinic must be a well-thought out plan. A treatment plan for a child must be accompanied by the treatment schedule taking into account the need for behavior modification. The following charts describe the same.

In the Chart III, the left column suggests a possible behavior modification method for a child. The right column takes into account the Frankl rating. As the rating becomes negative, the demand for a certain technique such as voice intonation, physical restraints, aversive conditioning or ultimately, pharmacological means, arises.

Such protocols and assessments, however, have to be customized. The following charts are only indicative in nature. The individual preference to a certain technique of modification and the child before you are the distinct variables affecting the same.

Chart I: Flow chart of activities as a child patient visits a dental clinic

Entry
Introduction to environment
Assessment of behavior and cooperativeness
Consultation with parents
Examination
Provisional diagnosis
SOS investigations
Diagnosis and treatment planning, estimation of charges, presentation to parents

Chart II: Treatment outline and schedule

Phase 1:
Emergency
Phase 2:
Preventive-fluoride, brushing demo, scaling
Restorative
Endodontic: maxillary molars, mandibular molars
Extraction
Quadrant dentistry when cooperation is adequate
Ant. extractions at the end
Phase 3:
Crowns, space management,
interceptive orthodontics
Follow-up

Chart III: Sequence of implementation of Behavior Modification techniques

Behavior Modification	*Frankl Rating*
TSD	Definitely positive
Contingency	Positive
Distraction	Negative
Modeling	Definitely negative
Parental separation	(Pre-cooperative)
Voice intonation	
Physical restrains	
Aversive(?)	
Pharmacological	

POSITIVE, PATIENT AND FLEXIBLE APPROACH

The child management techniques are based on scientific knowledge of child psychology. Behavioral Pedodontics is an applied science. The behavior modification methods demonstrate results with a certain predictable success. A dentist must believe in this fact and remain positive in his/her attitude. The experienced pedodontists often prove that when one has a firm belief in this applied science, it is only a matter of time and sincere efforts to bring about cooperation in a child for dental treatment. At times, children may not respond as desired or an appointment may turn out to be failure due to inappropriate child response; however, the degree of failure (unpredictability of behavior or unreliability of its modification) is certainly not high enough to demoralize a dentist. A dentist must be flexible in his/her decision-making. For example, in a negative child, achieving cooperation can only be the initial goal of a dentist, and completion of a certain work (carrying out a restoration or two, for example) comes only after that. Depending upon the child-cooperation, the dentist must take a timely decision, as to whether the entire quadrant treatment can be completed in a single visit after local anesthesia (block) is administered in order to avoid a repeat administration at a subsequent visit. It is occasionally necessary to review our strategy in view of child's comfort. It is important not to panic if things are not going as planned. The decision-making in such situations is often a test of our patience and attitude. Also, since child management is an art and a science, the operator has the choice to practice a certain philosophy (for example, retaining parents during the treatment of children in the operatory as against separating them). It is necessary to be innovative and smart while dealing with children.

ACTIVE LEARNING AND LEARNING THROUGH EXPERIENCE

One needs to upgrade oneself through continuous learning. We need to discuss and learn the implementation of these techniques from those who routinely practice them and should not rely entirely on the text-book knowledge. It is also a great idea to observe a pediatric dentist or a dentist proficient in managing child-behavior to grasp the methods of behavior modification. It is important to share experiences with colleagues and experienced dentists for acquiring certain skills in child management.

Our own experiences teach us a lot, too! In child management, the best teachers of the skills of behavior modification are the children whom we treat! All the children whom we treat individually

teach us how we should be going about managing them. It is, thus, important to keep eyes, ears and (of course) minds open to receive this first hand training while interacting with children.

STRIKING A BALANCE

The child management in dental clinics is integrated with all the other aspects of dental practice. A dentist has to strike a fine balance between them. In the dentistry for children, the entire patient care revolves around child management. The following figure depicts the same from a pedodontist's perspective (Figure 3.7).

A dentist for children has to know the psychology of child behavior, must possess experience in implementing behavior modification methods, must focus on optimal clinical results of preventive, restorative and other treatments, should work efficiently with proper sense of time and scheduling, ought to satisfy his/her patients (in case of children, even the parents have to be satisfied) and maintain a healthy professional long term relation with the children through judicious child management.

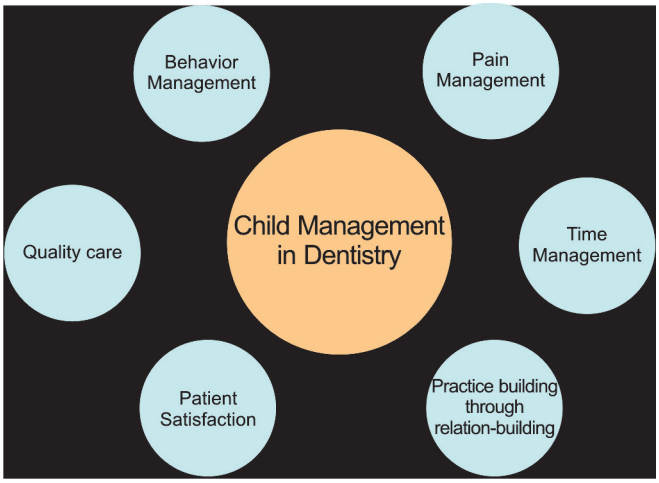

Figure 3.7: Child Management in Dentistry: A broad concept with different aspects

4

CHAPTER

Assessment of Child Behavior in the Dental Clinic

Child behavior in the dental clinic can be different in different situations. The child behavior assessment must be done on a continuous basis in each visit while carrying out the dental treatment so as to see the trend in the same. It gives the dentist an idea about how effective he is in modifying the child behavior or whether the same has deteriorated since beginning.

There are various behavior rating scales described in the literature to record the behavior of a child during his/her dental visit, such as the 'Frankl Behavior Rating Scale'. This scale describes the child behavior as definitely negative, negative, positive or definitely positive. Such a behavior rating scale may not be entirely appropriate for the purpose of assessing the child behavior, as the child behavior assessment can be more elaborate than what is depicted through it. The child behavior is also more dynamic and complex than that stated in the four categories. Therefore, the dentist has to carry out a detailed analysis of the same while managing one in the dental clinic.

Frankl behavior rating scale:

Rating 1	--	Definitely negative	Refusal of treatment, forceful crying, fearfulness, or any other overt evidence of extreme negativism
Rating 2	-	Negative	Reluctance to accept treatment, uncooperativeness, some evidence of negative attitude but not pronounced (sullen, withdrawn)
Rating 3	+	Positive	Acceptance of treatment; cautious behavior at time; willingness to comply with the dentist, at times with reservation, but follows the dentist's directions cooperatively
Rating 4	++	Definitely positive	Good rapport with the dentist, interest in the dental procedures, laughter and enjoyment

The clinical classification of Wright places children in three categories:

Cooperative	Reasonably relaxed, have minimal apprehension, may be enthusiastic, can be treated by a straightforward, behavior shaping approach
Lacking in cooperative ability	Very young children, children with debilitating or disabling conditions.
Potentially cooperative	Children having the capability to perform, the child's behaviour can be modified

The dentist has two goals to achieve in the beginning:

1. To assess the child's oral condition and
2. To assess the child's behavior (Figure 4.1).

The second goal is often a passive task to be accomplished by the dentist for which no extra time but some extra efforts need to be taken. The dentist should be able to judge the child behavior by asking himself/herself while interacting with the child and the parents in a professional and friendly manner.

There are broadly three aspects of child behavior assessment

1. Assessment of the child's behavior in dental office at each appointment
2. Assessment of 'fears' and 'anxieties' of the child and the parents in general and also specific to dentistry
3. Assessment of the attitudes of parents (parenting style) and their effect on the behavior of their children in the dental situation

The assessment of child behavior in the dental office is done by the dentist while interacting with the parents and the child, right from their arrival in the office till they depart.

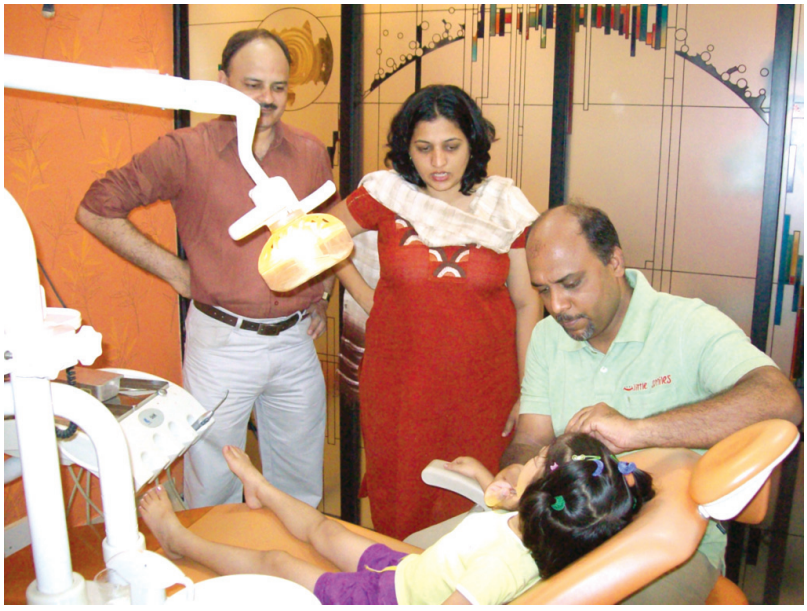

Figure 4.1: The goal of initial dental visit is to assess child behavior

An example of such a set of questions is given below, in which the dentist assesses the child behavior in the first visit.

1. Does the child make an eye-to-eye contact as he/she enters the clinic?
2. Does the child answer the initial questions such as his/her name, school name?
3. Does he/she have a smile on face, a 'neutral' look or scared/crying expressions?
4. Does he/she shake hands with the dentist?
5. Is he/she enthusiastic to see the place (operatory, the dental chair) or shies away?
6. Is the child dependent on the instruction of parents to comply with the demands of the dentist?
7. Does the child receive the gift happily?
8. Does the child wave goodbye or say it aloud while leaving?
9. Does the child communicate to his parent anything that he/she liked in the place (such as the fish tank in the waiting area, the gift, the poster on the wall, etc.)?
10. Is the child's initial dental experience overall satisfactory?

The more positive the answers are for these questions, more favorable are the child behavior characteristics. The more negative the responses are more is the need for the dentist to work at in terms of behavior modification.

The dentist should have keen interest in judging the child response and continue the exercise of questioning himself/herself throughout the dental treatment of the child.

It is also important to document individual fears and objections of the child. The fear analysis also becomes an integral part of behavior assessment.

Children usually have the following fears in a dental clinic:

1. Fear due to strange environment and people
2. Fear due to past memories of doctors, medical personnel
3. Fear due to negative preparation at home
4. Fear due to imagination of painful outcome
5. Fear associated with past negative dental experience
6. Fear of noises
7. Fear of sharp instruments, needles
8. Fear of separation from parents
9. Fear of being scolded
10. Fear of getting physically harmed

It is often difficult to ascertain the exact nature of fear prior to starting the dental treatment. Also, many times, the fears are complex and multi-factorial in origin. Some of the fears are easy to deal with, such as the fear of 'strangeness', fear of being scolded and physically harmed. Usually, the impact of first couple of visits in which the dental team introduces itself to the child and the environment (in a Tell-Show-Do manner and using appropriate rewards) assures the child that there is nothing to be scared of. However, certain specific fears such as that due to past negative experience, needle phobia, fear of noises are a bit more difficult to handle. The fears, such as those related to separation and those related to negative preparation at home, are best taken care of by interacting with parents effectively prior to treating children.

The dentist must be able to identify the nature of fear, its reason and introduce a specific remedy for a certain fear. The fears are also closely related and many a time a child has a compounded fear-

complex. Managing children with such a fear complex often requires a great deal of efforts on the dentist's part and use of a combination of behavior modification techniques.

The assessment of anxiety of parents contributing to the anxiety and fear of children also need to be carefully evaluated. There are various implications of parent-induced anxieties that develop into fears of the child. The dentist must study the correlation of the parent's anxiety and child's fear in the overall behavior assessment.

Another important aspect of assessment of child behavior is the analysis of the effect of parental attitude on it. Following are the commonly observed parental attitudes and possibly associated behavior patterns of children.

Parental attitude	*How it manifests while interacting with the dentist*	*How it affects the child behavior*
Normal	The interaction is healthy. The parent wishes to understand the dental care needs of the child and the child management protocol.	The child exhibits willingness to cooperate, is prepared well at home.
Overindulgent, Overanxious	The parent feels unduly worried on hearing terms like root canal treatment, extraction, etc.; keeps asking about pain, doubts the child management protocol, does not easily comply with the dentist's requests (for example: separation, use of voice intonation or aversive conditioning).	The child may be 'pampered' and timid, may require parental approval for the dentist's demands, and may cry easily.
Neglectful	The parent is not interested in comprehensive treatment program and expects only a temporary solution to the problem. Neither the treatment plan nor the child management protocol is fully understood by the parent.	The child is difficult to motivate.
Rejecting	The parent does not accept that the child requires all the care prescribed. The parent feels the treatment 'over-recommended'. Also, the parent does not accept lack of care on his/her part.	The child also does not feel the importance of the dentist's instructions, and is difficult to motivate.
Authoritative	The parent often orders the child in front of the doctor; criticizes uncooperative behavior.	The child is submissive, shy, usually cooperative but scared.
Depressed, dejected	The parents blame someone else for the problem (the other parent, grand parent/s, the child itself or even the previous doctors); do not communicate freely with the dentist.	The child appears unwilling, difficult to motivate unless the parents (and the dental team) generate interest in him/her. If the child has had a past negative experience of dentistry, the situation is worse.

The factors affecting child behavior in the dental office are summarized under three categories:

1. Factors somewhat controlled by the parents
2. Factors somewhat controlled by the dentist/dental clinic team
3. Factors controlled neither by the parents nor the dental office team

FACTORS SOMEWHAT CONTROLLED BY THE PARENTS

A child visits the dentist at the parent's wish and not at his/her own willingness. Prior to the dental visit of a child the parents prepare the child in a certain manner. Also, the child may overhear discussions related to dentistry that may take place in his/her presence. The child may also have accompanied parents on their dental visits earlier, observed dental procedures and made his/her opinion regarding dentistry. The parents may have expressed either satisfaction or discomfort related to their dental care in front of the child. The child might also hear from a peer or his/her sibling about the dental care prior to actually visiting a dentist. All such factors have an impact on the child behavior in the dental office.

For a dentist, it is important to understand

i. how the child has been prepared at home for his/her dental visit – i.e. whether the child has a *positive* approach towards dentistry and is looking forward to the dental check up or a *negative* outlook, wherein, is fearful about the same;
ii. what is the perception of parents regarding child dental care – i.e. do they expect and understand comprehensive dental care including preventive measures or have come only for solution of a specific concern such as extraction of a painful tooth of the child;
iii. the attitude of parents and the 'parenting' style i.e. whether the parent/s are normal, overindulgent, anxious, dominating, authoritative or neglectful.

The factors controlled by the parents can be influenced by the dentist if the dentist has an opportunity to meet parents prior to meeting the child. Ideally, the dentist must give parents necessary guidance on how the child should be prepared for his/her dental visits (may be through a mail) prior to meeting the child. If the same has not taken place, the parents need to be given the necessary guidance soon as they are in the dental office. The notice board must prominently display certain information for the parents and the receptionist at the front desk must be trained to inform the parents adequately. There can be kept a few handouts or take home brochures that carry necessary information for the parents of children seeking dental treatment.

FACTORS SOMEWHAT CONTROLLED BY THE DENTIST/DENTAL CLINIC TEAM

The first category includes certain factors that are mainly controlled by the parents but are, however, 'modifiable'. The dentist and his/her team must additionally consider the factors that *per se* influence the child behavior positively in a dental office. They are summarized below:

i. The environment of the dental office—is it child friendly?
ii. The manner of communication of the dental team
iii. The attire of the dental team
iv. The skill and expertise in child management and pediatric dental procedures

All the above mentioned factors are discussed at length in various chapters of this book. The dentist and his/her team must focus on giving the child a good experience while guiding him/her through the dental care.

FACTORS CONTROLLED NEITHER BY THE PARENTS NOR BY THE DENTAL OFFICE TEAM

There are many factors that are beyond the control of both the dentist and the parent/s such as

i. Age of the child– i.e. whether the child is pre-cooperative age: Most children below 2 years rarely cooperate for anything more than examination; children between 2 and 3 years of age may cooperate for small procedures such as examination, topical fluoride application, taking radiographs, excavation of small carious lesions.; children between 3 and 4 years of age may be introduced more complicated procedures that require administration of local anesthesia; however, only after ascertaining and modifying their behavior sufficiently; and most children above 4 years of age are potentially cooperative for all dental procedures.
   In India, most children enter preschool during $2^{1/2} – 3^{1/2}$ years of age. Soon as they enter preschool, they learn to interact with people outside their homes and thus socialize. A socialized child has a better chance of being a cooperative dental patient.
ii. Any emotional or social immaturity- over pampered children, children not separable from parents, children who cannot cope up with minor stress (generally of overindulgent, anxious and over-concerned parents) pose as difficult dental patients.
iii. Disability—any physical, mental, sensory or emotional subnormality may hamper normal communication with the child patient.
iv. A past negative experience at a dentist and/or a medical doctor (amounting to dental phobia): This aspect requires thorough attention. Although it is a factor mentioned as beyond control of the dentist and the parent; 'retraining' methods must be initiated for rebuilding the confidence of the child in dentistry. Also, dentists must endorse the first dictum of medicine i.e. to do no harm. No dentist must attempt treatment that is painful and unacceptable to a child forcefully without sufficient behavior assessment and modification with only exception being a true emergency. As such this aspect of child behavior may not be in control of a dentist/dental team; but is in control of the entire dental profession.
v. Mood of the child on a particular day: Even the most cooperative and behaviorally modified children have their own mood swings. A dentist's job is never mechanical and is therefore dependent on human emotions such as bad moods, tiredness, anger, etc. on the part of the child.

It is important to understand that the impact of the factors is wholesome and not individual. For example, even though a child is prepared properly at home, if he/she is not treated well at the dental office, the end result of such an appointment is failure. The dentist must be ready to count on each and every aspect that he/she can control, modify and influence in order to achieve positive child behavior.

5

CHAPTER

Techniques of Behavior Modification Revisited

There are various methods of child behavior management documented in textbooks. A dentist has to learn the same in order to 'manage' children well during their dental treatments. The behavior modification of a child, however, has to be highly customized for an individual; hence, a dentist has to be innovative and develop his/her own techniques to achieve child cooperation for delivering dental care.

The practitioner of dentistry for children improvises on the behavior modification techniques learnt to suit individual needs. The personality of the practitioner, the demand of parents, the influence of society and culture, and ultimately the behavior characteristics of the child are the factors that have to be considered while carrying out such improvisations.

The text below discusses various behavior modification methods with their 'improvisations.'

1. Tell-Show-Do
2. Contingency Management
3. Distraction
4. Modeling
5. Parental separation
6. Voice intonation
7. Aversive conditioning(?)
8. Physical restraints

TSD (TELL-SHOW-DO)

TSD is the most important behavior modification technique practiced by dentists. The technique is simple to understand but not so simple to practice. It is not just about *telling* something, *showing* something and *doing* it. It is a presentation given to a child for which the child may not be attentive. The *telling* something involves a lot of 'NOT TELLING', showing something involves a lot of HIDING by the dental team and *doing* means actually carrying out much more complicated treatment than what is TOLD or SHOWN to the child.

The children often feel scared on their initial visits to dental clinics. Often parents threaten the children that if they misbehave, they would be taken to doctors who give injections. Also, children have bad memories of visiting a doctor/hospital and they recollect the same on their dental visits. The dentist thus has an arduous task of creating a fresh image of him/her, distinctly different from other doctors and medical people, in front of children. Also, the medical doctors or surgeons, unlike dentists, usually do not carry out long, delicate and complicated procedures on children without general anesthesia; and short procedures such as giving vaccine shots are managed by merely holding them. However, a dentist may have to perform treatment procedures that are technically sensitive to deliver and may be time consuming, too.

The dentist has no choice but to gain child's attention, build a rapport with him/her to acquire his/her cooperation and maintain good communication throughout, to instill a positive attitude in the child's mind about dentistry.

The first meeting with the child must communicate to the child that there is nothing to fear about dentistry. The easiest way to achieve the same is by starting a conversation about a non-dental topic and keeping the dental experience of the child minimal. The interaction with parents, however, must begin well and their concerns regarding the dental care must be addressed. The parents must be explained that the dentist is planning the treatment plan and behavior modification with their consent and understanding.

The child on his/her first dental visit makes an impression about the dentist, the dental team and the 'place'. The same may be in the dentist's favor if the following happens on day one.

The child must spend 20-45 minutes in a dental clinic during first visit in the following manner:

- 10-15 minutes in waiting room/play area after being greeted and introduced to toys by the receptionist
- 5-10 minutes in consulting area with the parents to meet the dentist
- 1-3 minutes on the dental chair (either alone or on a parent's lap) and for a very brief introduction to dental operatory
- 5-10 minutes playing outside while parents in the consulting area or at front desk before leaving

Also, the attire and mannerism of the dental staff, the child-friendly atmosphere of the dental clinic, and the gifts and compliments given to the child help erase the preset notion of the child that a visit to a doctor is nothing but punishment and pain! Telling to a child about dentistry is not so easy. The dentist has to be imaginative, innovative and even spontaneous in using euphemisms. Also, for this first communication, the dentist has to participate with a lot of active interest and interact with the child. While starting communication, it is important to

- Start with shaking hands, welcoming the child warmly and starting a conversation with him/her (*Do not mind if there is no response!*).
- Keep the conversation around the topics of interest to a child such as schoolmates, cartoons, games, etc.
- Maintain an eye-to-eye contact with the child.
- Establish non-verbal communication through facial expressions and physical contact like patting on the back, giving a clap.
- Give compliments to the child (and of course, find more and more reasons to do the same repeatedly!).
- Avoid discussing pain, injections, bleeding, etc in front of children.

An example of such a communication is given below:

(Mihir, a 3-year-old boy has been brought to the dental clinic by both the parents for the check-up of his decayed teeth. On arrival at the clinic, he is greeted by the clinic receptionist, who showed Mihir a fish tank in the waiting area and introduced him to a slide in the play area. He also sees the black-board on the wall like one in his school, where a girl has been busy drawing a picture. After spending good 10-15 minutes there, Mihir's parents are instructed to take Mihir to the doctor's cabin.)

The following interaction continues there.

Doc: Please come in! Hello! What is your name? (Pausing for a reply) Will you shake hands with me?

(Mihir is apprehensive and turns his face away from the dentist and clings to his parents.)

Doc: Well, I know your name, Mihir! (The receptionist has already handed over the case paper filled with necessary information gathered from parents while Mihir was playing.) And I also know that you are from Little Tigers playschool. (Pausing again) What a nice t-shirt you have! It has a picture of Tom and Jerry! Do you like Tom and Jerry? (Mihir still does not respond, but has started listening to the dentist.) I'm sure you are a good boy. Mihir, shall I now talk to your daddy?

Here, the dentist asks a few questions to Mihir's parents and records his chief complaint and related medical and dental history. The dentist also explains to the parents that only after a brief check up of his teeth he/she would be able to give them further advice. Also, since this is his first visit to a dentist, he would not be asked to sit on the chair for more than a couple of minutes.

Doc: (Enters the operatory with parents and Mihir) See Mihir, we have a chair here, on which good children like you sit and show me their teeth. Can you see the cartoon channel on TV in front that we have put on for you? Also, this chair is a great ride… it moves up and down! We have a light to see your teeth better and a small spoon mirror to count the teeth. Do you want to hold one and see yourself?

If Mihir does not respond, one parent holds him on the lap and allows the dentist a brief examination of his teeth. The dentist gives compliments to Mihir for being a 'good boy' and hands over a gift to him (a small car or a tooth brush) and pats him on his back. The dentist now escorts them back to his cabin for further discussion. Mihir is allowed to go to the play area again or may remain with parents, depending on his wish.

Through such a communication, the dentist gets a fair idea whether the child is responding or not. It is imperative that the dentist does his job of talking to the child. The child's response may not be instant and an instant response may even be negative. However, persisting with the communication in such a manner achieves the desired outcome later.

The behavior modification is most essential for children who are entering cooperative age group (i.e. who are in a preschool passage). According to Pinkham (the author of 'Pediatric Dentistry from Infancy through Adolescence), no child is competent in language before the second birthday and all normal children are competent in language after fourth birthday. Usually during 3-6 years of age,

- Fear of separation from parents, strangers, and new experiences diminishes (by the third birthday)
- Self control develops
- Conscience develops
- Aggression (either instrumental or hostile) develops
- Interaction with peer, self-discipline, values (sexual as well as adult) develop

Therefore, this age-group children are amenable to behavior modification. They can be influenced because they are susceptible to

- Distraction
- Friendship
- Feeling guilty
- Praise
- Emotions of other people.

The dentist can achieve their cooperation with a properly thought out and thoroughly executed plan of verbal communication. It is important to create a fantasy in the child's mind regarding the dental care he/she is going to receive. The fantasy is nothing but a well-laid trap in which the child enters as per the dentist's wish and starts cooperating for dental care.

The communication must involve questioning the child and also making him/her understand a few statements. The questions must, however, be 'leading' questions. The child while answering them commits to the dentist his/her cooperation and thereby enters the trap! The following can be the sequence of statements to be made by the dentist for interaction with the child.

- *Are you a good boy/girl?*
- *Do you want to have good white teeth?*
- *Will you help me make your teeth white and good looking?*

These questions are often answered positively by children. Note that the last question has a 'condition' in it. The child has chosen to accept it by now. (Remember, it cannot happen all of a sudden. While you gave the child an overall good experience in the first visit, the child has observed you and has at least found you harmless! Now the child accepts this condition with caution.) Now is the time to ask for further commitment! For that, the following statements are noteworthy.

- *We help only good boys/girls to get good white teeth.*
- *We give nice gifts to only good boys/girls.*
- *If you promise me to help me, only then I'm going to make your teeth shine white!*

By now, the child has agreed to most demands and has shown initial willingness to comply. (He/she knows that crying is still an option if things go wrong!) The actual Tell-Show-Do can now begin.

- *Have you seen your teeth in a mirror?*
- *Have you seen these black spots, holes in your teeth?*
- *Do you know these black spots are tooth germs causing damage there?*
- *Do you wish to have all good shining white teeth?*
- *Let me show you how to clean teeth and make teeth white…*
- *See, this is a water–spray (demonstrate on the hand)*
- *And see, this is an air–spray (demonstrate on the hand)*
- *Look, this is a tooth-cleaning shower. See, it cleans so fast! (demonstrate on the hand)*
- *We have a nice white paint for your teeth to make them good-looking! We have a blue light torch to shine them bright, too!*

In the continuation of the same most dental tools can be demonstrated, too! The dentist must be ready with several euphemisms (substitute words) for them! Some of the commonly used ones are given below.

Dental tool/procedure	*Euphemism*
Mouth mirror	Spoon mirror to count/check teeth
X-ray machine	Camera
X-ray film	Photo film
Water syringe	Water spray
Air syringe	Wind blower
Suction tube	Tube pipe to remove dirty water
Air-rotor hand-piece	Tooth shower
Burs	Shower buttons
Light cure machine	Light torch to shine teeth white
Restorative cement	White paint to fill teeth, make them strong and white
RC instruments	Paint brushes
Topical spray	Tooth perfume medicine to put tooth to sleep
Topical gel	Ice-cream flavor jelly medicine to put tooth to sleep
Tooth decay	Tooth bug/tooth germs/black germs
EDTA gel	White paint medicine to kill germs in teeth
Needle-syringe	Water sprinkler
Mouth prop	Mouth opener on which teeth can rest

In the initial visits, a few small procedures such as taking radiographs, fluoride varnish application, and small restorations can be completed. If the child's cooperation is satisfactory, the procedures requiring local anesthesia administration can be subsequently taken up. If there is a failure in achieving full cooperation, the small procedures may still be continued with parent's assistance (without much force) and a different behavior modification technique (such as modeling, parental separation, voice intonation, etc.) is considered at the next appointment.

The SHOWING part of TSD includes hiding as well as not prominently displaying a few objects in the dental operatory. The following are the examples:

Do not SHOW to children	*How to hide/mask*
A tray loaded with instruments, sharp objects	Use only mouth mirror (and air syringe, if required) in the initial examination, keep the tray/instruments behind the patient
Needle and syringe while injecting	Shield the vision of the child with palm
Extraction forceps beaks	Hold cotton while carrying the same to the mouth

After demonstrating a dental procedure to the child by telling him/her adequately and showing him/her the necessary tools, the actual skill of the operator comes into play while 'DOING' the treatment. It is important that the child is not told lies or given any promises that the dentist is unable to keep. The dentist should not tell a child that the needle does not hurt in any case because if the child experiences pain later, he/she may lose faith in the dentist forever. Also, the TSD method only explains the child the procedures, but other method such as distraction (by allowing the child to watch a cartoon program while carrying out the treatment or engaging him in conversation) should be practiced to continue the

treatment comfortably. The child once knows what is happening may not seek explanation for the treatment again and again! (Figures 5.1 to 5.3)

The TSD method is thus, the most important method in 'conditioning' a child to receive dental treatments.

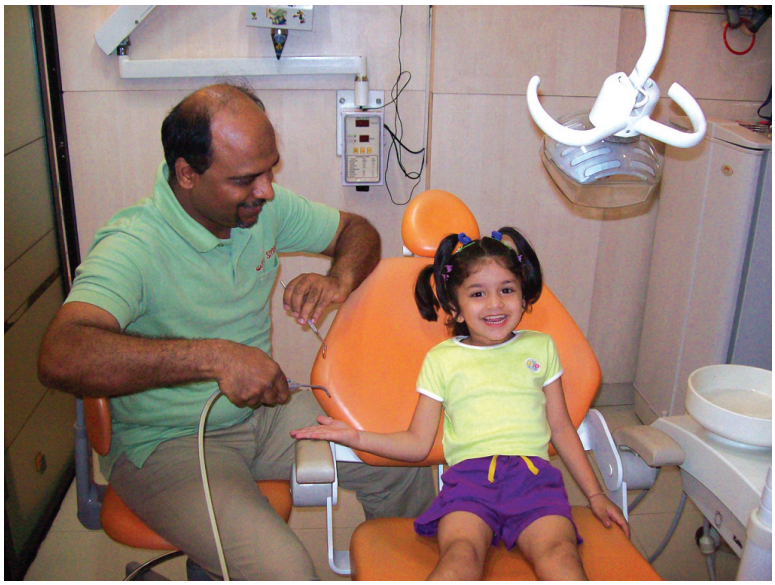

Figure 5.1: Tell-Show-Do

Figure 5.2: Tell-Show-Do

Figure 5.3: Tell-Show-Do

CONTINGENCY MANAGEMENT

Children are always happy receiving compliments and rewards. They easily befriend people who are interested in them, i.e. who praise them, give them gifts, allow them certain privileges. The contingency management of child behavior takes into account this aspect of child psychology. While starting an interaction with a child, the dentist must start by praising the child and making him/her feel special. The children can also be rewarded with gifts, toys that excite them, surprise them and compel them to behave nicely in order to 'win' them.

At times, however, the negative, unwanted behavior of a child needs to be curtailed. The child needs to be warned to be obedient and quiet in order to receive the treatment comfortably. The dentist should not be punishing the child for misbehavior, but can appropriately discourage it by warning, reprimanding him/her and depriving him/her of a few privileges that a well behaved child would be rewarded with.

Some of the 'positive reinforcements' can be:

- Terming a child 'good boy/girl', calling him/her a 'grown-up', giving compliments for a good smile or for wearing a nice shirt worn (verbal)
- Letting him/her know that he/she can watch his/her favorite cartoon program on television while the dental treatment goes on, only if he/she follows the instructions of the dentist well and remains obedient (privilege)
- A gift awarded at the end of satisfactory response such as a car, a doll, a pencil, an eraser, a pen, a medal, a sticker, an animal toy, etc. (reward)

It is rather more difficult to introduce 'negative reinforcements' or withdrawal of positive reinforcements. No child will sustain interest in a person who verbally ridicules him. It is hence, important

that only a bad *behavior* is discouraged and not the *child* exhibiting it! A child may be deprived of a certain privilege (such as watching TV), if he/she is not obedient enough! The child may be told that he/she will not receive a gift if he/she misbehaves!

The contingency management can be included in the 'reward' oriented domain as well as the 'linguistic' domain of child management. It is yet another technique (similar to TSD) that has to be used for all children (Figures 5.4 to 5.7).

Figure 5.4: Gifts for children-Variety is a must!

Figure 5.5: Gifts for children-Give children a reason to smile

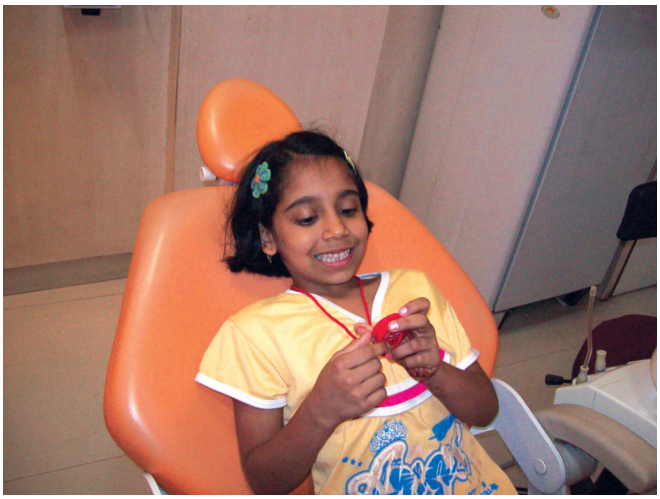

Figure 5.6: A child 'wins' a 'good girl' medal!

Figure 5.7: A child being rewarded with a medal for appropriate behavior

DISTRACTION

Children need to be distracted while undergoing dental treatments for various reasons. The distraction allows them to focus on something more interesting and thereby lowers the intensity of discomfort associated with dentistry. Furthermore, it allows the operator concentrate better on his work rather than continuously talking to the child and also probably the operator gets more time to work (as long as the child has remained distracted).

The obedient, distracted child undergoing the dental treatment comfortably on the dental chair often balances his interest (for example watching a cartoon film on the TV) while at the same time complying

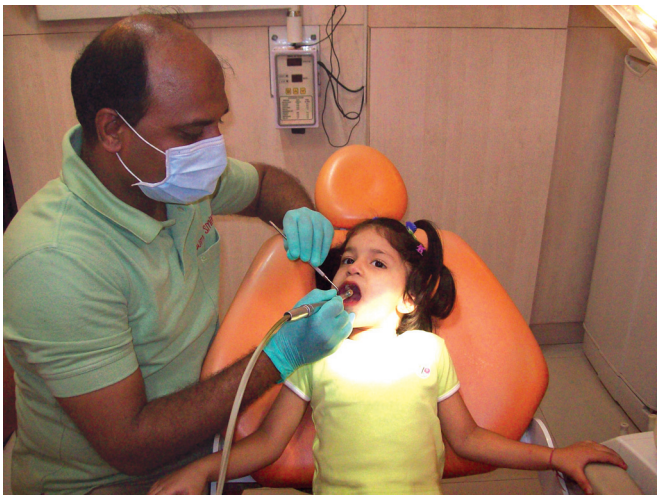

Figure 5.8: A conditioned child-remains distracted with TV set in front

with the dentist's demands. I like to call such a child a 'conditioned' child. Usually after 2-3 initial visits, most children get 'conditioned' to receive dental care. The understanding in the conditioned child's mind is simple: *"Let the dentist do his work. I'm busy doing mine."*

The distraction can be of two types: firstly for a short duration (for example, during a procedure like administration of LA), and secondly for longer period (for example, while carrying out an endodontic procedure).

Distraction for a short period is at times more difficult to achieve and demands conscious efforts on the part of the dentist, who has to engage the child in a conversation. It is not easy to talk continuously to a child even for a period of thirty seconds during a procedure like LA administration when the child could get restless if not distracted well. Such a conversation should be well rehearsed by the dental team before actually using it for a child. Alternatively, a child may be asked to count numbers (1-50) in mind during the LA administration; a method that keeps the child distracted without the dentist's actual involvement. Also, an activity such as rinsing mouth immediately after LA administration can distract the child in the recovery of a traumatic experience. The child can, however, remain relatively easily distracted for a non-traumatic procedure for a sufficiently long duration (particularly after LA is administered and the child has no pain to experience!). The cartoon programs are really a boon in child management! (Figure 5.8)

MODELING

For a child who has refused to comply after TSD and contingency management, the dentist may arrange a demonstration of a procedure in a child of similar age. It is a very effective method for young children (around 3 years of age) and children with past negative experience.

The child chosen to sit on the chair (the co-operative child) should be a 'conditioned' child, who also communicates freely. He/she has to be told that due to his/her good behavior, he/she has been chosen to perform before the other child who does not know 'cleaning of teeth'. The child, thus, takes

Figure 5.9: Modeling technique

a pride in performing before an audience! The child, who is shown the procedure, also gets to know that he/she would be deprived of attention, special privileges such as sitting on the chair to get teeth cleaned and brightened, and gift towards the end unless he/she also behaves well and accepts dental care (Figure 5.9).

At times, a sibling (older/younger does not matter; the more cooperative one) also can be a good candidate to his/her companion.

It is important to choose the correct procedure for modeling. Never show a procedure like LA administration, extraction or even a cavity preparation for a restoration that could be painful. The preferred procedure is a small restoration or a post-endodontic restoration.

Although a child can be shown a recorded procedure to understand what dental treatment is like, the same can never be as effective as the live one due to obvious reasons. Also, children may feel that the video-clips are 'doctored' to appear harmless!

The modeling is always carried out in combination with TSD and Contingency Management.

PARENTAL SEPARATION

There is a lot of debate on whether to retain parents in the operatory during the dental treatments of children and a separate topic for discussion as well. It is advisable that one or both the parents remain present in the operatory during the first dental visit of any child. However, for subsequent visits we should decide our policy about separation of parents/ requirements of parents during certain procedures and explain the same to them. The 1:1 communication between the child and the dentist is the key to successful management of children.

It is important to understand that this also is a behavior management modality if used effectively along with the other methods. (See Chapter 7 for further discussion on this topic.)

VOICE INTONATION

Although most children are manageable using the methods described above, some demand use of special skills on the part of the dentist. The voice intonation is first such method to be utilized.

However, VI does not mean shouting. It incorporates use of firm voice that gives clear instructions. A minor change in the pitch of tone (different pitches for praising and warning) is usually sufficient to achieve the desired effect.

The VI can be practiced in one of the two manners: Indirect/ Direct. In the Indirect voice intonation method, the dentist is neither asking the child to behave nor ordering to follow instructions; he is just passing a remark regarding the child's behavior. Such remarks are types of "I" messages. These remarks are many a time better than direct instructions given to the child since the latter may be perceived by the child as criticism. Examples of both the types of communications are given below:

Direct Voice Intonation	*Indirect Voice Intonation*
Do not move your hands while I'm working.	I don't like children who move hands while I'm working.
Stop crying and listen to me.	I like children who listen to me without crying.
If you don't behave, you won't get a gift from us.	We give gifts only to good children who behave well.

The direct VI is rarely necessary. It expresses authority on the part of the dentist and the child has no choice but to understand what the dentist has to say. This method although to be used sparingly, is effective when the dentist wants to abolish any unwanted movement of the child while administering LA. Also, at times if a child is just demanding a parent's presence near him/her (in a situation where the dentist has recommended parental separation), the dentist must make it clear to the child that the parent would not be brought in unless the child allows the dentist to finish work as planned. In extremely rare situations, this type of voice modulation is an adjunct to hand-over-mouth-exercise.

While using the direct voice intonation, the dentist looks into the eyes of the child (preferably from above), shows anger on the face and gives a clear instruction that comprises of minimum words. In the indirect voice intonation, the dentist can simply say: *"I'm getting angry with your behavior. I wish you stop it and follow my instructions like a good boy/girl."*

Regardless of the voice intonation used to modify the child behavior in certain situations, the dentist must re-establish a normal communication as soon as possible. The child's good characteristics must again be praised after the desired outcome of voice control is seen. Thus, the child does not remain scared during the rest of the procedure and starts complying better.

AVERSIVE CONDITIONING

The most controversial issue in behavior modification is aversive conditioning. Modern literature has criticized the use of hand-over-mouth technique to a great extent. The method has been debated a lot not only because of the ethical issues involved but also because it is such an effective tool of achieving instant change in the child behavior that it is likely to be misused beyond its actual need!

The aversive conditioning has still a place in the dentist's armamentarium of child management techniques (especially in a society like ours), where dental treatment under sedation or general anesthesia is questioned, under-recommended, under-utilized, and considered unsafe and expensive.

Consider a situation in which the dentist's attempts of behavior modification in a potentially cooperative child have been unsuccessful. The dentist either has to abort the procedure or consider immediate pharmacological means to complete it. The former is not really appropriate because the situation might be repeated again and the child would know that he/she can avoid the treatment by throwing a tantrum. Also, the dentist as well as the parent would regard it as a failed outcome. The latter is either unavailable or dreaded by the parents' due to safety issues. The dentist now recommends that only use of momentary force on the part of the team can compel the child to comply and the treatment may be completed thereafter.

There is nothing wrong in accepting the limitations of other behaviour modification techniques. There is also no guarantee that the pharmacological methods are technically the best and risk-free. At times, it is not practical to go in for a single extraction under GA in a needle phobic potentially cooperative child (we are talking about a scenario where nitrous oxide: oxygen inhalation sedation is not practiced) because even that would necessitate a prick or two (one: to draw blood for investigations, and two: I.V/I.M. for the induction). Under such circumstances, aversive conditioning would really be the method of choice.

The indications, contraindications and the manner in which aversive conditioning is practiced are mentioned in most textbooks of pediatric dentistry. Sadly, the literature has succumbed to the pressure of objections raised against its use and advocates great caution while using the same. The author feels that judicious use of aversive conditioning only increases the spectrum of non-pharmacological child management.

PHYSICAL RESTRAINTS

The entire range of physical restraints is rarely put in use by a dentist managing children. Most prefer use of only a few restraints. The papoose board, the Velcro straps, even the triangular bed sheet do not have a regular place in the dentist's kit. The author recommends use of them in extremely rare situation for which no other means of delivering dental care would be considered appropriate (including the pharmacological).

Some of the useful and practical restraints are mentioned below:

Physical restraints	*How to practice*	*Situation in which it can be used*
1. Child on the parent's lap	The parent holds the child's legs between his/her folded legs, encircles an arm firmly around body and child's extremities, and stabilizes head of the child with the other hand.	Initial examination Taking radiograph/s For simple procedures like fluoride application, a small restoration.
2. Child on the parent's lap with further restriction of movements by the other parent/assistant	Same as above, additional help sought to control wherever movements start	Same as above Emergency procedures

Contd...

Contd...

3. Dentist-assistant (1-2) method	The assistant on the left side of chair is ready to restrict occasional movements of head and left hand, another (if necessary) may stand near the child's feet on right side to control the right hand and feet movements of the child	While administering LA, in the middle of a procedure if suddenly a child starts getting restless
4. Mouth prop	Is well established	Most restorative procedures, to allow the teeth to rest on it rather than stretch open

The most appropriate aim in the use of restraints is that of helping the child cope with the situation and not just holding him/her to accomplish a faster job. The same should not be viewed by the child negatively and should not be a cause of fear for the subsequent visits (Figures 5.10 and 5.11).

Figure 5.10: Minimal physical restraints employed by dentist himself

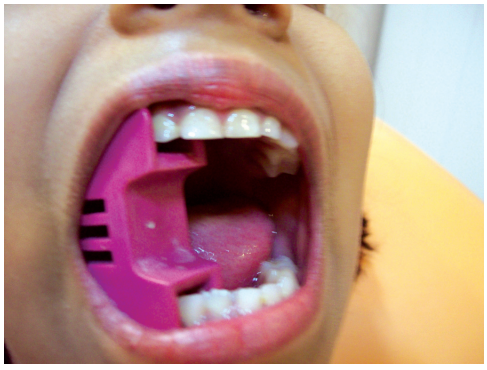

Figure 5.11: A self-locking mouth-prop acts as a stable rest for teeth and the mouth remains open

Dr. Bhushan Pustake outlines the steps in 'retraining' a child with previous negative experience

- First consultation with parents only…to know the exact sequence of events at the previous dental clinic. Discuss the negative experience in the child's absence.
- Begin with extremely tender, caring and loving approach towards the child.
- Reassure the child that there is no reason to fear about. Do not talk about procedures, pain and the past experience with the child.
- Keep initial goals small and simple. To begin conversation with the child must be the first goal.
- Initial consultation with child may be done on a normal chair in the consulting room (do not hurry to take the child to operatory and seat on the dental chair).
- TSD and 'modeling' another child's appropriate behavior are the first two behavior modification methods to be implemented. (Select simple procedures like fluoride application, small restorations.)
- Keep initial appointments short with minimal procedures and more entertainment for child.
- Praise and reward the child on small accomplishments such as talking, sitting on dental chair, completion of a small preventive procedure.
- Continue TSD and modeling for pulp therapy. (Do not model procedures like LA administration or a tooth-extraction.) 'Desensitize' the child about a past fear. (Some children have fear of RC instruments. Modeling usually helps in desensitization.) Also, use euphemisms effectively.
- If child is not cooperative after 2-3 visits, consider treatment under sedation/G.A.

Dr MS Muthu mentions the statistics of the use of HOME, Physical Restraints and Voice Control at his clinic 'Pedo Planet' in a total of 932 patients in last 55 months:

Technique	*No. of patients in which practiced*
Physical restraints	9
Voice control	13
HOME	4
Total	**26 out of 932 i.e. 2.8%**

6

CHAPTER

First Dental Visit of a Child

Dental Health is a right of each and every child! The parents and the dentist/pediatric dentist share the responsibility of delivering good preventive and therapeutic dental care to children. The first dental visit of a child aims at building a partnership between the dentist and the parent/s for fulfilling this objective.

Dental care is a continuous process, which starts in the womb (in expectant mothers) and continues lifelong! The dental management of children starts with education, counseling and preparation of parents prior to the actual dental treatment. Good communication with the parents is the key to successful management of children. This chapter throws light on the timing, manner and importance of first dental visit of a child.

When Should a Child's *First* Dental Visit be Scheduled?

The first dental visit is recommended within six months of the eruption of the first tooth, and no later than the child's first birthday. This has many goals such as:

1. To check for decay and other problems
2. To educate parents regarding feeding, dietary care and oral hygiene
3. To identify the child's fluoride needs
4. To introduce child not only to dentistry for regular care but also for developing familiarity with dental atmosphere in a pleasant manner

Unfortunately, we often come across children with advanced dental conditions! This is primarily due to either lack of information to parents on preventive dental care or absence of a painful condition. Also, at times we, the dental professionals are a little reluctant to examine a pre-cooperative child. Actually, interactions with parents at this stage could definitely benefit children mainly in terms of preventing early childhood caries.

However, rarely is the first dental visit of a child so well planned! More often than not, we come across a child with an acute condition or multiple dental problems. This text discusses the issues pertinent to such first dental visits.

Preparation of Parents Prior to the Dental Treatment of the Child

As emphasized earlier in the textbook, children are not just small adults! They behave, expect and relate to the surrounding much differently. While understanding and practicing dentistry for children a pediatric or a dental surgeon also has to play roles of behavior therapist and a counselor!

Parental counseling is important before starting the treatment in order to avoid future complications and misunderstandings. While doing so, we have to render them the knowledge about dental treatment modalities and child management techniques. The well-informed parents can themselves prepare the children well at home for receiving treatment in a better manner.

Pleasant visits to the dental office promote the establishment of trust and confidence in a child that will last a lifetime. Parents must make the child familiar with the dental clinic by having casual meetings with the doctor and the staff. The aims of such visits are exchange of information between parents and the doctor and establishing a good communication between the doctor and the child.

The Goals of Preparation of Parents Prior to the Dental Treatment

1. To assess their understanding and level of motivation regarding the child's dental care.
2. To get an idea about the concerns and anxieties of parents related to dental care
3. To start an active conversation with the child along with his/her parents
4. To help them understand and practice preventive dental care for children
5. To create a healthy environment prior to commencement of dental treatment of child.

The preparation of parents starts with answering the phone call by the office staff. Most patients prefer taking a prior appointment rather than dropping in without one. The receptionist can note down a few points and brief them about a few aspects of our protocol that can prove valuable in first consultation. Asking the age of the child, whether it's a first dental visit for the child or if any acute condition exists, are a few examples of the questions to be asked by the receptionist. Also, the parents can be explained that they both may remain present with the child for first consultation and the child must be prepared only for a casual meeting with the doctor (see the table on next page).

On arrival at the clinic, the child as well as the parents may have to spend some time in the waiting room (Figure 6.1). The area in the reception must have things that would be of interest to children (fish tank, some soft toys or a wall painting, for example) and some information in the form of brochures/articles/posters that can prepare them without burdening the parents with excess information. An example of such a brochure is given below.

A child's first dental visit is comparable to his/her first day at school. Many children do not like to be separated from parents and enter a strange place. However, they soon get accustomed to the surrounding and enjoy schooling. Children are at times scared to visit a doctor/dentist. Often parent/s or caretakers describe doctor as a person who uses injections as weapons. If a child is eating many chocolates a day, for example, he/she is often threatened with visiting a doctor! The mindset of children, therefore, becomes extremely negative towards doctors. They imagine a visit to any doctor only as a punishment. This makes the job of a doctor even more difficult. *It may be a good idea to have a conversation with parents in this regard prior to actually meeting the child.*

DOs and DON'Ts while bringing your child for his/her dental visit	
DOs	*DON'Ts*
1. Tell your child that you are going to a friend/uncle who's also a doctor and likes children and he may just check his/her teeth. 2. Tell him/her that getting teeth examined regularly may help finding problems—blackness, cavities early. 3. If possible, both the parents must remain present with the child in the first visit. 4. Give your doctor enough time to talk to your child. The time spent initially on building rapport and gaining his/her confidence will in turn save the time required for treatment later. 5. 85-90 % Children can cooperate for all dental treatments. Help your doctor in not only treating the child but instilling in him/her, a positive attitude towards dentistry. 6. Whenever the doctor wishes leave your child alone with him. The 1:1 communication between your child and the doctor is the key to successful dental treatment. 7. Get your child's complete medical record (including immunization status) for doctor's assessment. Also get his/her school performance card. 8. Insist on understanding complete treatment programme, including the preventive measures and follow-up.	1. Do not tell your child about pain, blood, injections, etc. in the first place. 2. Don't tell him/her something like - "because you don't brush you teeth properly, doctor will give you an injection.." or "because you eat chocolates, your spoiled teeth will be removed by doctor"! 3. Do not insist on starting the treatment in the first appointment itself. 4. Do not voice your own fears about dentistry (pain, blood, etc) in front of children. Your dentist can answer your queries separately. 5. Avoid dental appointments during the naptime or when he/she is too tired. 6. Don't bribe him/her with a gift beforehand. You may reward an appropriate behavior in the clinic (if obtained) later. 7. Don't make complaints of the child's behaviour to the doctor. Also, don't expect perfect behavior at all visits. 8. Don't promise him/her in advance about the time the doctor would take to treat, the pain he/she might get, etc. which can mislead him/her. Simply say you don't know.

Figure 6.1: Children should be allowed time in the play area

What Should be Done at the First Dental Visit?

We should develop a protocol for child management in our clinics. Firstly, ask the purpose of the visit. If there is any **emergency care** required, it must be delivered to the child as soon as possible. All the details including the medical history of the child must be mentioned in the case paper. The first visit is mainly a consultation with the doctor. It has **two goals**:

1. To start developing a rapport with the child and
2. To complete history taking, diagnosis and treatment plan.

At times, radiographs are required to come to a definite diagnosis. Depending upon the co-operation of the child and urgency of diagnosis, the same may be taken in the first visit. Once a final diagnosis is established, the parents shall be informed about the treatment plan including preventive measures, approximate schedule for accomplishing it and the rough estimate of the charges. The parents must sign a consent form prior to starting actual treatment.

The dentist should keep small goals and achieve them first. Always, start with shaking hands, welcoming the child warmly and starting a conversation with him/her. (Never mind if there is no response!) The conversation should revolve around the topics of interest to a child such as schoolmates, cartoons, games, etc. Showing them some photographs/computer-images of smiling children taking dental treatment (e.g. a child taking a ride in the dental chair, a child watching himself/herself with a mouth - mirror), use of intra-oral camera for showing decayed (black) teeth are some examples of initiating interactions. The use of a TV set displaying cartoon-films in front of dental chair has helped the author in making children comfortable in the chair. Also, usually children enjoy watching themselves on the TV screen (with a camera attached to the TV set).

If no emergency care is required, following procedures can be started in the first visit (Figures 6.2 to 6.5):

1. Examination
2. Counseling of parents in relation to prevention of dental diseases
3. Taking radiographs (one or more depending upon the co-operation)
4. Brushing demonstration (on models/on screen)
5. Introduction to dental armamentarium with use of euphemisms; e.g.: Use of air-water syringe as cleaning tools, Air-rotor hand piece as tooth-shower, etc.

It is advisable that one or both the parents remain present in the operatory during the first dental visit of any child. However, for subsequent visits we should decide our policy about separation parents/ requirements of parents during certain procedures and explain the same to them.

A Few things that need to be avoided in the first visit:

1. Do not start any treatment unless it is an emergency (especially for children below 5 years of age).
2. Do not use force for anything. Use minimum restraints (such as a young child on the lap of a parent) only for a good examination.
3. Don't promise parents about a child's co-operation. Assure them that only a proper protocol of behavioral management methods brings about cooperation in a child.
4. Avoid discussing things like pain, injections, bleeding, etc. in front of children.

I have summarized a few tricky situations, which are experienced by all of us, some time or the other. A more careful and skillful approach is required to manage them.

Situation	*How to Manage*
Situation 1: A child not ready to come to the clinic. Either informed about the same over phone or in person by parents	Ask the parents to meet you without the child. Discuss your protocol of child management with them. Ask them to casually get the child to the clinic once without any intention of examination and treatment.
Situation 2: A child not ready to enter the Clinic; crying and throwing tantrums at the door or in the waiting room.	Do not panic. Let the parents as well as the other people in the waiting feel that you are not affected by it! Once the child is inside the operatory, carry out a brief examination and advise parents to come back prepared for another visit. Explain them that you need to spend time with the child, use behavior management techniques such as *TSD* (Tell-show-Do), Modeling and if required, separating him/her from them. Start conversation with the child even if there is no response.
Situation 3: A child not ready to sit in the dental chair.	Start with parental counseling as in situation 2. Modeling, Use of a TV camera or some interesting object in front of the chair may help.
Situation 4: A child with previous negative/traumatic experience with a dentist: Dental phobia.	Most difficult to manage, TSD (Tell-Show-Do), modeling and several sessions to modify behavior are necessary. Best managed by Pediatric Dentists only.
Situation 5: A child from situation 1, 2, 3, or 4 and requiring some emergency care-abscess drainage, RCO for drainage, RCO for drainage or management of traumatic injury.	Best managed by Pediatric Dentists only. Explain to the parents the need to start treatment urgently and the possibility of the problems of cooperation. At times, strict measures such as physical restraints, voice control may be necessary. Consider pharmacological management in a hospital set-up if feasible.
Situation 6: Parents insisting on specific treatment. Extraction, when RCT possible, for instance, or treatment of only anterior teeth. Refusing to comply with step-by-step protocol (such as X-ray) small restorations, fluoride applications first and RCT/extractions later). *"aajhi daat nikaal do.....(please extract the tooth today)"* category.	Tell the parents that the treatment have to be performed in different phases. During initial visits, the child may not cooperate for a treatment like 'extraction', however, after undergoing initial treatments like scaling, fluoride application or a small restoration; would develop trust and confidence in the dental team and thus would accept the complicated treatments such as extraction or pulp therapy better. Do not carry out any procedure for which a child is not ready using force on parent's insistence (unless of course it is an emergency).
Situation 7: Parents insisting on staying in the operatory during treatment, want to hold hands of the child.	Explain parents that separation establishes a better rapport with the child, and the 1:1 communication between the child and the dentist is the key to successful management of children. Also tell them that their anxieties as well as instructions (apart from the doctor's) may create confusion in the child's mind and hinder smooth delivery of care. The child must get undivided attention of the doctor and the staff, which in their presence may be difficult to achieve.

Contd...

Contd...

Situation 8: Parents complaining about child's behavior. "Doctor, isko injection de do, yeh daat saaf nahi kartaa hai." *("Doctor, give him an injection; he does not brush his teeth.").* In other words, the child brought to us for punishment!	Explain the parents that your job is not of punishing a child but is that of developing a positive attitude in a child's mind about dental care.

Figure 6.2: Initial oral examination on parent's lap with minimal restraints

Figure 6.3: Brushing demonstration

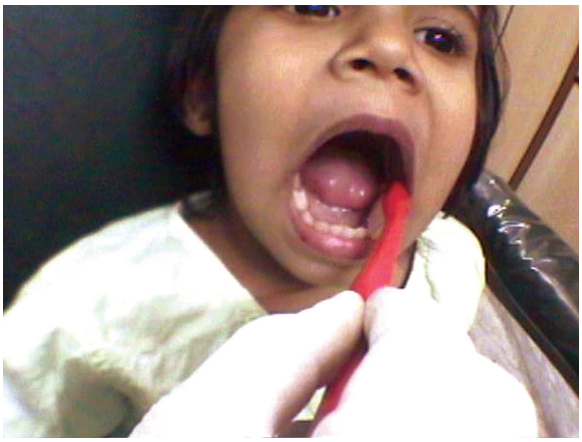

Figure 6.4: Brushing child's teeth: start with an object familiar to the child

Figure 6.5: Showing photographs on screen can create interest in the mind of a child

The situations discussed above are only a few examples of behavioral problems that can be encountered in the first visit. The suggestions for managing the same are only indicative and a certain flexibility and individual skill play important roles in tackling these problems.

Wishing a child "bye-bye" and handing over a small gift/toy (and no chocolates please) can bring back the smile on the child's face while departing. The first visit may be summed up with the planning for the subsequent one. For example, if an uncooperative child is to be scheduled for his restorative

work, have his/her appointment after a cooperative child who can be *modeled* for a certain procedure. It is important to plan procedures requiring minimal cooperation initially, and the complicated ones later.

It is a good idea to have a separate session of pediatric patients in a busy general practice (once or twice a week, including Saturday or a day convenient to most children and parents). This helps the doctor as well as the staff prepare better for the work.

It is a time investment and at times a very demanding task to achieve a child's confidence. The first impression (though is not always the last) of a dentist in a child's mind does have an impact on his/her behavior in subsequent visits. If we have begun well, it's definitely an overall rewarding and satisfying experience to treat children.

7

CHAPTER

Should Parents Remain with Children During their Dental Treatment?

Dentistry for children depends a great deal on the dentist's communication with the child as well as the parent/s. As aptly described by Gerald Z. Wright in the Pedodontic Treatment Triangle concept, it is the reciprocal communication between the dentist and the child-parent (1:2), with the child as the focus of attention, brings about necessary child-cooperation for the dental treatment (Figure 7.1). Although, the parents can help the dentist render dental care to children by preparing them better at home prior to their dental visits, their presence in the operatory while the child undergoes treatment may not always be desirable.

In the literature, the issue of whether to retain parent/s in the operatory or not, has been widely debated. Some opinions are in favor of retaining them throughout; and some are against. Also, according to a few authors, there cannot be a rule regarding this issue, although some believe that there can be

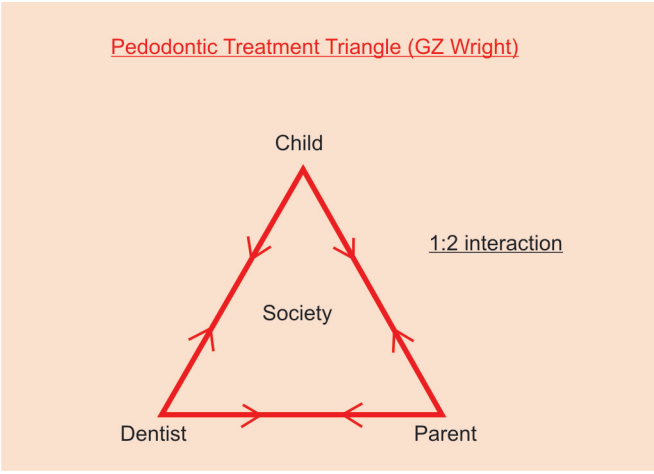

Figure 7.1: Pedodontic treatment triangle by GZ Wright

an 'office policy' clearly mentioning whether the parent/s be with children in the operatory or not. Also, many dentists feel that it is the moral right of the parent/s to be with children at the time of their dental treatment, and they are against parent/s waiting outside. Some dentists though, are convinced that at times, removing parent/s from the operatory can help them carry out the child's dental treatment; feel inhibited to do so with authority.

The dentist must understand that the parental presence in the operatory has to be viewed in the child-behavioral perspective. The presence of parent/s can affect the child-behavior positively, negatively or insignificantly. Also, the 'parental separation' must be considered a behavior modification method that can be employed to achieve child-cooperation. Thus, a firm decision has to be made by a dentist regarding the same by the dentist in each and every child's case after assessing the child-behavior sufficiently. It has to be the decision of the dentist and not of the child and/or parent/s; whether parent/s stay in the operatory with the child or not.

A lot depends on how the children are prepared at home for their dental visits. It is important for us to inform and educate the parent/s well. The notice boards in the waiting room must carry instructions to parents before dental visits of children as well as certain post treatment instructions. Also, a booklet or a brochure as a pre-treatment communication can be mailed to parents beforehand or delivered to them soon as they enter. An important deterrent to seeking dental care is **fear of dentistry**. Often, parents threaten a child that the child would be taken to a doctor if he/she misbehaves or an injection would be given by the doctor for eating too many chocolates! A child, thus, is in a negative state of mind even before visiting a doctor or a dentist and associates dental visits with some punishment!

The presence of parent/s is absolutely essential with children for initial one or two visits when the dentist completes history, examination, diagnosis and treatment-planning (Figure 7.2). In the process, the dentist also gets a fair idea about the behavior of the child, pattern of parenting (normal, over-

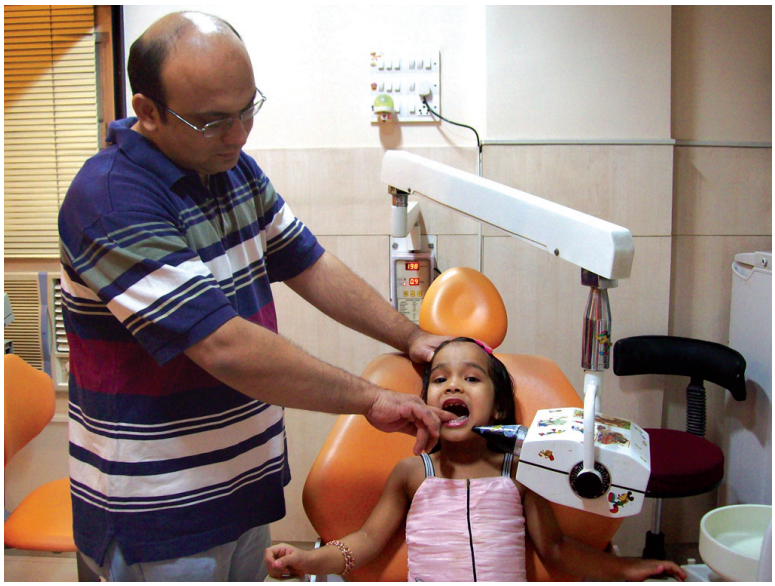

Figure 7.2: Parental presence is absolutely essential in the initial visits

indulgent, authoritative, etc.) and the anxieties of the parent/s. Also, the dentist comes to know how a child is being prepared at home for his/her dental visits. While explaining the treatment protocol, therefore, the dentist must explain parent/s how treating children is different from treating adults, and that they may be asked to wait outside while the child is being treated in the operatory. It is important that the parent/s show complete faith in the dentist's approach and consent to the same beforehand.

According to Pinkham, no child is competent in language before the second birthday and all normal children are competent in language after fourth birthday. This is because between ages 3-6 years, the fear of separation from parents, strangers, and new experiences diminishes, self control, conscience, aggression (either instrumental or hostile) develop. Children learn interaction with peers; self-discipline and values develop. Thus, this age-group children are susceptible to distraction, friendship, feeling guilty, praise, emotions of other people and even separation from parents. The children separated from parents have distinct individuality. Their behavior in absence of parents is much different from that in their parent's presence.

Advantages of Parental Separation

- Parental separation helps the dentist establish a better rapport with the child. The 1:1 communication between a child and the doctor is the key to successful dental treatment. In the presence of parent/s, the doctor's communication with a child may become 'indirect'; as the child would seek approval of parent/s for any instruction given by the dentist before following it.
- Many parents are themselves anxious about certain procedures. At times, parent/s cry while the child is being injected or a tooth is being extracted! The anxieties of parent/s as well as their instructions (apart from doctor's) may create confusion in the child's mind and hinder smooth delivery of care.
- Parent/s often repeat/s dentist's orders and add a few, too! This may confuse a child as the child has to comply with many demands!
- The child may do different things to please the dentist and the parent/s. These may become obstacles in the delivery of care.
- The child at times may demand holding mother's hand or sitting on mother's lap, and much more…. Remember, whenever a dentist meets with such demands, the child senses that he/she can dominate the proceedings and that makes the dentist's job even more difficult.
- Children also know the best ways to emotionally blackmail their parent/s! It is obviously difficult to manage a combination of a 'demanding' child and an 'anxious' parent without 'separation'!
- The doctor's attention may get divided in the presence of parent/s, thus influencing the child treatment adversely.
- Also, separation ensures that the child gets undivided attention of the doctor and he/she has no choice but to comply with the doctor's demands. Now, the dental surgeon can use the behavior modification to fullest extent.

The 'separation' should take place as comfortably as possible. At times, however, during the initial separation, the child starts crying sensing that the commotion would force the dentist bring in the parent/s. It must however be clear in the dentist's mind that calling back the parent would only complicate the matter, as the child has succeeded in his/her game-plan. A patient hearing to the crying, reiterating that the parent/s would not be brought in unless the child stops crying and undergoes treatment, often

solves the problem. The confidence on the part of the dental team is of utmost importance in dealing with such situations. Also, the parent/s along with the dentist must clearly instruct the child to be alone with the dental team. If the parent has promised a child that he/she would accompany him/her during the dental care and the dentist decides otherwise, the child would not feel convinced about the dentist's stand. It is important that the child is instructed by the parent in front of the dentist to be in the dental operatory alone and the parent would be waiting in the waiting area until the dentist's work is over. It is also the parent's responsibility to escort the child up to the dental chair and make him/her sit upon it before leaving. A child who says goodbye to his/her parent and wishes to remain on the chair alone, is almost always, a potentially cooperative child.

Many dentists find it difficult to instruct parent/s to leave the operatory before beginning the treatment of the child. The author is usually able to convince them through following conversation with the parent/s that takes place in the consulting room.

(Place: The discussion takes place in the consulting room before entering the operatory)

Dentist (to the child): Dear Aditya, I wish to show you today how I would be cleaning your teeth. I know you are a good boy and would follow my instructions. I want you to sit on the chair that I showed you on your last visit and then I shall be cleaning your teeth so that they look nice!

Dentist (to the parent/s): I know Aditya is a good boy. He had shown me all his teeth last time we met. I have told him about the requirement of cleaning his teeth. As he is a grown up child I expect that he sits on the dental chair by himself and cooperates for the treatment. I also promise him a nice gift if he does so.

Aditya (to the parent/s): Mom, will you be with me?

Aditya's Mother: Aditya, let's hear what the doctor uncle has to say.

Dentist (to the child): Aditya, I'm sure you sit in the school class room without your mom. Does she come there to sit with you? …. (To the mother): You may accompany him up to the chair and make him sit upon it. By then I would ask my assistant to start a cartoon program for Aditya. (To the child): Do you like Tom and Jerry? You know, I've decided to show you a cartoon serial of your choice when you sit on the chair.

The mother accompanies Aditya in the operatory and makes him sit on the chair.

Aditya: Mom, please be here and hold my hand.

Aditya's Mother: Aditya, I shall have to wait outside and will be coming in only when the doctor uncle calls me back. I'm sure if you listen to him and get teeth cleaned nicely, he will call me back soon. (Mother leaves.)

Now, Aditya either sits quietly on the chair and starts the interaction with the dentist or insists that the mother comes back and starts crying and attempts getting down from the chair.

The dentist firmly tells an assistant not to let him get down and instructs the child that the mother would not be called in unless he sits quietly on the chair and listens to the doctor. He is again reminded about getting a gift for a good behavior. He is also allowed to select the cartoon channel of his choice before dental care begins.

Aditya realizes that he is left with no choice but to comply with the dentist's demands. Also, he is attracted towards privileges like watching the cartoon serial and a reward later.

For some young children (typically 2-4 years of age), the presence of parents may have a positive influence on the treatment delivery in the initial visits. It is necessary to understand that the parents need to be instructed properly rather than separated in such instances. For example, they should be told to be spectators rather than participants in the treatment, and should not give instructions, express feelings and question the dentist during the treatment. At times, for young (pre-cooperative) children, parents can hold (restrain) the child on their lap for small duration procedures, such as consultation, taking radiographs, fluoride application and even restorations. A dentist should take into account these considerations as well, prior to making a decision of separating/retaining parents.

Finally, the decision of parental separation must be taken only in the interest of the child's dental treatment. The Behavioral Pedodontics aims at carrying out treatment effectively and efficiently in a child patient, and at the same time instilling in him/her a positive attitude towards dentistry. The decision to (or not to) separate parents must facilitate this objective.

Dr MS Muthu opines that all parents can remain present during the dental treatments of children. However, they need to be instructed properly before beginning any treatment.

The advantages of parental presence inside the operatory:

1. Generally parents want to accompany children in stressful situations.
2. Parents get an opportunity to view the reality of dentist's excellent care.
3. Parents see proof of the dentist's hard work and caring approach.
4. Parents are not left imagining dentist's interaction with their child.
5. Parents feel a part of the process of decision-making and care.
6. Health care messages can be delivered simultaneously to child and parent.
7. Dental care delivered can be described simultaneously to child and parent.
8. Communication time is reduced by decreased need for repeated messages.
9. Parents can reinforce dental health messages at home.
10. Dentists can get rapid informed consent for changes in treatment or management.
11. Dentists can get rapid feedback on parent's attitude and beliefs.
12. Very young children can get appropriate physical and psychological support.
13. Patient behavior and anxiety reduction can be improved.

As a practicing pediatric dentist I strongly recommend parental presence inside the operatory for the above mentioned reasons. The dentist's ability to treat children with empathy, kindness and patience is very well observed by the parents during these sessions. This helps them to strongly recommend us to other parents and relatives. This word of mouth is a very good practice builder for a practicing Pediatric dentist.

Dr Bhushan Pustake's view on parental presence in the dental operatory

- Parent's presence is required while treating very young children, as well as for all children during initial visits.
- The dentist should assess difference in behavior pattern of the child by asking the parent to sit in waiting room during second/subsequent appointment.

- Those parents whose presence makes the child more secure should stay in the operatory.
- Parents, who ask too many questions during treatment procedures, disturb the dentist by repeating instructions, or make scared gestures/cry should be made to sit in waiting room only.
- Some otherwise disobedient (pampered) children behave well in the absence of parents, while some fearful children may become uncontrollable in absence of parents.
- The dentist should not have a predetermined strategy. The decision has to be made for each individual.

Dr Amit Wanka writes about the 'use of separation from parents as a punishment':
One should consider it to be a form of contingency management (negative reinforcement) while unfortunately it frequently assumes the form of aversive conditioning. It could be the worst policy to adopt in a child, where genuine fear of the dental treatment exists and that its usage as a first line method in behavior modification is not at all warranted.

8

CHAPTER

Designing a Dental Clinic for Children

Children relate to surroundings and react to people around them much differently from adults. In order to treat them comfortably in the dental clinics, the approach of the dental clinic staff and the clinic atmosphere thus have an important role.

Children do have a 'place memory'. This can be both advantageous as well as disadvantageous to us. Children do not like to visit a place where they have experienced discomfort previously. Also, children like to be in places and catch up with people that are fun for them! Often, medical set-ups are stereotype and hence are not liked by children. A child-friendly dental set-up, thus, has to be a little different from a routine clinic.

Children behave, expect and imagine much differently from adults. Keeping this in mind, we have to design a clinic as well as formulate a system of functioning! Pleasant visits to the dental office promote the establishment of trust and confidence in a child that last a lifetime. The goal of a dental team must be to help all children ***feel*** **good** about visiting the dentist and to teach them how to care for their teeth. From the office design to the style of communication, the main concern of the dental team must be what is best for a child. Also, since about one third of the nations' population is children, the onus would always be with the general dental practitioners to treat children in their clinics and therefore their clinics must be 'child-friendly'. Furthermore, we live in a 'child-centered' society today and hence in the dental clinics too, children should be considered important visitors.

The dentist must not only have a child-friendly dental clinic design, but also possess a child-friendly approach in the clinical practice. Both verbal and non-verbal messages can help portray child-friendliness in a dental clinic. Often, many dentists overlook a few simple considerations that are required for child-friendliness in the design of the clinic and approach. A few of these are discussed below:

1. At times, the dental clinics are designed in such a manner that a child has no 'attractions' in the waiting area! The child has to remain seated along with other patients 'quietly' until his/her turn for the treatment comes!
2. The child in the waiting area is able to see a patient undergoing dental treatment inside (if there is such a glass partition that it does not isolate waiting area sufficiently from the operatory or if the door between the waiting room and the operatory frequently opens for movements of people).

3. Often, children accompanying their parents for the parent's dental treatments are allowed to watch the parents undergoing procedures such as administration of local anesthesia, extractions, etc. A child can imbibe fear and develop negative attitude towards dentistry.
4. At times, an operatory has two or more chair units without enough separation between the chair units; a child seated on one chair for his/her dental treatment can easily watch another patient being treated on the adjacent chair.

To make our dental clinics child-friendly, following aspects must be considered important.

1. Compartmentalization
2. Space-provision
3. Reception at the front desk
4. The waiting area
5. Attire and presentation of the clinic staff
6. Colors, smells and sounds
7. Instructions for children/parents
8. Readiness to accept children as they are
9. Gifts and rewards
10. Audio-visual aids for entertainment
11. Team approach

COMPARTMENTALIZATION

The clinic should have 4-5 compartments such as

- Reception/front desk
- Waiting area for parents which may or may not be an extension of play area for children
- Play area for children
- A consulting/Conference room
- Dental operatory

The dental operatory should be well isolated from other areas and the last place to be introduced to the child during the first visit. As the child enters the clinic, he/she must find the place attractive and not like another clinic or hospital that reminds him of pain and discomfort. The play area and the waiting area should keep children engaged in various activities until they are ready to be called in for the consultation.

The consulting room is the area where the dentist gets an opportunity to interact with parents with or without children. It should be separated from the operatory in such a manner that the child does not get to see the dental set-up or any other child undergoing dental treatment. If a child with past negative experience of dentistry walks in, most of the first visit routine can be completed in the consulting area itself; without the child being forced to sit on a dental chair. Only after the initial history taking and child's behavior assessment, must the child be escorted to the operatory along with parents. After a brief examination on the dental chair (the child may be sitting alone or with parents), the child may be accompanied back to the consultation area. The child may be allowed to play in the waiting/play area and the dentist may now continue the discussion with parents in absence of the child (Figures 8.1 to 8.7).

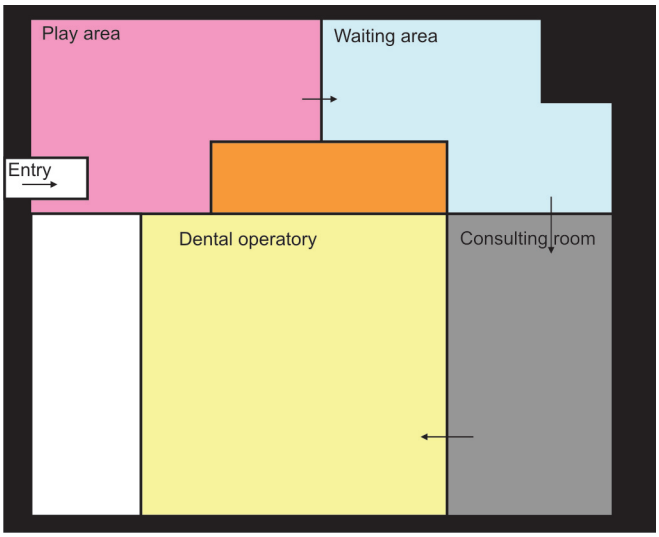

Figure 8.1: Clinic design (The orange area – front desk space, white area – assistance work space)

Figure 8.2: The reception and waiting area

Figure 8.3: A part of play area

Figure 8.4: A corner in play area

Figure 8.5: A notice board displaying instructions to parents

Figure 8.6: Consulting area and operatory with a sliding glass partition

SPACE PROVISION

Children require free, empty spaces to move around! They usually don't sit in one place. They often stand near windows, keep going near reception table or keep looking for interesting things around. Therefore, it is necessary to have at least a corner or two in the waiting area free without any chairs, corner tables and other things. A fish tank, a black board or a slide may be kept (depending upon

Figure 8.7: Dental operatory with assistant's work station separated

the space available) in such a corner. Also, remaining busy in an interesting activity helps relieve their anxiety by the time they are ready for their turn of dental check-up or treatment (Figures 8.1 to 8.3).

RECEPTION AT THE FRONT DESK

The receptionist should take interest and possess communication skills to deal with children effectively. She/he must call each and every child by his/her name and start conversation about the topics of his/her interests. Often, lack of interest on the part of the clinic staff to deal with children fails to generate any excitement in the child about what is going to happen to him/her. Also, many a time children in our society are threatened by their parents of a doctor's visit or of injections, for not behaving properly (or a dentist's visit for eating too many chocolates, for example)! Hence, before their initial dental visits, they are unsure of what is going to happen. If a friendly welcome, cheerful conversation and playful atmosphere greets a child, the child feels that he/she is no longer brought here for any punishment and that in turn, makes the job of the clinician easy!

THE WAITING AREA

It is necessary that the waiting time of a child in the dental clinic is pleasant. Often, children having to wait for long are bored by the time they are taken in for treatment. Also, a 5-10 minutes waiting time spent in playing can distract them from the fact that they have been brought for some treatment and is 'refreshing' for them. A child, who is in a happy mood just before entering the dental clinic operatory, is more likely to be cooperative for the treatment than a child who is either bored of waiting in a dull clinical waiting room or is anxious about dentistry. Only a few items such as a blackboard, a slide, some soft toys or games make a world of difference in child management in dental clinics (Figures 8.8 to 8.13).

Figure 8.8: A blackboard keeps children busy

Figure 8.9: A child in the play area

Figure 8.10: A slide can be simultaneously used by many children

Figure 8.11: Children at the fish tank

ATTIRE AND PRESENTATION OF THE CLINIC STAFF

According to Finn, *A good children's dentist has grace, skill, knowledge and intelligence.* A pediatric dentist or a dental surgeon has to play roles of behavior therapist and a counselor! A typical attire of dental staff comprising of cap, apron, mask and gloves is certainly not child-friendly! Make an attempt to meet a child casually, and preferably not around the dental chair. If possible, the consulting room

Figure 8.12: Children busy in their own world!

Figure 8.13: Parents often like child-friendly clinics

should be separated from the operatory; where the dentist first meets the child casually, takes a brief history, assesses the child's behavior and then directs the child to dental chair after touring the clinic and introducing other staff members as friends. The dental chair could also be either a 'Pedo' chair with attractive features or having a 'customized' look (Figures 8.14 and 8.15).

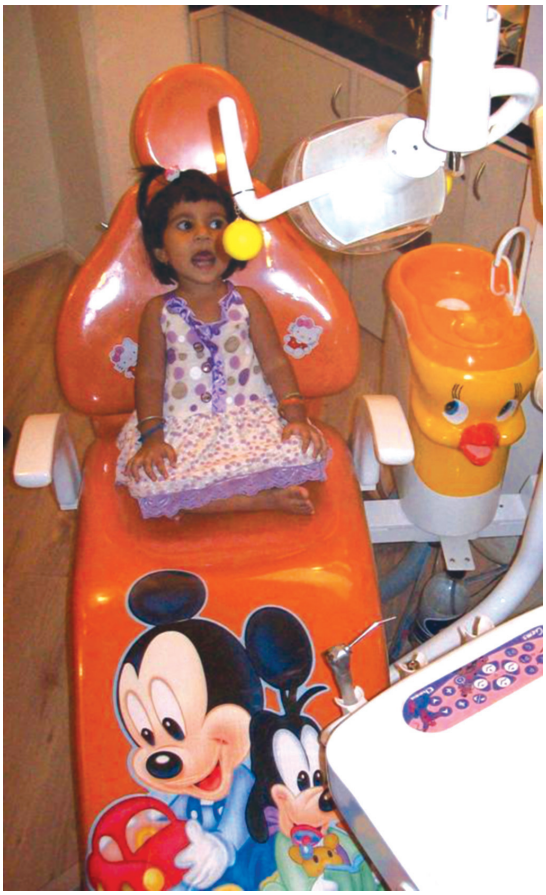

Figure 8.14: The 'Pedo' chair

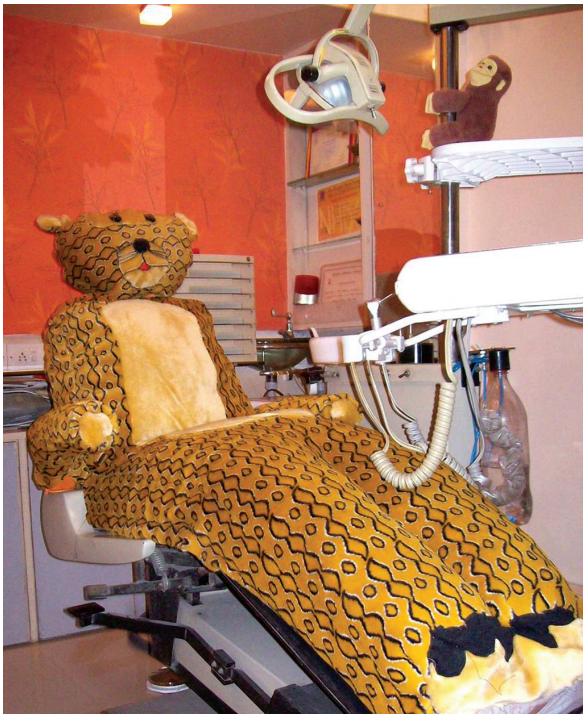

Figure 8.15: The customized 'Tiger' chair

COLORS, SMELLS AND SOUNDS

Children imagine and accept bold, bright fresh colors such as yellow, red, blue, green, orange, pink and may dislike grey, black and white, wooden, brown, etc. Also, smell of spirit, eugenol, acrylic, waxes may not really go well with children. The noise of an air-rotor handpiece, a compressor or an ultrasonic cleaner can be disturbing, too! Sudden movements of big arms of machines like X-ray machine, movements of the chair (specially the back-rest), or the tray arm coming too close are disliked by most children. It is important to understand that the child has been brought to a new place and these objections are valid. A proper planning and efficient working can help deal with them effectively.

The dentist can incorporate use of colorful gloves with mint smell, drapes of bright colors with cartoon pictures; allow the child to smell substances like local anesthesia gel or an impression material in order to make these things acceptable.

INSTRUCTIONS FOR CHILDREN/PARENTS

A lot depends on how the children are prepared at home for their dental visits. It is important for us to inform and educate them well. The notice boards in the waiting room must carry instructions to parents before dental visits of children as well as certain post treatment instructions. Also, a booklet or a brochure as a pre-treatment communication is made available to parents beforehand or delivered to them soon as they enter.

READINESS TO ACCEPT CHILDREN AS THEY ARE

Children love fun. They enjoy being admired, interacting with others and making their 'world' of people and nonliving things such as places, toys, games, cartoon films, etc. We have to accept them as they are and more importantly become a part of their world by communicating with them verbally as well as non-verbally (with an eye-to-eye contact, physical contact like shaking hands, patting on the back, giving a clap, etc.). The child can be asked to sing, tell stories, praised and the dental team must create opportunities to praise children. Children are also emotionally different and are susceptible for distraction, friendship, feeling guilty, praise, emotions of other people, etc. During initial visits, therefore, the dental team should focus on communicating with children properly to win their confidence and progress to carrying out treatments gradually. Also, children do cry at times! The dental staff should not panic due to a child crying. A child may cry due to various reasons in a dental clinic. Noise of certain machines, taste of certain medicines (anesthetic spray, for example), not wanting to get the treatment done, getting bored, are a few examples. As long as the child does not cry due to pain, there is nothing to worry at all. Crying does not cause any bodily harm to a child! We must be prepared to listen to it! However, with a proper protocol of child management followed, such 'crying' instances are rare.

GIFTS AND REWARDS

Give a child a token of appreciation for good work with a small gift at the conclusion of a visit. Never bribe them beforehand, although. Even calling a child a "good boy" or a "good girl" or drawing a 'star' on his/her hand can work like rewards and excite children and leave with them fond memories of dental visits. The dentist must have stocked a variety of gifts that can be handed over to children such as small cars, dolls, tattoos, stickers, pencils, erasers, toy animals, toothbrushes, crayons, medals, soft toys, balls, etc. Getting a different gift at each appointment is exciting for any child!

AUDIO-VISUAL AIDS FOR ENTERTAINMENT

Children forget themselves while watching cartoon films. The TV set in front of the dental chair can distract the child enough to forget the dental treatment while it is being carried out! Also, once a child is cooperative, it reduces the need of talking on the part of the dental team. It is a good idea to have a camera attached to a TV set displaying the child on the chair. Children do love watching themselves!

TEAM APPROACH

The whole team should work with a plan for each visit of a child. The plans however, should have certain flexibility. The initial (1-2) visits are usually sufficient for ascertaining the child cooperation

and diagnosis and treatment planning. Plan for the subsequent visit (if an uncooperative child is to be scheduled for his first restorative work, have his/her appointment after a cooperative child whom you can *model for* a certain procedure). It is important to plan procedures, which require minimal cooperation, initially; and the complicated ones later. It's a good idea to have a separate session of pediatric patients in a busy general practice. The team should work with a flexible approach, learn communication skills to deal with children effectively and be positive.

To make a clinic child-friendly, a dentist has to budget his expenses in two categories.

1. Fixed assets: A wall painting or wall paper, toys such as a slide, a fish tank, a black board, soft toys, wall hangings, etc.
2. Running expenditure: Gifts to be given to children, greeting cards to be sent on the birthdays for children, etc.

Both the capital and running costs incurred are quite low as compared to the overall establishment and running costs of dental clinics. Thus it is only a matter of desire on the part of a dentist that matters in making a clinic child-friendly.

"The foundation of practicing dentistry for children is the ability to guide them through their dental experiences" (McDonald). It is important to plant seeds for the future dental health early in life and to promote positive approach towards dentistry during childhood (children are keys to the future)! In order to facilitate this, a dental clinic must be child-friendly.

Photographs in Figures 8.2 to 8.11, 8.14 and 8.15 taken at Dr Ashwin Jawdekar's clinic – Little Smiles.
Photographs in Figures 8.12 and 8.13 taken at Dr MS Muthu's clinic – Pedo Planet.

9

CHAPTER

"Needle Phobia"—No More!

It is not easy to inject a child, even though it ensures pain relief! "Needle Phobia" does exist in children and at times in adults, too! Also, we as dental surgeons are scared to inject a child prior to dental treatment! (On a lighter note, we are needle-phobic, too!)

Local anesthesia is mandatory for most dental procedures. If we fail to achieve adequate anesthesia, we can rarely accomplish treatment with ease. The advantages of local anesthesia, therefore, need not be over-emphasized. It is an acquired skill of a dentist to administer local anesthesia to a child patient. The most crucial part of a pediatric dental procedure is the successful administration of local anesthesia since the cooperation of the child, and subsequently, the quality of dental treatment, depends on it.

WHY ARE CHILDREN SCARED OF INJECTIONS?

An important deterrent to seeking dental care is **fear of injections**. Often, parents threaten a child that the child would be taken to a doctor if he/she misbehaves or an injection would be given by the doctor for eating too many chocolates! Also, the FEAR associated with injections lowers the pain threshold and thus, the intensity of pain increases when it has to be experienced.

The **anxiety of parents** could be another important reason for a child's negative preparation of mind. Parents, family members, friends expressing their own concerns in front of children in relation to pain, bleeding, tooth removal, injections, etc. may influence a child negatively. At times, the presence of an anxious parent in the operatory can affect the administration of local anesthesia adversely, as the child in presence of such a parent would be obviously more worried and fearful.

A **past negative (painful) experience** is another factor associated with fear. However, many a time such an experience is not due to painful injections *per se*, but is due to lack of pre-treatment preparation of the child or lack of adequate pain control (either due to failed/inadequate anesthesia) during treatment. One must believe that only a good painless administration would restore the child's confidence in receiving local anesthesia. The following discussion outlines the necessary steps to be followed for the same.

PREPARATION OF PARENTS PRIOR TO LOCAL ANESTHESIA FOR CHILDREN

A discussion with parents prior to any procedure should help them prepare themselves better for a child's dental care. The same may preferably take place in absence of children. Certain instructions

need to be given to parents for better preparation of them and their children for receiving dental treatments; such as:

- Do not tell your child about pain, blood, injections, etc. in the first place.
- Don't tell him/her something like – " because you don't brush you teeth properly, doctor will give you an injection…" or "because you eat chocolates, your spoiled teeth will be removed by doctor"!
- Do not voice your own fears about dentistry (pain, blood, etc.) in front of children. Your dentist can answer your queries separately.
- Do not insist on starting the treatment in the first visit itself. Give your doctor enough time to talk to your child. The time spent initially on building rapport and gaining his/her confidence will in turn save the time required for treatment later.
- Don't promise him/her in advance about the time the doctor would take for the treatment, the pain he/she might get, etc. which can mislead him/her. Simply say you don't know.
- Report to doctor any past negative experience.

The author requests parents to wait outside the operatory during most dental treatments, including administration of local anesthesia to a child. This establishes a better rapport with the child. The 1:1 communication between a child and the doctor is the key to successful dental treatment. Also, as mentioned earlier, many parents are themselves anxious about certain procedures. Their anxieties as well as their instructions (apart from the doctor's) may create confusion in the child's mind and hinder smooth delivery of care. The child at times may demand holding his/her mother's hand or sitting on mother's lap, and much more…. Remember, whenever we meet with such demands, the child senses that he/she can dominate the proceedings and that makes our job even more difficult. Children also know the best ways to emotionally blackmail their parents! It is obviously difficult to manage a combination of a 'demanding' child and an 'anxious' parent without 'separation'! The 'separation' should take place as comfortably as possible. Therefore, it needs to be explained in a professional manner to the parent prior to the treatment and the parents must willingly agree to it. Also, separation ensures that the child gets undivided attention of the doctor and he/she has no choice but to comply with the doctor's demands. Now, the dental surgeon can use the behavior modification to the fullest efficiency.

While treating children, we must note that we are *behavior therapists* and not merely dentists. We must believe that if we use child management methods properly, 85-90% children can cooperate for all dental procedures (many of them enjoy them, too)! **Distraction** by engaging the child in conversation or by showing some interesting objects, or with TV set in front of dental chair/music being played; **modeling**, i.e. showing another child receiving dental treatment comfortably, demonstrating procedures (**Tell-Show-Do**) in simple words (using **Euphemisms** or substitute words), **rewarding** appropriate response by praising or giving gifts, etc. are a few examples of these methods. At times it may be necessary to **restrict** unwanted movements of children by holding their hands and stabilizing their heads. Also, it may be necessary to **modulate voice** to praise good behavior and discourage bad behavior. Only if the child is uncooperative after these methods have been attempted, the need for pharmacological technique (general anesthesia/sedation) arises. The same may be explained to parents appropriately.

The child must be made comfortable in the dental set-up. The dentist in the first couple of visits must focus on this aspect rather than carrying out much treatment. Simple procedures such as consultation and treatment planning, taking radiographs, brushing demonstration, fluoride applications, small restorations, etc. can be carried out prior to a treatment requiring administration of local anesthesia.

The child sitting in the chair in a relaxed manner and actively participating in a conversation with the clinic staff is more likely to accept local anesthesia with ease. The following step-by-step approach helps in a rather smooth administration of local anesthesia (Figures 9.1 to 9.10).

Figure 9.1: Imagine LA syringe being loaded in front of the child!

Figure 9.2: Tell-Show-'Smell'-Do for topical gel

Figure 9.3: Demonstration of topical spray

Figure 9.4: LA syringe being loaded behind the child

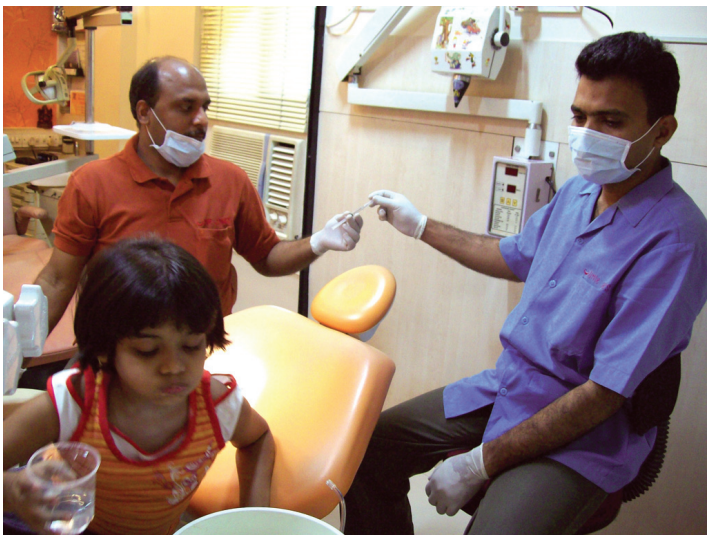

Figure 9.5: Transfer of needle syringe while the child rinsing her mouth

1. Explain the procedure to the child in brief, firm yet friendly manner. Tell him/her that you would be "cleaning" the tooth for which you need to "put medicine near the tooth to put the tooth to sleep". Also, you may tell him that it may hurt only as much as an ant/mosquito bite and lasts only a few seconds. (Avoid using word like injections, pain… Always ask your assistant for LA and not injections.) Avoid answering direct questions from a child such as "are you going to give me an injection "; or "are you going to remove my tooth". Answer confidently that you are going to first do as you explained ("cleaning" the tooth for which you need to "put medicine near the

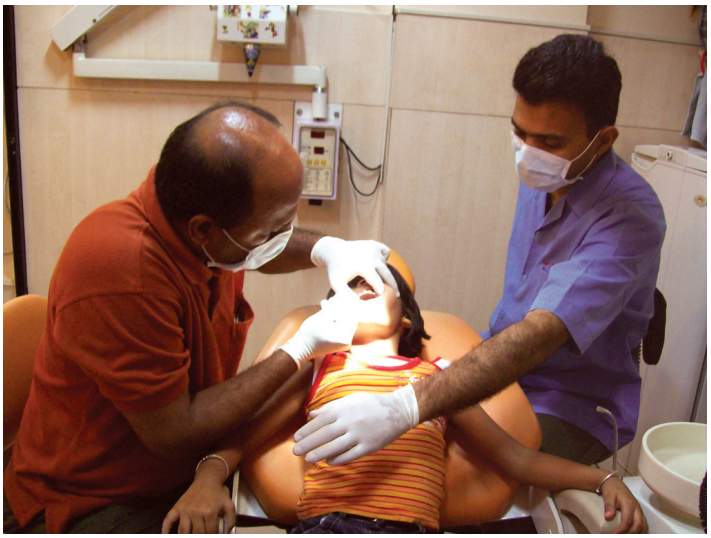

Figure 9.6: The child's vision shielded with operator's hand, assistant ready to prevent any movements

Figure 9.7: Administration of LA to a child

tooth to put the tooth to sleep") and decide the other things later! Reassure the child that nobody wants him/her to experience pain, however, for having the teeth problem-free, treatments are required that may involve only a little bit of pain which most children bear without much discomfort. (Remember, children do take pride in performing!)

2. Also, do not promise a child that he/she would not experience pain at all. The child might feel cheated even after a mild discomfort and would not trust you anymore. Just avoid discussing pain. Should you explain pain, it must involve reassuring the child that it would not be more than an

Figure 9.8: Asking child to rinse immediately after LA administration

Figure 9.9: Two assistants for restricting movements of a child

ant-bite or a mosquito-bite and it would be less only if he/she follows the doctor's instructions carefully, such as not moving hands/head.

3. Do not ask questions related to past negative experience, if any. Also, do not ask questions that would bring about apprehension; for example: "Do you want to get tooth removed?" or "Are you ready for an injection?"

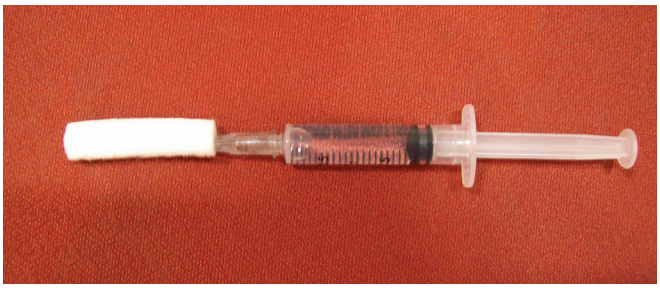

Figure 9.10: The needle hidden in a cotton roll

4. Ask 'leading' questions that would yield positive responses and direct the child to follow your instructions; for example: "Are you a good boy/girl?" "Do you wish to have good, problem-free teeth?" "Will you help me carry out treatments so that you have problem-free teeth?"
5. Give compliments and remarks that boost confidence; for example: "You are a grown-up child." "I like children who listen to me and help me in what I do for fixing problems of their teeth."
6. Involve child in some imagination. Tell the child that he/she can receive a gift (from you) or a reward (may be an ice-cream of his choice) from parents only after successful completion of treatment (if he/she behaves well). The discussion around such topics is anxiety-relieving.
7. Do not over-prepare a child. If the child has been previously treated by you and is an otherwise a cooperative child, let him/her feel that this is just another minor procedure.
8. Always use a topical anesthesia; either a flavored jelly or spray.
9. Use the thinnest gauge needle (27-30 G for infiltration, 26-27 G for blocks).
10. Do not show the child the syringe while being loaded. Do not wave the needle in front of the child. The assistant should transfer the syringe to the dentist without the child knowing about it! Screen the child's vision with your palm, however, do not cover eyes entirely. (In the author's opinion cartridge syringes are difficult to hide.) The needle may be hidden in a sterile cotton roll that can be disengaged just before injecting.
11. Should the child see the needle, DO NOT PANIC. Just demonstrate how it works by ejecting a few drops on hand. Tell him/her that seeing it only increases pain.
12. Have an assistant standing on the left side close enough to restrict any unwanted movements. Another assistant may stand towards the feet for the same. However, do not forcibly hold the child prior to injection.
13. While administering local anesthesia, a few drops are sufficient to anesthetize mucosa. After a couple of minutes, the required dose may be injected. (The child should not have seen the needle in first insertion, however.)
14. Distract the child by continuously talking with/him her during the injection; or alternatively ask the child to count numbers 1-30, while the tooth is being put to sleep (not aloud, of course)! It is important for a dentist to have thought of what to speak to a child while administering local anesthesia. Talking to a child spontaneously without any prior preparation could be difficult.
15. Immediately following administration, ask the child to rinse to his/her mouth thoroughly. This will not only remove the taste of the anesthetic solution but also divert the child's attention.

16. Once pain control is achieved with adequate anesthesia, it is advisable to carry out maximum work; for example: quadrant/half arch dental treatments after a pterygomandibular block, single visit endodontic treatment, etc.
17. Avoid giving local anesthesia in the next visit as far as possible (particularly when a child's first experience of receiving the same has not been satisfactory or if extensive work has been accomplished during the previous visit). Carrying out lighter work such as post-endodontic restorations or filling a small cavity can help a child forget a past traumatic experience, if any.
18. At times, voice intonation and/or physically restraining the child may be necessary for successful administration of local anesthesia. However, pacify the child on completion of the procedure and praise good behavior. Explain to the child that he/she had been restrained from moving so as not to injure himself/herself.
19. The above mentioned steps must be followed even in the case of a definitely positive child. By this a dentist can get accustomed to deal with any child in a systematic manner, and this preparation makes the task simpler in case of an uncooperative child.

Difficult Situations

Problem	*Possible way of managing*
• Frequent administrations for full mouth rehabilitation cases	Schedule work in such a manner that you need to give local anesthesia on alternate visits. Also, change the topical anesthetic (switch over form spray to jelly) to remove 'associated' fear.
• Palatal infiltrations	Avoid for pulp therapy and mobile extractions that can be managed with supragingival grip. Inject minimum quantity. An injection through interdental papilla with the needle held perpendicular to it can actually anesthetize palatal gingiva. Avoid carrying out procedures requiring palatal anesthesia in the initial visits.
• Anesthetizing young permanent teeth for pulp therapy	Wait for good 15-20 minutes after injecting; explain the child that you have tried your best to put the tooth to sleep but it has not worked well. Ask the child to bear with the pain for a while until additional intrapulpal or intraligamentary anesthesia is administered. Often, children exhibit maturity and cope up with the situation.
• Failure of local anesthesia	Rare, but may demand other pharmacological methods

Remember

Never fear giving local anesthesia. Avoid starting any painful treatment without proper anesthesia. The child management and the pain management are interdependent. If one fails to achieve local anesthesia, he/she can rarely succeed in doing a good job. However, if one successfully administers local anesthesia, half the battle is won!

Dr MS Muthu describes the technique of LA administration as follows (Figure 9.11):
The technique integrates Tell-Show-Do, Distraction and Euphemisms effectively. Hence, it is called as "TeDiE" technique. The TeDiE technique is explained below as it is carried out on a child:

First let me explain what I am going to do. I would like to remove your tooth without hurting you and without any pain. For this you should cooperate and listen to what I say. As the first step I will put your tooth to sleep, so that it cannot perceive pain. I can do this very well by giving a medicine (the author intentionally avoids the word injection). However, when I give this medicine it can hurt you like an ant bite or a mosquito bite (can be demonstrated by a slight pinch on the ventral surface of the forearm of the child). To give medicine very effectively (without much of pain) and put your tooth to sleep you have to do two important things for me: You should not shake your head or move when I am giving the medicine. If you shake your head, it can hurt more. I am going to use a spray before the medicine which is slightly bitter. When I am spraying, you should close your eyes and extend your neck (look up). If the spray touches the eyes it can cause burning sensation (a demonstration of the spray on the child's palm or dorsal surface of the forearm is useful occasionally). However, this spray will help you not to have pain when I am giving medicine to put your tooth to sleep. You have to allow me to put the medicine (instead of the word injection) as soon as the spray is sprayed. Delaying after the spray is given can necessitate repeating the spray process. As soon as the medicine is given I will give you water to rinse your mouth. Is that okay? Repeat the two instructions again before starting the local anesthetic procedure. Repetition of the instructions helps the child to understand what is going to happen to him. Now once the child is ready, the local anesthetic spray is sprayed and the child extends the neck and closes his eyes. The dental assistant passes the syringe below the extended neck to the dentist. Then the dentist immediately inserts the needle into the sprayed area and continues verbal reinforcement (like: it is over, don't move, once it is done your tooth will sleep and we can remove without any pain, you will get a new tooth there or any other conversation appropriate for the situation) and slowly deposits the solution continuing the conversation throughout the deposition. Immediately after this, child is instructed to wash the mouth with water for 2-3 times.

Figure 9.11: The TeDiE technique

Limitations of TeDiE Technique

Occasionally, the bitterness of the LA solution can make a younger child get up and spit saliva. It is better to avoid using the spray in children less than 3 to 3.5 years. Use of a flavored gel is preferred.

Some children tend to look up and search for the needle in the assistant's or dentist's hand. Some children can move during the procedure in spite of repeated verbal instructions.

Advantages of TeDiE Technique

Most often or almost always children do not see the needle at all as it is passed below the neck by the assistant (and their eyes are closed).

Children close their eyes and the needle is inserted immediately after the spray, hence the prick of the needle is rarely felt.

As it has been explained clearly (repeated) prior to the procedure, they do not move during the procedure as it can hurt them.

As they do not move during the procedure which gives sufficient time for the dentist to deposit the solution slowly, minimizing the discomfort further. Many a time the entire procedure is carried out within 60-90 seconds.

Almost complete description is explained prior to the procedure; children know what is expected of them.

It can be taught to any dentist who is getting trained for treating children.

The topical spray produces an almost instant numbness; where the waiting period for pricking is negligible.

The continuous verbal reinforcements during the deposition of LA solution by the dentist effectively distract children.

Dr Bhushan Pustake describes the technique of LA administration as follows:

Usually, following conversation takes place between me and the child prior to LA administration:

Me : Do you know you have a bad tooth full of germs in your mouth. These germs bite your tooth everyday to give you pain. Isn't it?

Child : Yes uncle.

Me : We can remove those bad germs and stop tooth pain.

Child : Oh really? How? What will you do?

Me : Really. But for that, both of us have to help each other.
(The child may be a bit confused about what help requirement at this stage.)

Me : See, there are too many germs in your tooth. Because they like your tooth, they are not ready to come out of it. I would put a medicine near your tooth which is a 'sleeping medicine'. As soon as that medicine enters the germs' mouth, they will be asleep. Then we will catch them and throw them out. If we try to catch and throw them without putting 'sleeping medicine', they will run around and will not come out. Let me give you an example…. When you are awake and somebody picks you up and keeps you from one place to another don't you come to know?

Child : Yes uncle.

Me : But at night, when you are asleep if mummy or papa picks you up and keeps you to another bed, do you get to know that?
Child : No uncle, I get to know about it only in morning.
Me : Yes. The same happens with these germs. We can take them out without their knowledge if they are sleeping. OK?
Child : OK uncle. But what medicine you will apply, is that painful?
Me : See, that's a sleeping medicine, and that's all. First tell me, are you ready to help me?
Child : What help?
Me : You can help me by keeping mouth open mouth and closing eyes because if the medicine goes into your eyes, you would be sleeping here! Where do you want to sleep- here or at home?
Child : At home.
Dentist : Also, you must keep quiet and not shout; otherwise the germs will come to know that we are coming with the sleeping medicine. And most importantly, you should not move at all so that the medicine can be applied at right place. I know that all good and brave children like you follow these instructions. Are you a good boy?
Child : Yes uncle.
Me : And yes, it would hurt you this much, like a mosquito bite (a small pinch on the child's palm or cheek).

All this communication must take place in a casual manner. The dentist should confidently talk to the child in such a manner that the child is able to correlate this experience with minor painful episodes in routine life like mosquito bites, due to fall while playing, etc. which do not create any negative impression regarding the incidence. Moreover, the dentist should challenge the child's ego at this stage by saying that good/brave children can do it easily.

This conversation may take 10-15 min. Once it is done, LA administration can usually be done without any hassles.

Importants steps of LA administration

1. Topical anesthesia application is a must. (The gel is preferred for inferior alveolar block and PSA block, and the spray is preferred for anterior region of mouth.)
2. Use thinner needle like 26 g, 30 g for infiltrations and 25 g/26 g/27 g needles for blocks.
3. Insert the needle slowly and deposit LA solution slowly while talking to the child continuously. Sudden deposition of LA solution is painful. Withdrawal of needle also should be slow.
4. The assistant should be ready to hold the child's hands to support the child/prevent unnecessary movement.

10
CHAPTER

Pain Management in Pediatric Dentistry

The dental experience is often believed to be associated with pain. Many dental procedures are considered painful such as drilling teeth, injections, extractions of teeth, root canal treatments, etc. Parents, who have had past painful or traumatic dental experiences, often feel that the children would have to go through the same. Even if a child does not have a past experience, he or she may be informed about 'pain' in relation to dentistry both appropriately and inappropriately. The dental experience may not always be enjoyable, but certainly is not always painful. There are many unpleasant stimuli in relation to various dental situations which are actually much less intense and cannot be termed as 'painful'.

PAIN Vs DISCOMFORT

The dental experience may include a variety of discomforts such as the sensitivity or vibrations of drilling, retraction of cheek, lips, placement of suction tip on mucosal surface, feeling of tightness after cementation of a steel crown, placement of rubber dam clamp, etc. These experiences often make the child uncomfortable even in absence of real pain. Also, sometimes it is not easy to identify the cause of discomfort for a child in absence of pain. The dentist has to be good at managing both the 'pain' factor and the 'discomfort' factor.

IS DENTAL TREATMENT PAINFUL FOR CHILDREN?

The dental treatments are not entirely 'pain-free'! The pain in dental procedures such as local anesthesia administration can be bearable for most patients, however, even with the best practices of pain management in dental clinics, possibility of pain-experience for a child cannot be ruled out.

Whether the dental care is painful or not is determined by certain factors mentioned below:

1. Pain perception of children
2. Pain tolerance of children
3. Fears of children and pain
4. Use of anesthesia and analgesia in pain management

5. Successful behavior modification of the child
6. The dentist's approach to the child's pain

Often, these factors are related to each other and are associated with each other.

Pain Perception of Children

If a child imagines or is told to expect pain, even a minor discomfort would be perceived as pain by him/her. In absence of such a notion, however, even pain would often be well tolerated by a child many times. There are factors that affect pain perception of the child such as:

a. Past experience of pain
b. Information given to the child regarding dentistry and associated pain by peers and family members

The past experience of pain, particularly in a dental clinic or a medical setup may modify the child's pain perception. The objective fear of pain reduces pain threshold of a child and thus the child is always anticipating pain even while the dentist is carrying out absolutely non-traumatic work such as placing a cotton roll in mouth or only retracting the tongue or cheek with an instrument such as a mouth mirror.

Parents, many a time, discuss their experiences of pain in front of children. Also, many parents threaten the children that they would be taken to the dentist/doctor if they misbehave. In certain societies, thus, doctors and dentists are the people feared most by the children!

It is important for the dentist to know what the child is expecting in a dental situation and whether the child's perception of pain is influenced by the above mentioned factors.

Pain Tolerance of Children

Each child has a different tolerance capacity for pain. The dentist has to accept this fact. There is no 'generalization' possible regarding how much pain should be acceptable and bearable to all children. The child's genuine inability to tolerate a certain pain must be respected by the dentist and a solution for the pain relief must be offered. Just because most children of a certain age accept certain procedures, the same must not be forced upon those who cannot receive them due to poor tolerance.

Fears of Children and Pain

There are various associations of fear and pain. An important deterrent to seeking dental care is the child's **fear of dentistry.** Children with fear of dentistry often have low pain threshold and thereby less tolerance. They also anticipate pain unnecessarily and react to non-painful stimuli as if they have experienced pain! However, not all children with fear are intolerant to pain and not always does a painful experience sets in fear. For example, there are extremely cooperative children who can go through most dental procedures without any problems but are 'needle phobic'. Hiding the needle, not mentioning words such as 'injections', distraction while administering local anesthesia and if required desensitization often take care of this problem. Also, some children do cry in pain when the local anesthesia is administered (on sites such as palatal mucosa, inferior alveolar nerve block), but can be comforted easily (if they have been behaviorally modified and are otherwise cooperative) and do not necessarily retain pain memory and develop fear of the same.

It is always more difficult to manage fears than pain, hence, the behavior management skills of the dentist come first in the pain management and subsequent to that are the anesthetics and analgesics!

Use of Anesthesia and Analgesia in Pain Management

It is beyond the scope of this text to discuss the drugs used and their advantages and disadvantages. It is imperative that the dentist uses appropriate anesthesia and analgesia in any dental procedure and for even post-treatment relief. No dental treatment can commence if the anesthesia is not adequate and failure to administer local anesthesia prior to a potentially painful treatment is detrimental to the quality of treatment as well as child cooperation.

Successful Behavior Modification of the Child

Successful behavior modification is a prerequisite to pain management. Prior to taking necessary steps in pain management (such as administration of LA) the dentist must ask himself/herself questions such as: Is the child cooperative for dental treatment? Does the child give sufficient attention to the dentist and comply with all instructions? While in the dental chair, is he/she a 'conditioned' child?

A dentist with effective child management skills, at times, can induce such relaxation in a child patient that the child is almost asleep or as good as asleep while the treatment is being carried out! *Malamed* used a word 'iatrosedation' for this phenomenon. This author likes to call the same "conditioning". (The behavior of a conditioned child is almost similar to a person who is 'hypnotized'!) (Figures 10.1 and 10.2).

Figure 10.1: A 'conditioned' child

Figure 10.2: A 'conditioned' child allowing dentist to perform procedure

The Dentist's Approach to the Child's Pain

This factor needs elaborate discussion because the dentist has to work on developing an approach towards understanding and management of the child's pain in relation to dentistry.

Following are the guidelines for inculcating the right approach towards the child's pain:

a. Never take any child for granted. All children are different and have different pain tolerance, pain perceptions, fears and anxieties.
b. Have a detailed talk with parents regarding the child's past experiences of pain (particularly in a dental/medical situation), in the absence of the child.
c. Learn about the parent's anxieties and how they have influenced the child's behavior.
d. Win the confidence of the child. Assure the child that nobody wants him/her to experience any pain; however, do not assure that he/she will never experience any pain. Explain him/her that if he/she follows all instructions given by the dentist, the pain would be minimal and bearable.
e. Inform the child that he/she can let you know if there is any pain, by raising a hand. If a child unnecessarily raises a hand tell him/her that you would not understand if there is real pain.
f. If the child experiences real pain and tells you that, accept it and offer sympathy. Do not dismiss the child's remarks. Tell him/her that only occasionally he/she might experience something like that, and you would do your best to prevent further pain and would want the child to help you for that by following all necessary instructions.
g. The administration of local anesthesia is an acquired skill. It has to be learnt and practiced well. There is no real alternative to it in the dental clinic.
h. Understand the limitations of pain control. For example, palatal injections are painful; local anesthetics do not attain good effect in presence of inflammation; some emergency procedures may have to

be carried out even without adequate pain control considering overall relief that it would bring about (abscess drainage in a severe acute dentoalveolar abscess), etc.

i. Do not feel guilty if the child cries and experiences pain despite your best efforts of administering local anesthesia and child management. Do not loose faith in the behavior modification methods due to a few failed attempts.
j. Prescribe the analgesic drugs in proper dosages and strengths.
k. Inform the child and the parent regarding possibility of post-treatment pain and how to take care of the same. An unexpected pain bothers a patient more than the expected pain.
l. The dentist must not only manage pain, but also reduce discomfort and fear. Syringe-loaded materials such as sealants, endodontic medicaments, etc. often simulate injections. A child often needs to be explained about them befor using them. The placement of cotton rolls, suction tips, mouth-props could result in mild discomfort, too! The dentist must take utmost care in causing as less discomfort as possible; for example: the cotton roll should be of proper size and held in a correct manner, the suction tip should not touch loose mucosa, the mouth-prop should never rest on a painful, mobile tooth. Also, situations that can evoke fear such as heating a burnisher to seal gutta-percha points, should be carried out without the child noticing it (Figures 10.3 to 10.9).

Figure 10.3: Procedure like burnisher heating should not be seen by the child

Figure 10.4: Materials in syringe form simulate injections

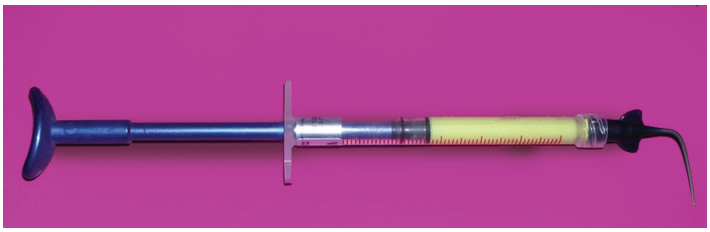

Figure 10.5: Children should be explained that these are not injections

Figure 10.6: Carrying a cotton pack in extraction forcep tips

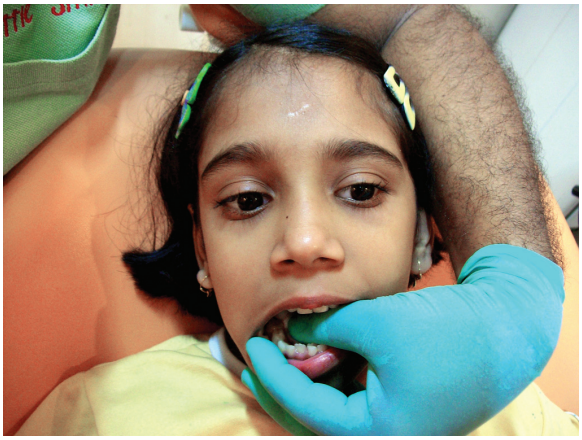

Figure 10.7: A cotton roll held by the operator in mandibular right quadrant

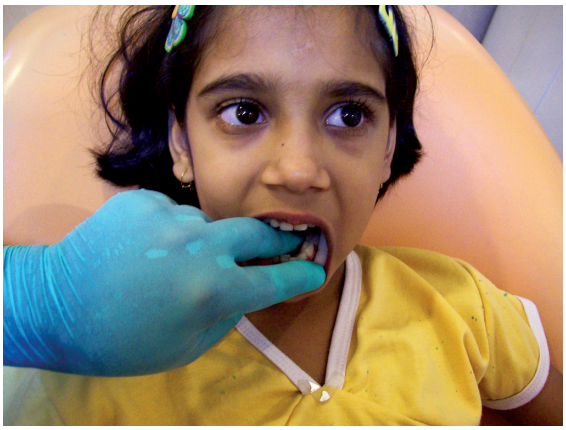

Figure 10.8: A cotton roll held by the operator in mandibular left quadrant

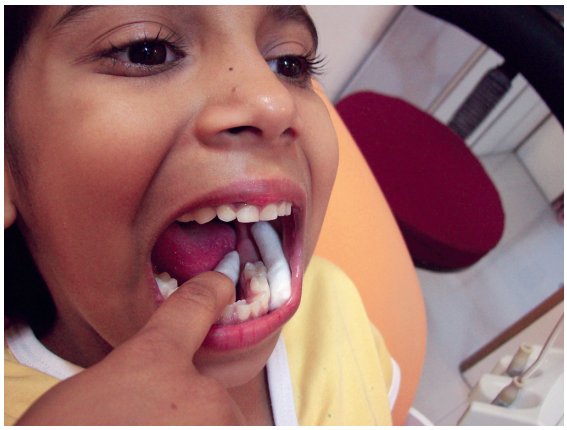

Figure 10.9: A cotton roll held by the child in mandibular left quadrant

CONSEQUENCES OF PAIN EXPERIENCE

A painful experience may lead to either temporary loss of cooperation or even a permanent loss of cooperation if the child has not been behaviorally modified. The dentist has to anticipate what effect would be there in the child if he/she experiences pain. It may be required to be extra-cautious in not repeating a painful experience for a couple of visits after a relatively painful one so that the child does not view dentistry negatively. (For example, if a child has undergone an extraction of a maxillary tooth for which palatal infiltration was given, on the next couple of visits, only procedures with minimal/no pain such as post-endodontic restoration, must be taken up so as to allow the child to forget the traumatic experience.)

The 'intentions' of the dental team must be clear to the parents (and even to the children). It is important for them to know that we care for their pain. The dentist wants the child to have pain-free and healthy teeth; the treatment-related pain and discomfort are at times unavoidable factors in achieving this objective.

11
CHAPTER

Management of Children with Extremely Disruptive Child Behavior in Dental Clinic

The delivery of dental care to a child is almost always dependent on his/her behavior. Behavior modification is primarily aimed at providing a child quality dental care in a comfortable manner. If the child behavior is disruptive, however, the same is not possible.

The disruptive child behavior results due to a variety of reasons in a dental clinic:

1. The child failing to understand the reason for his/her dental care
2. Fear of either a past negative experience with a doctor/dentist (objective fear) or strange, unknown environment (subjective fear)
3. Experiencing pain or discomfort midway
4. Knowledge that disruptive behavior may result in stoppage of procedure
5. Other temporary reasons such as a bad mood, tiredness, not able to concentrate if hungry, wanting to do something else, etc.

The Child Failing to Understand the Reason for his/her Dental Care

The child's parents always make a decision of taking the child to a dentist. A young child may not understand what parents mean by going to a dentist or getting teeth fixed. Even though a child is explained about what the dentist may do to his/her teeth at the clinic, the child's imagination may not be sufficiently developed to give him/her an idea about what would happen in the dental clinic.

Why should a child want to get the dental treatment done? A child may want to have better looking teeth or pain-free teeth; however, he/she is seldom ready for the dental treatment as such. The dentist as well as the parents must instill positive attitude in the child's mind regarding dental care during initial dental visits. The child has to be convinced that the people at the dental office are good persons and are harmless. Only then, the reason for his/her dental care such as treatment of decayed teeth could be made apparent to the child. The child may look forward to have his/her teeth fixed only if people

around him/her at the dental clinic appear before him/her in a friendly manner, praise him/her and also allow him/her certain privileges. A child who is not sure of what is going around him/her throws a tantrum just to get rid of it.

Fear of a Past Negative Experience with a Doctor/Dentist (Objective Fear) or Strange, Unknown Environment (Subjective Fear)

There is an issue that is of concern to the child: Will I get pain? If a past visit is associated with bad memories of pain, the child now wants to avoid it from the word go. An associated fear of this kind may often result in disruptive behavior particularly when the dentist fails to assess and modify child behavior sufficiently prior to starting treatment. This type of disruptive behavior comes with a strong objection to all dental care and is difficult to control.

Experiencing Pain or Discomfort Midway

It is important to understand the contribution of pain factor along with the fear factor in precipitating disruptive behavior. Experiencing pain is the most valid reason a child may have for the disruptive behavior. The dentist must concentrate in the initial visits and if possible, always strive to impart pain free dentistry. Once a child's behavior is modified, a slightly painful experience is usually not taken that negatively; hence procedures requiring the child to bear with pain (such as palatal infiltration for extractions) are best scheduled after a few successful accomplishments of simpler treatment procedures.

Knowledge that Disruptive Behavior May Result in Stoppage of Procedure

If the child has experienced that by throwing a tantrum he/she has averted treatment (or any unwanted situation) successfully in the past, this knowledge comes handy to him/her in the dental clinic. The attitude of parents and the dentist play an important role in such a circumstance. If the child's disruptive behavior makes the dental team stop the procedure and if he/she is left alone, the child has scored a point and senses victory. Now, it would be even more difficult in the subsequent visit to control and modify child behavior unless a different strategy is implemented.

Other Temporary Reasons such as a Bad Mood, Tiredness, Not able to Concentrate if Hungry, Wanting to Do Something Else, etc.

A usually cooperative child may also have his/her bad day at school, be feeling sleepy, have not got enough time to play on that day or is simply tired. The dental team must respect this and accept the child' negative response. However, the child in such instance should only be subjected to a brief routine of just getting teeth examined and left after that with a promise to cooperate well in the subsequent visit.

CHARACTERISTICS OF A DISRUPTIVE BEHAVIOR

Usually a disruptive behavior manifests with following characteristics:

1. Crying
2. Movements of hands, legs (kicking)

3. Wanting to get down from the dental chair
4. Asking parent to come close, hold hands
5. Desiring to go home
6. Stopping communication, eye contact
7. Solitary talking
8. Angry/hurt facial expressions

'Crying' is always associated with disruptive behavior.'. The crying of a child can be of various types:

Type of 'cry'	*Description*	*What should be done*
Hysteric cry	A loud and continuous crying to create commotion in order to achieve immediate attention and scare others	Wait for a minute to see the progress, do not panic Do not allow the child to get down from chair Ask the child that only if he/she stops crying, attention will be given to him/her; ignore it for a while Voice control HOM (after informing parents) if everything else fails In most children, it does stop after 2-3 minutes; carry out a non-invasive small procedure or a demonstration after that and create an opportunity to praise the child again and develop a good rapport
Frightened cry	Crying may not be loud or continuous but is associated with withdrawal (child turning face away, suddenly pulling the hand back while demonstrating airway syringe in TSD, starting to panic on seeing a needle)	Give a proper TSD demonstration Desensitize Model the procedure Comfort and reassure the child Engage the child in a conversation of interest to him/her Distract the child
Hurt cry	After experiencing pain; for example, a palatal or intrapulpal administration	Reassure that the pain is over and shall not be repeated Divert attention; for example, ask the child to rinse mouth a couple of times after LA administration Offer sympathy Tell him/her that he/she was brave to tolerate that much of pain and will be appropriately rewarded
Compensatory cry	Continuous, low volume but irritating crying mainly to relieve himself/herself than to protest	Be prepared to listen to it! (It may not be stoppable in some children) Ignore! Don't discourage when not controllable and does not come in the way of treatment!

It is important for a dentist to decide how to control the 'crying' part of the disruptive behavior. The dentist must know the ways to tackle crying in order to restore good behavior.

It is important for a dentist to identify whether the objection on the part of the child is temporary in nature or a more rigid one. The disruptive behavior has to be managed well by a dentist catering to children, but more so, has to be prevented with proper understanding and implementation of behavior modification methods.

Disruptive child behavior in a dental office is a 'crisis' in child management. The dental team must have a proper methodology for this crisis management and not merely start firefighting abruptly. The following discussion describes the methodology in a stepwise manner.

MANAGING THE PARENTS DURING DISRUPTIVE BEHAVIOR OF A CHILD

1. Let everyone know that the situation is under control; do not shout, panic or give unnecessary orders.
2. Tell the parents that there is no need to worry if the child is not crying in pain; at times children cry and they can be confronted with a bit of authority so that unnecessary crying is discouraged. Use voice intonation and if necessary hand-over-mouth only after their approval.
3. Tell parents that only after the child gets a pain-free experience of dental treatment, he/she will realize that there was no reason to cry; however, in order to give him/her such an experience, at times the dental team has to use stern measures.
4. The parents, if present in the operatory, may be asked to wait outside. At times, a child may be crying to seek attention of his/her parents. Also, once the parent has left, the child has no choice but to listen to the dentist. The child also learns that he cannot dominate the proceedings thereafter.
5. Tell the parents that there exist only two ways of managing children for dental care: a. By such behavior modification techniques and b. Under GA in a hospital set-up. (Most parents choose the first!)

PROTOCOL FOR MANAGING THE CHILD DURING HIS/HER DISRUPTIVE BEHAVIOR

1. Wait for a minute to see the progress, do not panic.
2. Do not allow the child to get down from chair; let the assistant restrict the child movements.
3. See to it that the child does not cause an injury to himself or anyone else and does not damage anything.
4. Tell the child that only if he/she stops crying, attention will be given to him/her.
5. You may use a temporary threat but do not leave the child scared.
6. Use a behavior modification technique that has not been attempted till this point. For example: parental separation (send the parent/s out and ask them to come in only after being called in; tell the child that the parent/s would be called in only after he/she stops crying and follows all instructions).
7. Ignore it for a while, once necessary instructions are given. Give the child time to control himself/herself.
8. Use voice intonation.
9. Use HOM if everything else fails after informing parents.

10. Do not stretch it further. Do not feel defeated by the child. Control your anger. Inform parent/s that your best attempts have failed to achieve cooperation; you may give it another try some other day. Ask them that they also need to prepare the child better at home and get him/her back. If the child cooperation is not attained they may have to take the child to another specialist or consider treatment pharmacologically.

The management of disruptive behavior is a learned skill. The efforts often yield positive outcome if the dental team is focused on achieving the result. Also, it is not unusual to see a good behavior at the next visit from the same child who demonstrated disruptive behavior earlier. Remember, children do take pride in performing and feel guilty after realizing their mistakes/misconduct. If sincere intentions of the dental team have reached the child's mind, the mind of a child more often than not, responds favorably.

12
CHAPTER

How to Take Good Intra-oral Radiographs in Children

Often, the tasks that are considered simple and routine in adults can be really difficult and challenging to carry out in children. If not executed properly, intra-oral radiography in children can at times be a hurdle both in terms achieving co-operation of a child and in the process of arriving at a diagnosis.

A proper understanding of the problem and a systematic approach in its management can help a clinician deal with the problem effectively. This article outlines the necessary steps in obtaining good intra-oral radiographs in children.

The difficulties encountered in radiography are related to following factors:

1. Age of the patient
2. Limited mouth opening
3. Shallow palate
4. Inadequate lingual sulcus depth
5. Hypersensitive gagging reflex
6. Anxiety related to foreign object in oral cavity
7. Objection to film/holder irritation
8. A past negative experience
9. Other

Following measures can be taken to manage the problems related to taking quality radiographs of children in dental clinic.

- Assess child cooperation and implement behavior modification principles prior to starting the procedure of taking good radiographs. Introduce the X-ray machine as a "camera (with head, neck and nose)" and use *tell-show-do* technique throughout the procedure. In extremely un-cooperative children, behavior-shaping applying principles of stimulus-response theory may be necessary with Tell-Show-Do technique, desensitization and modeling. (See box for an example of *behavior-shaping* method for taking quality radiographs.)
- Choose to take radiographs at the right time. Though intra-oral radiographs are usually necessary at the beginning for diagnostic purposes, the same may not be possible due to factors mentioned

above. Rather than having poor quality radiographs and/or loss of child's co-operation due to a failed procedure at the beginning, it is at times advisable to postpone taking intra-oral radiographs until a certain level of comfort is attained with the child in the dental chair.

- Consider OPG when more than two intra-oral radiographs are required for preoperative assessment. Although the OPG can not replace intraoral periapical or bitewing radiographs entirely, it does many a time provide sufficient information to a clinician. Also, since the OPG does not require the film to be placed intra-orally, the child is much more at ease. Also, the 'digital' OPG reduces wastage of films and processing time as the radiograph can be viewed on the screen and offers much better quality as compared to the conventional OPG. Furthermore, since, the OPGs are made at a radiology centre, if at all a child has any negative experience of the radiography, it is well outside dental clinic premises and therefore, the behavior in dental office is not affected by it. In my opinion, most children above three years of age can cooperate for the OPGs satisfactorily.
- Use 'pedo' films for most regions. The films being smaller and with thinner emulsion are much more convenient. For permanent teeth and for primary maxillary anterior teeth, a regular size film is suitable. A regular size film may be placed horizontally to cover all four primary maxillary incisors.
- In taking intra-oral radiographs serially, follow this sequence: maxillary anteriors first, maxillary posteriors next and mandibular molars last. The side of the patient could be the choice of the operator and/or the patient.
- Take parent's assistance for taking intra-oral radiographs in children. For this reason, the radiographs of maxillary right side may be taken before the left side as the dentist standing on the right side of the child can easily guide the parent standing on the left to hold the film/holder in the child's mouth. At times, a parent is asked to sit on the chair with the child sitting on his/her lap for stabilization and the other parent assists in holding the film.
- Consider taking radiographs after administration of local anesthesia. Should a mandibular molar, for example, receive pulp therapy or extraction and the decision is pending due to unavailability of a radiograph; the radiograph may be taken after the inferior alveolar nerve block is given. Also, the treatment requiring any more radiographs of that region may be completed in the same visit, such as completing an endodontic procedure in a single visit or carrying out quadrant dentistry.
- For older children, deep breathing, relaxation, reassurance, concentration on minimizing tongue movements, may help.
- The child can be asked to *gargle with chilled water intermittently* to reduce stimulation of palate and gagging.
- A flavored topical anesthetic gel may be applied to the area prior to film placement.
- Radiographs can be taken in supine position.
- *Minimize "open- mouth- time"*. A good chair-side preparation, 4/6-handed dentistry, quick and efficient working are necessary for minimizing "open-mouth-time" and related problems.
- Take utmost care in reducing wastage due to improper angulation of cone, under/over-exposure and other processing errors.
- RVG, though not a necessity, may add value in terms of generating excitement in the child's mind regarding viewing a tooth-image on screen.
- Distract the child. Keep TV set on in front of the chair. Engage the child in a friendly conversation.

- Rarely, pharmacological management (sedation) may be necessary even for good radiography. At times physically restraining the child is essential. For special children, consider taking radiographs in wheel-chair. For a pre-cooperative child, an intraoral radiograph may be taken with the child sitting on the parent's lap.
- Do not expect perfect radiographs always. A diagnosis is a combination of clinical judgment and radiographic examination. Also, consider additional diagnostic tools such as vitality tester, apex locator, etc.

Behavior Shaping for Taking Quality Radiographs

Behavior shaping is a procedure which very slowly develops behavior by reinforcing successive approximation of desired behavior until the desired behavior comes to be. Since any behavior (e.g. cooperation for a radiograph) is learned and learning is the establishment of connection between a stimulus and a response (sometimes known as *Stimulus-Response Theory*); the principles of the same can be applied for taking quality radiographs.

Steps (Figures 12.1 to 12.5)

1. *Use euphemisms*: Introduce the X-ray-machine as a "camera", X-ray film as a "photo-paper-strip".
2. *Use modeling*: Let the parent sit on the dental chair holding a film simulator (a card-board cut-piece) in the mouth while the child observes. Demonstrate film placement, cone-angulation on the parent.

Figure 12.1: The child being shown an exposed film

3. *Use desensitization*: Let the parent place the film simulator (a card-board cut-piece) in the mouth of the child in the waiting room chair a few times so that the child becomes comfortable.
4. *Tell-show-do*: Continuously talk to the child while working. Show the child an already exposed film within its wrapping. Generate curiosity in the child's mind regarding 'photographing' a tooth.
5. *Use contingency management*: Promise a reward for co-operation, and voice-intonation for non-cooperation.
6. The successful outcome (i.e. a good quality radiograph) is a result of steps 1-5. Be patient and do not lose interest.

Figure 12.2: The child being shown the 'camera' (X-ray cone)

Figure 12.3: A film simulator prepared

Figure 12.4: The mother practices holding the film simulator in the child's mouth

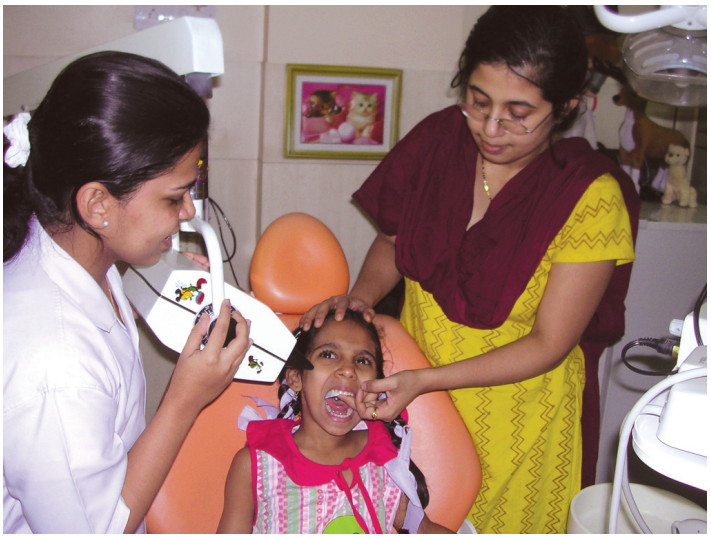

Figure 12.5: The child is now ready for the radiograph with mother's assistance

13

CHAPTER

Dental Management of Children with Hypersensitive Gagging Reflex

Children with hypersensitive gagging reflex can be difficult to manage in dental clinics. However, a proper understanding of the problem and systematic approach in its management can help a clinician deal with the problem effectively. This article outlines the steps in the dental management of children with hypersensitive gagging reflex.

Just as some people have motion sickness, some have a very strong gagging reflex. In the initial intra-oral examination of a child a clinician can generally detect whether the child has a strong gagging tendency. The magnitude of the problem can be assessed on placement of a mouth-mirror at the time of taking a radiograph or at the commencement of a Tell-Show-Do session for a restorative procedure (when water accumulation in oral cavity is not tolerated by the patient). Strong gagging is also associated more with anxious children, children who have not developed 'rinsing' habit or who are mouth-breathers. Also, the problem is more prevalent in children below 5 years of age and is aggravated by cough (URTI) and crying.

The Following Measures can be taken to Manage the Problems Related to Gagging in the Dental Clinic

- Display a notice in the waiting area informing parents regarding the possibility of problems associated with gagging. At times, parents are already aware that the child has a strong vomiting tendency and such valuable information can reach you prior to starting any treatment. Also, any past negative dental experience related to gagging can be noted down and care can be taken to prevent a similar one again. Furthermore, a prior explanation of such a possibility prepares the parents to deal with the problems better, should a child vomit during a dental procedure.
- Once aware of the problem, ask the parents not to feed the child excessively prior to a dental appointment. Best is not to give any solid food 2-4 hours prior and liquids 1 hour prior to the procedure.
- Premedication (anti-emetic such as Syrup Ondensetron) may be given one hour prior to treatment in some cases to prevent vomiting. Though it does not eliminate gagging, it does prevent emptying

of stomach by constricting the lower esophageal sphincter. Also, the very fact that nothing comes out on gagging is comforting to both the child and the dentist!

- Comfort the child. A good rapport with the child, child-friendly atmosphere and reduction of child-anxiety are important before starting any procedure. Also, do not ridicule or scold the child to stop gagging. Offer help and sympathy.
- If the child tactfully uses vomiting to avoid treatment, manage this aspect of behavior. At times, children 'use' the vomiting act to avoid unwanted procedures. In such cases, it is important to let everyone know that you are not affected by the child's vomiting act at all.
- For older children, deep breathing, relaxation, reassurance, concentration on minimizing tongue movements may help.
- Ask the parents to carry a spare set of clothes along. In case a child vomits during treatment, DO NOT PANIC. The treatment may still be continued after comforting the child. Actually, it is the best time to carry out any remaining treatment because if the child has vomited once, chances of another vomiting episode are minimal!
- Keep free-size spare clothes for children in the clinic. A few free size shirts for a 5-year-old (worth may be Rs 50/-) can be stocked and one given to the child as a gift can prevent any embarrassment! Also, it sends a very positive message to parents that you really care for their kids!
- Do not lose interest in carrying out treatment if the child vomits. Train not only yourself but your staff to deal with such mishaps professionally.
- Drape the patient.
- Use a rubber dam if possible. Since rubber dam prevents water accumulation in oral cavity and masks the tastes of chemicals, it could be valuable in preventing vomiting. However, the same is difficult in mouth-breathers and/or where the clamp or the sheet is objectionable to the tongue.
- Use micro motor for drilling in maxillary molars if rubber dam is not used. At times, the water-spray on palate leads to stimulation of gagging.
- Tilt the head of the patient on one side while air-rotor is in use (and rubber dam not placed) so that the water accumulates in buccal vestibule and does not irritate the throat.
- Select materials properly, for example, flavored topical anesthetic gel preferred to anesthetic spray. Also restorative materials less sensitive to moisture contamination (amalgam) or requiring less chair-time (such as RMGIC) should be considered. Some procedures such as crown cementation, composite restorations can be delayed until the child gains control over the reflex. Also, give an explanation to the parents about your limitations due to the reflex and the possibility of a compromised outcome.
- Use flavored latex gloves. The rubber-smell of gloves is often irritating to some children.
- Use suction judiciously. A high vacuum suction takes out water accumulated instantly and thus relieves the child, but a suction-tip used for retraction of tongue may be a cause for gagging! (Figures 13.1 to 13.4)
- The radiographs may be taken in supine position or at times, with the film in buccal vestibule.
- Take radiographs for mandibular teeth after a nerve block is given. At times it is wise to postpone a diagnosis until anesthesia has worked. It is much easier to take mandibular radiographs after a block is given. Also, completing an endodontic procedure in a single visit or carrying out quadrant dentistry is beneficial.

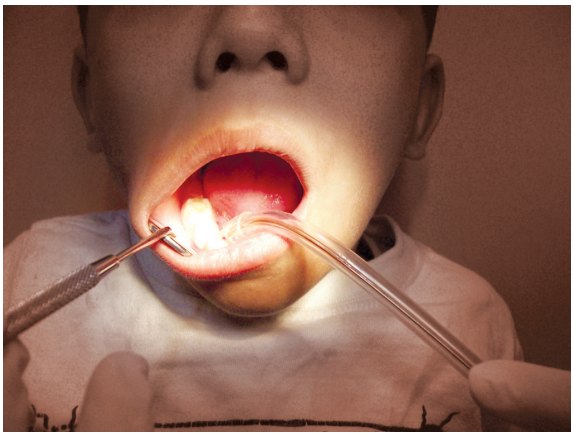

Figure 13.1: Suction tip used for tongue retraction continuously may be irritating to a child and provoke gagging

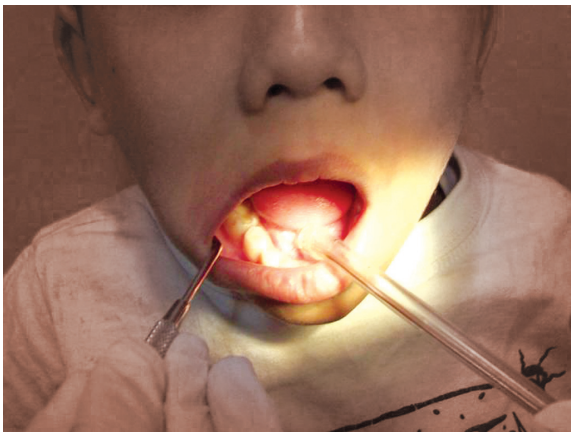

Figure 13.2: Suction tip should be used intermittently with minimal mucosal contact

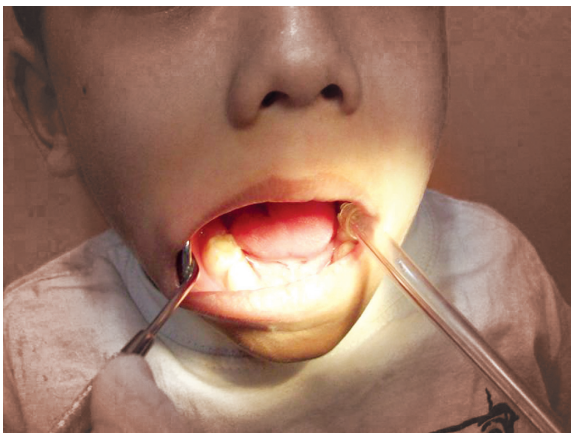

Figure 13.3: Suction tip is best rested on occlusal surfaces of teeth of opposite side

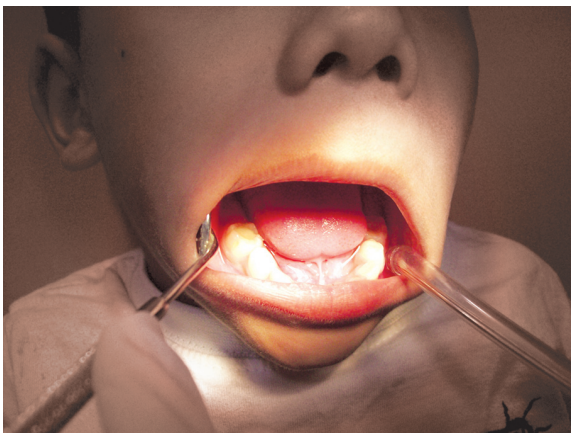

Figure 13.4: Suction tip kept in buccal vestibule is usually comfortable to a child

- Press the tip of the tongue firmly while maintaining isolation. A forward movement of tongue can be prevented by firmly pressing it against floor of the mouth by thumb and the index finger stabilizing the chin. This must be done for a short duration in a young child.
- Minimize "open-mouth-time". A good chair-side preparation, 4/6-handed dentistry, quick and efficient working is necessary for minimizing "open-mouth-time" and problems related to gagging.

Difficult Situations

- Impression making-keep a plastic bag ready to collect vomit.
- Keeping post-extraction pack-consider topical haemostatic/sutures.

- Distract the child. Keep the TV set on in front of the chair. Engage the child in friendly conversation.
- Rarely, pharmacological management (either sedation or GA) may be necessary.

Finally, the presence and magnitude of the child's gagging tendency, the techniques employed to prevent any related mishaps, any pre-medication given must be properly documented as this may be necessary for future reference.

14
CHAPTER

Need for the Pharmacological Management

Any discussion of child management in dentistry is incomplete without the inclusion of pharmacological methods such as conscious sedation, deep sedation and general anesthesia. These methods do not replace the non-pharmacological methods in any way but are useful when the behavior modification is either not feasible or has failed.

Dentistry and anesthesiology have been interestingly termed as 'strange bedfellows'! The first use of a general anesthetic, nitrous oxide, was meant for a dental procedure carried out by a dentist (Horace Wells). The first anesthesia machine was also developed by a dentist (Charles Teter). In the Western world, various sedation techniques for child management are routinely practiced by dentists trained in 'dental anesthesiology'. However, in India, the use of sedation and general anesthesia for dental treatments is neither widely taught nor practiced much for various reasons.

Decision-making of pharmacological management is a skill that is not easy to acquire. Often, a dentist may decide to treat the child under general anesthesia while examining a 3-4 year child patient who is not willing to get teeth checked in a dental chair. On the other hand, he/she may over-attempt behavior modification just to avoid the pharmacological method. To a certain extent, it is the bias developed in the dentist's mind due to a previously failed behavior modification in a child that compels a dentist to consider the option of managing a child pharmacologically in haste. The parental demands may have an influence on the dentist's decision to chose the child management method. Some parents may be too apprehensive about the risks involved in the pharmacological way; whereas, some may not easily agree to voice intonation or methods like aversive conditioning.

LIMITATIONS OF BEHAVIOR MODIFICATIONS

Even the best and experienced practitioners of Behavioral Pedodontics would agree that behavior modification has its limitations in spite of its high success, predictability and reproducibility. Some of the limitations are as follows:

1. Behavior modification requires patience on the part of both the dentist and parents. It is actually *not* time consuming because, once the child becomes cooperative, usually a lot of treatment can

be carried out (for example, quadrant dentistry) in a single visit that makes up for the time spent initially on bringing about behavior modification in the child. However, a pharmacological method such as general anesthesia may allow even full mouth rehabilitation in a single visit, the same with behavior modification is almost impossible. The dentist as well as the parents must sustain interest in the child's treatment that may take multiple visits and may encounter an occasional behavior management failure (such as a child crying on the day of a tooth extraction, while remaining cooperative through other treatments).

2. Emergency treatments are difficult to carry out on day one or during initial visits with only behavior modification. Often, resorting to behavior modification techniques such as voice intonation and aversive conditioning may help render the early emergency care, but in the process if the child experiences dentistry negatively, further child management becomes an arduous task.
3. Children coming from a long distance, children reporting less frequently (each appointment more than a week apart), children seeking late evening appointments are difficult candidates for behavior modification. Also, it is a challenge for a pediatric dentist 'visiting' a certain clinic once a week or once in a fortnight, to bring about behavior modification in a child.
4. The 'protocol' system of child management that outlines the treatment plan and the treatment schedule in view of child cooperation as well as various behavior modification methods must be well understood and endorsed by the parents before the actual treatment begins. At times, specific concerns of parents pose a problem for the dentist to sort out; for example, the dentist wishes to carry out the treatment in a sequenced manner with fluoride application and small restorations in the beginning and treatments like extractions of asymptomatic anterior teeth later. However, the parents may be concerned about the ugly appearance of the anterior teeth and insist on them being treated first. Such demands disturb the 'protocol' and pose difficulties in child management.
5. All children are not the same even if they are of the same age, society or even a family. It may not always be possible to highly individualize behavior modification techniques to suit each and every child's demands. Also, a practitioner may not be good at all techniques and usually practices a behavior modification technique in a certain 'stereotype' manner. For example, two practitioners may be using different communication styles while administering local anesthesia effectively; but in the event of failure (for any one of them), to adopt the other person's communication style is not easy.
6. It is not possible to modify child behavior when the dentist feels angry or is tired (or is not in a happy mood); wants to finish work early or is already late in the schedule. Such emotional as well as practical problems come into play in day-to-day practice.
7. Some failures are just simple statistics. They do not require any explanations. Just as the same antibiotic does not work for the same infection in all individuals; the methods that are well documented, time tested and proven beyond doubt can also *fail* at times.

INDICATIONS FOR PHARMACOLOGICAL MANAGEMENT

The detailed account of pharmacological management is beyond the scope of this discussion. The pharmacological management may be recommended to parents at any of the following situations:

1. Before beginning the treatment (Just after consultation)
2. After initial visits

3. In the event of failed/inadequate behavior modification

The dentist may have to choose the option of recommending the pharmacological management considering various indicating factors. The same are listed below:

When to recommend pharmacological management	*Indicating factors*
Before beginning the treatment (Just after consultation)	• Too young children (< 2 years, requiring complicated work like pulp therapy) • Emergency (trauma, space infections with limitation in opening mouth) • Severe physical/mental disability; underlying medical condition • Specific demand of parents due to previous negative experience of the child
After initial visits	• If behavior modification not successful, or parents object to certain means • If an emergency develops, for the management of which the child is not ready yet • A problem like severe gagging tendency that hinders treatment
In the event of failed/inadequate behavior modification	• A child failing to get accustomed, consistently un-cooperative in spite of all attempts

ADVANTAGES OF PHARMACOLOGICAL METHODS

The two obvious advantages of the pharmacological child management are:

1. No 'cooperation' factor: no movements of child's head, tongue, body, no saliva contamination or gagging, no need for the dentist to remain in active conversation with the child.
2. It is possible to complete extensive procedures in single/fewer visits.

The decision of pharmacological management eliminates the need for extensive thinking and application of behavior modification techniques for the dentist. At times, even the parents find this modality more practical. The advantages of pharmacological methods, however, come with a statistically very small but significant risk.

ARE THE PHARMACOLOGICAL METHODS EASILY ACCEPTED BY PARENTS?

Whenever the option of general anesthesia or sedation in a hospital environment is recommended to the parents, they first fear the worst! Their fear is not entirely unfounded.

It is not an easy decision to make for any parent. The dentist now has to undertake the responsibility of answering a lot of questions to the parents to their satisfaction. Also, the dentist should not try to influence their decision, but only tell them in a professional manner the necessity of pharmacological method. The final decision has to be an unbiased decision of the child's legal guardians.

The dentist, however, must tell the parents that the other methods of treating the child have either failed or are not applicable for the dental management of their child. The dentist has to stress upon the fact that modern anesthesia is considered safe and only because of certain advances in the field of anesthesiology and dentistry, the treatment of critical conditions (such as severe early childhood

caries with acute dental conditions like abscesses) is possible. The dentist also should point out to them his/her own safety record and past experience. The parents must also be encouraged to speak to the anesthesiologist and satisfy themselves regarding the facilities in the hospital before the treatment is scheduled.

The ultimate aim of child management in dentistry is to deliver high quality dental care for the child in a comfortable manner while instilling him/her a positive attitude towards dentistry. The author always prefers to explore all possibilities of child management with behavior modification prior to considering the option of pharmacological methods.

15
CHAPTER

Child Management Considerations for Children with Special Care Needs

The **World Health Organization** has defined a **handicapped individual** as;

"One who over an appreciable period is prevented by physical and mental conditions from full participation in the normal activities of their age groups including those of a social, recreational, educational or vocational nature."

The **American Association of Pediatric Dentistry (AAPD)** states that a person should be considered to have a **dental disability** if pain, infection or lack of functional dentition:

1. Restricts nutritional intake adequate for growth and energy needs;
2. Delays or otherwise alters growth and development; or
3. Inhibits participation in life activities.

The **AAPD** also states that persons are considered to have **Special Health Care Needs** if they have a physical, developmental, mental, sensory, behavioral, cognitive or emotional impairment or limiting condition that requires medical management, health care intervention, and/or use of specialized services or programs. The condition may be developmental or acquired and may cause limitations in performing daily self maintenance activities or substantial limitations in a major life activity. Healthcare for special needs patients is beyond that is considered routine and requires specialized knowledge, increased awareness and attention, and accommodation.

The **Persons with disability Act (1995)** of the Government of India states that the term **"disability"** means

i. Blindness,
ii. Low vision,
iii. Leprosy-cured,
iv. Hearing impairment,
v. Locomotor disability,
vi. Mental retardation,
vii. Mental illness.

WHAT IS SPECIAL CARE DENTISTRY?

Special Care Dentistry in its broadest sense deals with the dental management of an individual with special health care needs. It requires an understanding of the underlying conditions and knowledge of the precautions that need to be taken while delivering dental care to such conditions. It may be defined as

The improvement of oral health of individuals and groups in society who have a physical, sensory, intellectual, mental, medical, emotional or social impairment or disability, or more often a combination of these factors (Fiske 2007).

It is often a challenge to manage children with special care needs requiring dental treatments in dental clinics. The difficulties in the management could be attributed to various factors described below:

1. Difficulty in arrival to the clinic (for the patient)
2. Difficulty in remaining seated in the waiting area (for the patient)
3. Difficulty in dental examination, diagnosis and treatment planning (for the dentist)
4. Difficulty in carrying out behavior modification and actual treatment procedures (for the dentist)

All dental offices do not possess the necessary infrastructure to overcome such difficulties. All clinics do not have facilities for wheel chair entries, not all are located on the ground floor adjacent to roads. Many dental clinic waiting areas may not have a space provision for accommodating wheel chairs; the waiting room seating may not be suitable for seating some physically disabled children.

Some hyperactive children may exhibit unusual behavior such as shouting, running around, touching various objects in the waiting area and may be uncontrollable. The accompanying persons (including parents) often remain busy attending to them, introducing them to a strange place and thus may not be totally receptive to the dentist's detailed explanations of the dental conditions.

Still, it is necessary for a dentist to attempt to deliver dental care to the children with special care needs. The dentist has to acquire certain skills and make necessary changes in the protocol for facilitating this.

WHERE DO I BEGIN?

As with any patient, the treatment of the child with special health care begins as soon as they walk; or in some cases, are wheeled into the office. The most important issue facing the dentist is then one of access. Access to your clinic if you are treating a child with special care needs is an issue of utmost importance. It can be considered under the following headings:

1. Access to the building
2. Access to the office
3. Access to the chair
4. Access to the patient's mouth

Access to the Building

This refers to steps which can be taken to make the building accessible to people with physical disability. This is often the most challenging part of access as it involves factors that are often out of the dentist's control. The ideal requirements of a dental clinic accessible to the disabled are difficult to achieve.

The dentist is often forced to operate from a clinic that is not on the ground floor. Most buildings do not possess ramps for wheelchairs and remodeling the doorways of the building so as to allow access to wheelchairs is usually difficult. Although the various disability acts in India "recommend" the provision of accessibility features in buildings they do not make these features mandatory. However, you can cite the act to ensure that the management of the building provides you with a ramp and reserved parking for disabled patients.

Access to the Dental Clinic

Though access to the dental clinic addresses the same problems as access to the building, these problems are easier to solve. Many of the problems can be overcome by the simple process of rearranging the furniture! For example, a cupboard in a doorway or an improper positioning of the dental chair may severely reduce the amount of space available. The dentist will often find it easier to widen his own doorway to accommodate a wheelchair than to alter the space available. While the installation of features such as a chairlift may not be feasible for most practices, there are other features that are relatively inexpensive and go a long way in improving the accessibility of the dental clinic for a disabled individual. Some of these include grab-rails or lowering the height of counters and basins.

Access to the Dental Chair

Working on the Patient in the Wheelchair

One of the simplest ways to overcome the problem of patient access to the dental chair is by providing the treatment in the wheelchair itself, without transferring the patient. Conventional wheel chair based dentistry usually does not permit sitting down dentistry. The wheelchair is wheeled close to the instrument tray of the dental chair and the safety brakes are applied. The operator then stands behind the patient and is able to perform the necessary procedures.

Though greatly convenient to the patient, this form of dentistry presents certain challenges to the operator. It may not always be possible to get adequate access because of constrains of space. The positioning of the suction may present a problem as the suction apparatus of a conventional chair is in the direction opposite to that of the patient. Similarly, alternate arrangements have to be made for the provision of a spittoon as the patient will not be able to reach the spittoon attached to the chair. It is easier to use a disposable cup or bowl as a spittoon held by an assistant or an accompanying person than shifting any fixtures. Lastly, the positioning of the patient is upright; this may pose a problem, especially when working on maxillary teeth, where a more reclined position is favorable.

Many of these problems may be overcome by the use of specially designed mobile dental platforms. Platforms such as Diaco™ are used routinely by the NHS in the UK and by certain clinics across the US, Asia and Australia. The unit consists of an adjustable ramp and an attached dental unit. The patient remains in the chair at all times. The chair is wheeled on to the ramp and the brakes are applied. The ramp is then adjusted to the optimal angulations permitting the dentist all the benefits of a conventional dental chair. These units, however, are expensive and thus their use in the Indian scenario is limited. Thus, in most cases, the dentist; in order to render optimal dental care, is compelled to transfer the patient from the wheel chair to the dental chair.

Transferring the Patient from the Wheelchair to the Dental Chair

Transfer of the patient from the wheelchair can be a scary experience for both the patient and the inexperienced dentist. Factors that will determine the actual success of the transfer include:

- Whether the patient is able to transfer himself or requires assistance
- The ability of the caregiver to give help
- The skill and experience of the dental staff

Keeping in mind the above mentioned parameters the National Institute of Dental and Craniofacial Research (NIDCR) has proposed the following six steps to a safe wheelchair transfer:

Step 1: Determine the patient's needs

Ask the patient or caregiver about

a. preferred transfer method
b. patient's ability to help
c. use of special padding or a device for collecting urine
d. probability of spasms

Reduce the patient's anxiety by announcing each step of the transfer before it begins.

Step 2: Prepare the dental operatory

- Remove the dental chair armrest or move it out of the transfer area.
- Relocate the hoses, foot controls, operatory light, and bracket table from the transfer path.
- Position the dental chair at the same height as the wheelchair or slightly lower.

Step 3: Prepare the wheelchair

- Remove the footrests.
- Position the wheelchair close to and parallel to the dental chair.
- Lock the wheels in place and turn the front casters forward.
- Remove the wheelchair armrest next to the dental chair.
- Check for any special padding or equipment

Step 4: Perform the two-person transfer

- Support the patient while detaching the safety belt.
- Transfer any special padding or equipment from the wheelchair to the dental chair.
- **First clinician:** Stand behind the patient. Help the patient cross his arms across his chest. Place your arms under the patient's upper arms and grasp his wrists.
- **Second clinician**: Place both hands under the patient's lower thighs. Initiate and lead the lift at a prearranged count (1-2-3-lift).
- **Both clinicians**: Using your leg and arm muscles while bending your back as little as possible, gently lift the patient's torso and legs at the same time.
- Securely position the patient in the dental chair and replace the armrest.

Step 5: Position the patient after the transfer

- Center the patient in the dental chair.
- Reposition the special padding and safety belt as needed for the patient's comfort.
- If a urine-collecting device is used, straighten the tubing and place the bag below the level of the bladder.

Step 6: Transfer from the dental chair to the wheelchair
Position the wheelchair close to and parallel to the dental chair.
- Lock the wheels in place, turn the casters forward, and remove the armrest.
- Raise the dental chair until it is slightly higher than the wheelchair and remove the armrest.
- Transfer any special padding.
- Transfer the patient using the two-person transfer (see *step 4*).
- Reposition the patient in the wheelchair.
- Attach the safety belt and check the tubing of the urine-collecting device, if there is one, and reposition the bag.
- Replace the armrest and foot-rests.

Access to the Oral Cavity

The simplest way for the dentist to gain access to the oral cavity is by the use of mouth props. A mouth prop is a device that is used to keep the mouth of the patient open. The simplest form of mouth prop is the conventional bite block; a piece of reinforced rubber, vulcanite or hard plastic, that a patient can bite on. Some manufacturers offer disposable mouth props made of styrofoam. The major disadvantage of these blocks is, however, their instabilty. The child can dislodge the block from his/her mouth, thereby hampering treatment. However, despite this, the bite-block is relatively inexpensive and remains the most commonly used mouth prop.

Establishing Communication

Once the child has been seated in the dental chair, establishing communication becomes the biggest challenge to the operator. It is important for the operator to assess difficulties in establishing the same. This can be done by asking a few basic questions.

What is the cognitive age of the child? It is important to establish whether the children can understand instructions given to them. Very often, in deaf children or some children with cerebral palsy the problem is not one of understanding but one of expression. If the dentist feels that the child is incapable of understanding the instructions, it is important that all communication be carried out with the parent.

Does the child have a sensory impairment? The use of an interpreter (usually the parent or cue cards carried by the child) can help the dentist achieve communication.

Once these problems have been sorted out and the dentist is able to communicate with the child, the principles of communication remain the same as with any child. It must be remembered that the greatest part of communication is not in the words we speak but in our actions and the tone in which the words are spoken.

Following are the general considerations in the management of children with special care needs:
1. Precise understanding of the medical/handicapping condition
2. Discussion with parents
3. Changes in appointment system and work pattern
4. Use of physical restraints
5. Understanding the limitations of care
6. Legal and ethical issues in the care of children with special care needs.

Precise Understanding of the Medical/Handicapping Condition

The dentist must assess the nature and extent of disability and study the behavior pattern of the child with the help of a detailed medical history, past medical records and necessary communication with the pediatrician (or a neurologist, cardiologist, etc.)

The children with handicapping conditions present a variety of problems for which the dentist has to provide 'tailor-made' solutions. Each management protocol must be carefully prepared, followed and appropriately revised. Following are a few general guidelines in designing such a protocol.

a. Most of the mentally challenged children do not readily cooperate for initial examination. It may be a good idea to meet parents first, understand the nature and extent of disability and current dental complaints and then call them for the dental examination.
b. Necessary assistance should be provided for the entry and exit of the child and the person carrying/accompanying him/her.
c. The dentist has to be careful while examining the child; retraction with mouth mirror must be done with caution as a child while inadvertently chewing hard on it may break the mirror-glass. Too bright a light may also not be liked by the child.
d. The best physical restraints are those for which parents can assist; for example, a small child sitting on the parent's lap, the other parent holding the child from behind or on the left.
e. Although, the dentist must try to establish communication with the child, usually instructing parents and allowing parents to instruct the child is a better idea.
f. The decision of managing them pharmacologically should not be taken in haste. Many children with special care needs such as those with Down syndrome, autism and sensory handicaps may allow routine care with a little different approach. Also, it might not always be easy to obtain fitness for general anesthesia for some conditions unless extensive investigations are carried out. Many conservative non-invasive procedures such as restorations and oral prophylaxis do not require them if the child is to be managed in the dental clinic.
g. Unless it is an emergency, any procedure (even taking radiographs) need not be attempted in the first visit. It is a better idea to have a final diagnosis after all evaluation of the child's medical status is done and the decision regarding the use of sedation or general anesthesia is taken. If a child's abnormality and the dental condition are not difficult to manage in the dental clinic, the dentist must start working on the behavior modification. The techniques like TSD, modeling, contingency management, distraction and desensitization can be employed by the dentist. However, the dental team has to be more patient and flexible in dealing with the subnormal children.

Discussion with Parents

The parents need to be counseled regarding the difficulties that may be encountered during the treatments. They also must be warned about a possible loss of cooperation during the middle of the treatment. They also must be told that it may not possible to carry out certain procedures and achieve best results unless (or even if) pharmacological management is chosen. It is important to understand their expectations from dentistry and they should be given a fair idea about the likelihood of 'compromised' results as a possibility, whenever necessary.

The approach of parents is of utmost importance in the decision making. Many parents accept that the treatment would not be easy for the child non-pharmacologically. However, they are also worried

about the complications of general anesthesia and fear going through fitness assessment investigations that are invasive in nature (such as blood tests). Also, the investigations and hospitalization may incur big expenses and that could be a hindrance in the delivery of care to the child.

The parents must also be told that the dental treatments, at times, are really technically sensitive to deliver (for example, light cure composite restorations) and some are likely to be associated with risks of bleeding, injury and systemic complications (such as extractions). Some simple instructions such as retaining a pressure pack in the mouth after extraction, not biting the lip after the treatment as long as the effect of local anesthesia persists, are difficult for the child to comply and may cause post-treatment complications.

Changes in Appointment System and Work Pattern

The dental team must be aware of the nature of the child's disability and the dentist must have suggested them a necessary protocol for the management. Following changes may be necessary in the protocol for managing them in the dental clinic:

a. The appointment for a special child is best scheduled at the beginning of a working session or after finishing the routine work towards the end of a session so as to minimize his/her waiting time in the clinic premises.
b. Allotment of extra time: Usually more time would be required to manage a special child and provision for the same must be done beforehand.
c. In the initial visits, however, due to the limited attention span of some of the special children, they may become restless in the dental environment in a short time. They may require a couple of introductory visits, modeling sessions before actual treatment begins. The best 'models' could be a sibling, a parent or alternatively, a child who is cooperative.
d. Use of more working hands: a 4/6/8 handed dentistry should be considered for controlling movements of the child as well as good chair-side assistance.
e. More patience and tolerance is required on the part of the dentist to treat the child; for example, a special child may have to be repeatedly demonstrated (TSD) while introducing a scaler or air-rotor handpiece before the child understands and accepts its use.
f. Certain materials should be considered over others only due to their time saving properties; for example resin modified glass-ionomer cements could be preferred to conventional glass ionomer cements as the latter may take longer time to set. A fluoride varnish could be a quicker and easier method than the gel-tray application for such children.
g. The dentist should never take the child's cooperation for granted. A *plan B* must be ready, in case the *plan A* fails. Also, hasty decisions to 'over' treat a child than planned for a particular day (on achieving cooperation) should be avoided in the interest of overall treatment and for long-term cooperation of the child.

Use of Physical Restraints

Working with the Patient in the Parent's Lap (Figure 15.1)

Certain children with disability, especially children with Cerebral Palsy are best treated in the parents lap. The parent carries the child onto the chair and positions the patient in a position that is favorable

Figure 15.1: Working with the child on the mother's lap. Notice the arms of the mother around the child serve as a physical restraint. (Photo: Dr Sharat Pani)

to the dentist. The procedure is more advantageous than using physical restraints as the child is more comfortable on the parent's lap. The procedure also actively involves the parent in the treatment of the child and thus reduces the anxiety of both parent and patient. The presence of the parent also offers the dentist an additional pair of hands to stabilize the patient, thus allowing him to practice "6 handed" dentistry.

Use of Physical Restraints

Though not routinely recommended the dentist has to often resort to physical restraints as a means of managing an uncooperative patient or a patient who is unable to cooperate. The commonly used physical restraints are listed in Table 15.1. While many of these restraints are either not available in India or expensive to import a wide range of suitable alternatives are available. A padded board with straps serves as a useful substitute for the papoose board and a sheet with Velcro straps attached works as well as the more expensive Pediwrap™. Bean Bags are inexpensive and are available readily in India and are extremely useful especially while treating children with rigid muscles as seen in Cerebral Palsy (Figure 15.2).

Table 15.1: Commonly used Physical Restraints

Body Restraints
• Pediwrap
• Papoose boards
• Sheets
• Beanbag with straps
• Towel and tapes
Restraints for the extremities
• Velcro straps
• Posey straps
Restraints for the head
• Head positioner
• Forearm body support
Mouth Props
• Mouth blocks
• Molt's mouth prop
• Banded tongue blade

Figure 15.2: Child with cerebral palsy on a bean bag, notice how the adaptability of the bag compensates for the muscle rigidity of the patient (Photo: Dr Sharat Pani)

Legal and Ethical Issues in the Care of Children with SCN

The care of individuals with special health care needs raises several legal and ethical issues such as the rights of the patient to obtain care, the question of informed consent, and the duties and legal obligations of the dentist.

Informed Consent

While all individuals under the age of 18 require consent from parent or a guardian, individuals with certain disabilities may require the services of a guardian even after the age of 18. The National Trust Act of India states that individuals with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities require legal guardians to take decisions for them due to an impaired capacity of these individuals for informed decision making. If the parents of the individual are no longer alive, Section 14 of the National Trust Act empowers the **Local Level Committee** headed by the **District Collector** to appoint **legal guardians** for persons with the above mentioned disorders.

Disability Acts

Many countries in the world have adopted legislations for the protection and empowerment of people with disabilities (Table 15.2). Though a detailed discussion

Table 15.2: Disability Acts in Different Countries

UK
Disability Discrimination Act (2005)
Mental Capacity Act (2007)
India
Mental Health Act (1987)
Rehabilitation Council of India Act (1992)
The Persons with Disabilities Act (1995)
National Trust Act (1999)

of these acts is beyond the scope of this book, the purpose of these acts is to provide an equal opportunity to such individuals while reducing the discrimination they face.

In India, a large number of acts have been passed to protect the interests of individuals with different disabilities. While all the acts recommend the incorporation of accessibility measures in public establishments, the acts do not make them mandatory. Similarly, while the acts call for the equal treatment of an individual, it is not mandatory for a dentist to treat these individuals. Thus, special care dentistry in India is a field that is often neglected by the general dentist.

Understanding the Limitations of Care

The dentist must understand his/her limitations and any heroic attempts to treat the child in absence of necessary cooperation should be curtailed. A poor quality treatment cannot be justified and only leads to unnecessary repetitive care for the child. If the child cooperation is not suitable for regular dentistry, either use of pharmacological management is suggested or the child should be referred to an institutional set-up where hospital-based dentistry is practiced.

This chapter has a major contribution by Dr Sharat Chandra Pani.

16
CHAPTER

Follow-up Visits of Previously Treated Children

Most children previously treated by a dentist satisfactorily/unsatisfactorily have memories of their dental visits. The nature and extent of dental care delivered and the child's memories of the previous dental visits are the factors deciding child behavior at the time of follow-ups.

It is important that the child retains 'good' memories of their dental visits. Not only good dental care, but also good memories of them help instill a positive attitude towards dentistry in children. The effective child management, thus, does not only aim at gaining cooperation for a particular span of visits but also has a focus on building trust and confidence in the child's mind regarding dentistry that will last a lifetime. Following are the considerations for developing a long-term positive dental approach in the child's mind:

1. The child visiting at regular follow-up intervals (3-6 monthly), retains his/her cooperative behavior and often appears motivated. The parents of the child also appear convinced and motivated regarding the dental care (including preventive measures).
2. The child visiting infrequently and after a long interval (> 1 year) has either lost the motivation or the effect of 'behavior modification' has substantially reduced. The dental team often has to re-work on establishing the necessary rapport for further care.
3. Also, a child visiting a dentist infrequently, only for treatment of a painful condition may have memories of pain associated with the dental care and may remain a difficult patient.
4. The impression dentistry has left in the child's mind is of great importance. If a child remembers only pain, pulling out of a few teeth, being held by people while undergoing treatment, etc., the dentist has to start the behavior modification all over again. However, if the child recollects the instances such as being praised, given toys and gifts, and privileges likes watching cartoon serial on TV; the child response would be positive, yet again.
5. The dental team has to reassess the child behavior on all follow-up visits and recommend treatment appropriately. Remember, a child's cooperation at all subsequent visits should not be taken for granted.

6. Most children for whom the dental treatment has ended on a positive note (with simple procedures such as finishing composite restorations, fluoride varnish applications done in the end) have good memories of their 'last' visit (Figures 16.1 to 16.4). However, if the treatment has abruptly ended after a traumatic extraction, the child retains some memories of the episode, longer than expected.
7. On follow-ups, it is important to begin conversation with sentences like: "…Oh! You have grown tall now! You are now looking a big boy!" *or* "My god! Are you really in the second standard? I remember you only as a small girl in kindergarten!" *or* "Now I can see your new teeth when you smile; you must show me your new teeth once!"

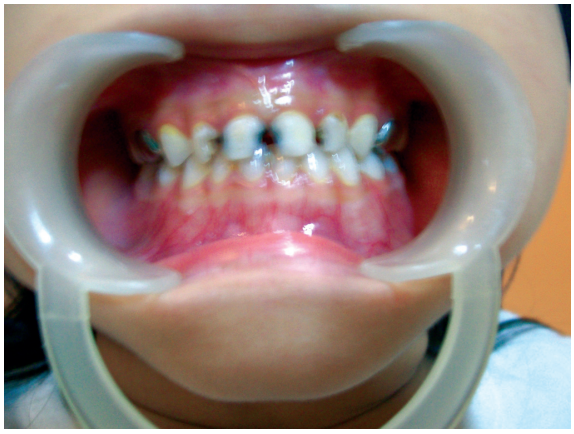

Figure 16.1: Anterior teeth – Before treatment

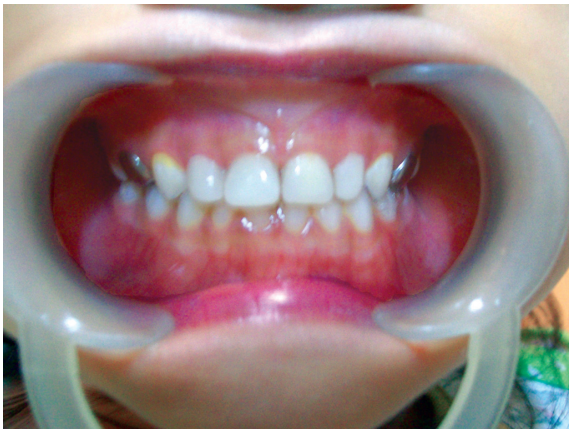

Figure 16.2: Anterior teeth – After treatment

Figure 16.3: Anterior restorations done towards the end of treatment leave good memories of dentistry with the child

Figure 16.4: A child going back happily after treatment is the child who is likely to come back with a smile!

8. It is important to evaluate the effect of preventive care taken at home and recommend further office preventive care (such as fissure sealing soon as first permanent molars have erupted) on follow-up visits. It is also a good idea to bring up topics such as the preventive measures with parents. The discussion with parents can be started with statements like: "I'd like to monitor the development of his/her new teeth. Considering he/she had undergone a lot of treatment for his/her milk teeth, I would like to suggest you appropriate preventive measures at the right age; such as fissure sealing soon after first permanent molars have erupted, fluoride mouthrinses after the child turns 7."
9. The parents may be asked to keep a 6 monthly follow-up during the vacations as most children are free during these periods. Summer vacations and Diwali (winter) vacations are more or less 6 months apart. Thus a habit can be inculcated for a dental check-up throughout their schooling.
10. Sending follow-up reminders to patients is a good practice. Either a phone call or a letter or an e-mail is sufficient for this purpose.

The dental team must believe in the fact that most children of and above a certain age (in the author's opinion 3½ – 4 years) are either cooperative or potentially cooperative. Only those few who are either pre-cooperative or uncooperative should be dealt with more preparation and conscious efforts or with pharmacological aid. Thus, irrespective of whether they are visiting for the first time or for follow-ups, children are mostly cooperative if the dental team believes in the principles of behavior science.

17
CHAPTER

Child Management from Practice Management Perspective

The clinical practice management is a mixture of

- Leadership
- Planning
- Marketing
- Time management
- Delegation
- Financial management
- Quality
- Patient satisfaction
- Medico-legal aspects
- Communication skills
- Motivation
- Stress management
- (and of course) Related aspects

The discussion of all the considerations in the practice management is beyond the scope of this text. Only the important aspects of practice management in relation to pediatric dental practice (of which child management is an integral part) are discussed here.

IS IT REWARDING TO PRACTICE PEDIATRIC DENTISTRY?

Often, dentists who are not adept at managing children as dental patients complain that it is not rewarding enough to practice Pediatric Dentistry as it involves expenditure of a lot of effort and time. Also, some compare the financial gains through pediatric dental practice and feel that they are not worth the patience and skills the dentist exhibits. Many people do not practice pediatric dentistry because they believe that dealing with children requires a different approach in functioning and they cannot accommodate it in their routine style of working. A few dentists are not just mentally prepared to interact with the children and thus do not practice pediatric dentistry.

From a practice management point of view, however, it can be proved beyond doubt that it *is* rewarding to practice pediatric dentistry. Of course, it involves a lot of considerations to make it an attractive and satisfying profession and these need to be studied well.

The following four factors contribute to make it a 'rewarding' profession:

1. Effective time management
2. Focus on patient satisfaction
3. Practice-building through relation-building
4. Optimal clinical outcome

Effective Time Management

Time management has an important role in the success of pediatric dental practice. The allocation of time for different dental procedures integrated with child management protocol, scheduling of appointments, frequency of visits per week, the 'time' of the day for certain procedures need to be considered in effective time management.

Following are the methods of effective time management:

- *Spending quality time for achieving co-operation in the initial visits*: The time spent on communication and behavior modification is a time investment. Most of the pediatric dental procedures are not really time consuming. 'Conditioned' children usually do not require any extra time after first few visits.
- *Training staff to deal with children differently; the 'quick' and 'smart' ways to carry out a few procedures*: Child management is a team effort. The assistant's job of transferring the loaded syringe to the dentist is as critical as the dentist's job of injecting. The dentist should prepare the entire team to deal with different situational demands effectively.
- *Prior scheduling of all appointments*: Patients have to be scheduled in a proper manner. Very young children should not have to wait for long. Also, prior confirmation of appointments, rescheduling in case of genuine difficulties and reminders to patients are necessary.
- *Constant check on schedule*: Before starting a procedure, the time allotted and the time expected to accomplish it must be tallied. The appointment slots should have some free slots (as buffers) in order to accommodate the extra time spent in an unusual situation.
- *Everything well documented*: Appointment cards for patients, appointment diary at reception, patients' list in the operatory must be duly filled and updated. Late entries of patients and missed appointments must be properly recorded.
- *Efficient, adequate staff*: Doctors, assistants, receptionists: it is necessary, at times, to overstaff the clinic in order to compensate for a person's absence. Also, the auxiliary staff must be trained to exchange the duties if necessary.
- *Adequate sets of instruments*: All the necessary instruments should be available in excess of the actual requirement. They must be stored well and should be easily retrievable. The cleanliness, sterilization of instruments (autoclaving), appointment confirmation, and equipment-maintenance may preferably be done in non-clinical time (for example, two hours before the clinic hours).
- *Saving time*: Good chair-side preparation, minimum 'open mouth time' of the child, use of 'dead time' of the procedure (using the time when the child is rinsing mouth or when the effect of local

anesthesia is awaited) are necessary for efficient child management. The dental team must learn to work with great coordination for the same. Working 4/6/8 handed, helps save time and are necessary for some procedures.

- *Having necessary 'tea/coffee breaks'*: If a 10-minute break can refresh you to work for an additional one hour; it is a time spent productively. The team must remain fresh and motivated throughout the working session. Even the last patient has to be attended with same energy that was there for the first.
- *Remaining 'focused' throughout the working session*: Unwanted phone calls, guests, medical representatives, dealers, suppliers are not welcome on all busy days. A separate time allotment may be done for attending medical representatives, dealers, suppliers. All unwanted phone calls should be filtered at front desk. The dental team must be constantly aware of the task at hand. Even the free time (if an appointment is cancelled) must be spent constructively for work such as assessing feedback forms, reminding patients for follow ups, etc.

Focus on Patient Satisfaction

The ultimate aim of healthcare industry is 'patient satisfaction' (Figure 17.1). It is often said: *Whether or not others like us is largely up to us!* Hence, the onus of satisfying the customers i.e. patients of healthcare industry, lies with the service providers, i.e. the health professionals.

Today's customer has a choice, access to knowledge and information and enjoys the status of being called a KING! Also, the industry faces challenges like competitiveness amongst practitioners, price wars, huge investments and recurring expenditure and so on. Thus, to satisfy the patients in addition to making profits in the business while maintaining optimal ethical standards of practice must be the focus of each and every unit of the industry.

Often, doctors who do not seem to care much about patient satisfaction say: "I am qualified to give good care; therefore, the care I give is good." However, this approach may not go well with most patients of today. For quality in terms of patient satisfaction, it must be a balance between what doctors do and what patients feel.

Figure 17.1: Patient satisfaction is the ultimate aim of healthcare industry

"People don't care how much you know until they know how much you care!" (*Stephen Covey*) The patient-care, must therefore have patient satisfaction as a primary objective. The word 'satisfaction' broadly means fulfillment of expectations. The expectations of people from the service-providers are ever-increasing! The service industry heavily depends on the customer and is obsessed about the customer. For a long time, the healthcare industry enjoyed a unique position in the service industry, and did not succumb to the demands of the customer. However, times have changed!

Satisfaction of a customer is never an end result of a process; it is the process itself that satisfies the customer. In healthcare industry, the patient-care is as important as patient-cure! Assessment of patient satisfaction is an important aspect of healthcare as it helps the service provider improve his patient-care and in turn, the overall quality.

There are several aspects of patient-care such as:

- Promptness of attention received from the doctor and/or the staff
- Efficient appointment system
- Minimal waiting time
- Facilities such as proper seating, entertainment, wash-rooms, etc
- Front desk services including the manner of communication
- Fee-structure, mode of payment
- Information and knowledge provided to patients regarding their care (therapeutic as well as preventive) through consultation, reading material, presentation, notice boards, etc.
- Continuum of care—a follow-up system
- Overall satisfaction

Although expectations of people may differ and there can never be an agreement about 'satisfaction' in general, some of these parameters can be used to objectively assess patient satisfaction.

The assessment of patient satisfaction can be done with following objectives:

I. To assess the **overall satisfaction** of patients objectively by questioning parents
II. To evaluate **satisfaction of patients pertaining to individual parameters** such as appointment system, waiting time, reception and facilities, information received by them regarding treatments and preventive care, fees and mode of payment, reminders for follow-up, etc.
III. To find the key areas where improvement is needed.

The same can be done by letting parents fill up the 'feedback forms' and periodically assessing the feedback forms to identify deficiencies in the system and scope for improvement. Also, such studies done over a period also, help the dentist learn the 'trend' in patient satisfaction. An example of such a feedback form is given below (the one currently used in the author's clinic - Little Smiles):

1. Are you happy with the appointment system that we follow?
   Yes/No/How we can improve _____
2. What was your average waiting time?
   Less than 15 minutes/ 15-30 minutes/ more than 30 minutes
3. Are you satisfied with the reception and facilities in our waiting area?
   Yes/No/How we can improve _____
4. Are you satisfied with the information about treatment and preventive care given to you in our consultation and our brochures?
   Yes/No/How we can improve _____
5. Are you satisfied with our fees and mode of payment?
   Yes/No/How we can improve _____

6. Would you like to have a reminder for follow-up from us?
   Yes/No
7. Any other suggestions _____
   _____
   Name (optional): _____

Practice-building through Relation-building

Those who always opt for short term goals in practice may enjoy success only for a short term! The practice philosophy must be developed for long term success. An active interest on the part of the dentist in the overall well-being and progress of the child and the family underlines the fact that the dentist is also a well-wisher of the family. A dentist frequently sees the same children again and again as dental patients. Children grow up, enter higher grades in schools, develop different interests, and acquire newer skills. Also, the family members of these children have their own achievements in life that may not be known to the dentist. These children or these families keep coming to the clinics/doctors over years; with a lot of trust and familiarity. A few simple gestures such as wishing them on their birthdays or on festive days are meaningful for both the dentists and the patients. This relation once built goes a long way in contributing to the success of a practice.

Dentistry has limitations, and certain failures are inevitable in practice. Crown decementation, a fractured restoration, post-operative pain after a certain procedure, etc. may mislead a patient and doubts may cloud the patients' minds over the dentist's ability and intentions. The dentist must claim responsibility for the problem, explain to the parents about the same in a reasonable manner and assure them that the best possible efforts will be spent to take care of the problem. Also, the dentist must explain the parents that there are pre-existing limitations regarding different procedures, materials and the results of certain treatments, and even child management techniques are not entirely predictable. However, if the doctor-patient relation is healthy, these issues may not have a negative impact on the practice.

Optimal Clinical Outcome (The 'Quality' Perspective)

'Quality' is never accidental. It comes out of healthy intention, genuine efforts and perseverance to strive for it. The 5 Ms that are necessary for delivering optimal quality are: Men, Machines, Motives, Materials and Management. Effective child management is an important prerequisite for optimal quality in clinical practice. The practical success is inherently dependent upon good child management that is integrated with other aspects such as use of appropriate equipment and materials, updated and evidence-based knowledge and skills, and thoughtful budgeting and financial planning.

Most parents wish to give their best for the upbringing of their children, at times even if they cannot afford it! A dentist practicing pediatric dentistry is their partner in the esteemed process and shares the responsibility of giving the best possible dental care to the child. Hence, the importance of optimal clinical success need not be overemphasized.

Appendix:

Case Study: Treatment and Behavior Details of a Three and a Half Year-old Boy on Completion of Multi-visit Full Mouth Rehabilitation Program for Severe Early Childhood Caries

The dental care delivery, behavior assessment and modification are simultaneous processes in the child management. Presented below is an example:

Visit No.	*Work done*	*Remarks on Behavior*	*Behavior modification*
1.	Consultation; child accompanied by mother (referred by a dentist for specialty care) Reports history of occasional pain in teeth aggravated on taking sweets H/o bottle feeding up to age 2 H/o not brushing at night H/o uncooperative behavior at a dental clinic during examination; no negative experience, however No relevant medical history Child examination, preventive counseling and advice for an OPG radiograph; analgesic prescribed (s.o.s. use)	Child does not respond to questions, has no eye-to-eye contact, does not shake hands, cries, holds mother	Explained to mother that only a brief examination (after the child has played in the waiting room for a while and after a brief tour of the clinic) would be done Only examination of child on the lap of the mother is carried out The child is given a gift, compliments Mother is explained that a couple of visits would be necessary for further analysis of his behavior and assessment of cooperation and only if cooperation not obtained GA would be necessary; handed over a brochure The child is told that if he gets a good photograph of his teeth at next visit, he would receive another gift, and wished bye-bye (no response from the child)
2.	Not a perfect but useful OPG available Treatment planning done; mother is told that additional intra-oral	Child not crying; however not willing to enter operatory, shy but a little curious	Made to sit on the chair with mother while the OPG is assessed and detailed clinical examination carried out TSD demonstration of chair movements,

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	radiographs may be taken while carrying out treatment if necessary Advised to begin a small procedure such as excavation, temporary restoration at next visit	Receives a compliment well (on getting a 'good photograph') Eye-to-eye contact, shakes hands Indulges in watching cartoon serial on the TV in front of chair	air-water syringe done Handed over a gift Child smiles but does not say bye-bye, remains clung to mother Mother explained that next visit the child would be made to sit alone on chair, and if necessary, parental separation, modeling and minimal restraining would be done
3.	Excavation of soft decay in 75, temporary restoration placement. Advised a permanent restoration at next visit if cooperation improves	The child enters without crying; shakes hands Sits alone; allows demonstration and hand excavation, loses patience after 5 minutes, demands holding mother's hand; cries softly However, smiles on receiving a gift on completion of treatment, and when the mother comes back	The child is told that he is a good boy and he must have all good teeth; the teeth should look white and not pain. He's told that some teeth have germs and they are looking ugly. The same shall be cleaned and painted white. If he follows dentist's instructions, would receive a gift at the end Mother observing the child from a distance, instructed not to talk to the child so that the child receives instructions only from the dentist TSD of how to sit in the chair, air-water syringe, suction, spittoon (spitting maneuver), hand excavator, air-rotor handpiece done Shown a cartoon serial on TV Cries due to the noise and vibrations of air-rotor (however not allowed to leave and the assistant gently holds him while the dentist puts a temporary restoration) The treatment completed not entirely satisfactorily. Mother explained about separation, modeling and minimal restraining at next visit Gift handed over with a 'promise' taken for not crying again
4.	A glass-ionomer pit restoration done in 55	The child enters without crying; shakes hands, but tells mother not to begin any treatment Observes the other child carefully Cries after the mother has left, becomes quiet after being firmly told that mother would not enter until his tooth	Mother asked to assist the child observing another cooperative child's restorative work (who is sitting alone) Mother asked to leave the operatory after making the child seat on the dental chair Voice intonation used and the child's movements restricted during the first cry Another demonstration of air-rotor-hand piece given. A small lesion excavated with the air-rotor interruptedly. The child is praised when follows instructions

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		'cleaned' and 'painted' After initial movements and hysterical crying, cooperative for the treatment	Reminded that he would receive a gift at the end of the treatment Asked to see the TV cartoon specially put on for him Smiles after treatment and receives a gift; is establishing 1:1 communication with the doctor (which may not have happened in mother's presence) Praised about good behavior in front of the mother before leaving, waves bye-bye
5.	A glass-ionomer restoration done in 65	The child enters without crying; shakes hands The child wants the mother to accompany him in the operatory	Mother asked to leave the operatory after making him sit on the dental chair and the child is told that mother would enter only when the treatment is over The child is praised when follows instructions Reminded that he would receive a gift at the end of the treatment The child remains busy watching TV cartoon serial of his choice The child is by now more or less 'conditioned' and receives instructions without questioning Has established good active communication, has 1:1 rapport, smiles and gives positive feedback Receives a gift after the treatment, is praised about good behavior in front of mother before leaving An endodontic treatment requiring LA administration is scheduled at next visit
6.	54 pulpectomy under LA, obturation with $Ca(OH)_2$ + Iodoform, temporary restoration under LA	The child enters without crying; shakes hands The child does not want mother to accompany him in the operatory anymore	Communication begins happily with praising the child for good behavior The child is shown topical jelly and asked to smell it The child is asked not to move and engaged in discussion while being administered LA in a Tell-*Don't Show*-Do Manner The child cries momentarily at the insertion of needle; after depositing 1 cc LA, is asked to rinse mouth thoroughly a couple of times while being reassured that the tooth would now sleep and not pain while cleaning and he would feel only

Contd...

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			tingling and funny feeling on his cheek; he does not cry after rinsing Beyond this point, the child remains busy watching TV cartoon serial He is a 'conditioned' child now and receives most instructions without questioning Receives a gift after the treatment, is praised about good behavior in front of mother and leaves
7.	54 RMGIC post-endo restoration	Same as in visit 6	No LA administration allows the child forget the memories (if any) of pain and the long procedure at the previous visit Now a 'conditioned' child; receives all instructions without questioning Receives a gift after the treatment, is praised about good behavior in front of mother and leaves Another endodontic treatment requiring LA administration is scheduled for the next visit
8.	54 pulpectomy under LA, obturation with $Ca(OH)_2$ + Iodoform, RMGIC restoration under LA	Same as in visit 6, 7	Same as in visit 6, even more cooperative A quadrant dentistry procedure scheduled for the next appointment
9.	84, 85 pulpectomy, obturation with $Ca(OH)_2$ + Iodoform, 83 caries excavation and 83, 84, 85 temporary restorations under LA (Quadrant dentistry procedure)	Same as in visit 6, 7, 8	Same as in visit 6, 8; the child exhibits 'hurt' crying after administration of inferior alveolar nerve block; but could be comforted without much problem
10.	83 Composite restoration, 84, 85 post endo restorations	Same as in visit 6, 7, 8, 9	Same as in visit 7 Another quadrant dentistry procedure scheduled for the next appointment
11.	73, 74, pulpectomy, obturation with $Ca(OH)_2$ + Iodoform, 75 complete caries excavation and 73, 74, 75 RMGIC restorations under LA (Quadrant dentistry procedure)	Same as in visit 6, 7, 8, 9, 10	Same as in visit 6, 8, 9, 11 Another extensive procedure scheduled for the next appointment
12.	51, 61, 52, 62 pulpectomy, obturation with $Ca(OH)_2$ + Iodoform, 75 complete caries excavation and 73, 74, 75 RMGIC restorations under LA	Same as in visit 6, 8, 9, 11	Same as in visit 6, 8, 9, 11
13.	51, 61, 52, 62, 73 Composite restorations	Same as in visit 6, 7, 8, 9, 10, 11, 12	Same as in visit 7, 10

Contd...

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14, 15, 16, 17.	Stainless steel crown restorations on 54, 64, 74, 84, 85	Same as in visit 6, 7, 8, 9, 10, 11, 12, 13	Same as above visits; child expresses mild discomfort after cementation of crown on one occasion but reassured that the same will disappear soon and mother is told to give him an analgesic s.o.s.
18.	Final finishing of all composite restorations and fluoride varnish application	Same as in visit 6-17	Treatment ends on a positive note, the child as well as the mother, are told to follow good care at home and report for a check-up after 3 months

Treatment Summary

GIC Restorations 55, 65
Pulpectomy 51, 52, 54, 61, 62, 64, 73, 74, 84, 85
RMGIC Restorations 75
Composite restorations 51, 52, 61, 62, 73, 83
Pulpectomy 51, 52, 54, 61, 62, 64, 73, 74, 84, 85
S/s Crowns 54, 64, 74, 84, 85
Fluoride varnish application

The above case record is indicative of a typically executed full mouth rehabilitation of early Childhood Caries in a pediatric dental set-up. Please note the behavior record and sequential implementation of behavior modification methods.

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