

## A survey of parental attitudes toward sedation of their child

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### Abstract

*A questionnaire was sent to parents whose children had been sedated for dental treatment to determine their acceptance of such a treatment modality. Other areas examined were the adequacy of parental information, total recovery time, degree of illness experienced, and the level of patient recall. There was a high level of acceptance of procedures by parents.*

In a typical pediatric dental practice, treatment for the majority of child patients is provided effectively with the aid of local anesthetics and psychological child management techniques. A small percentage of child patients present greater management difficulty and cannot be treated in this manner. For those children, different forms of behavior management techniques are required. The literature is replete with articles discussing this problem, with recommendations ranging from psychological management to pharmacological management of the uncooperative patient.<sup>1-4</sup> When a dentist recommends sedation, the parents generally agree; however, there is little in the literature which describes parent reaction to this approach. The purpose of this study was to collect information from parents whose children had been sedated for dental treatment. It was felt such information would serve as a means of evaluating treatment techniques from the parents' perspective.

### Methods and Materials

The sample consisted of 41 children (22 males, 19 females) with an age range of 1 year 6 months to 11 years and an average age of 61.3 months (Table 1). All the children were healthy, as determined by a self-administered health questionnaire, and by discussion with 1 or both parents. The decision to use sedation was based on the child's age (e.g., preschoolers with extensive dental work needed) or a

demonstrated management problem evidenced by past dental history as well as the authors' own subjective assessments during the child's initial examination appointment.

The authors' usual procedure was to see the child for an initial examination visit. At that time, the child's dental needs were determined, as well as the need for sedation. If the child was to be sedated, the procedure was discussed with the parents and they were provided with a printed instruction sheet which briefly described the procedures, the child's preoperative preparation (e.g., NPO after midnight), as well as a description of the child's postoperative course. The child was then reappointed for the sedation and treatment session.

All children in this study were sedated with a combination of drugs (Meperidine<sup>®</sup>, Promethazine<sup>®</sup>, and Chlorpromazine<sup>®</sup>),<sup>5</sup> in a weight-related dosage. The sedative was administered IM (gluteal area), by a registered nurse approximately 45 min before the scheduled dental appointment. During treatment, children were placed in a Peditwrap.<sup>®</sup> Nitrous oxide was used initially at 30-50% (depending on the level of sedation displayed by the patient) and subsequently was reduced to 10% following administration of the local anesthetic. Every effort was made to complete

Table 1. Age Distribution of Child Patients

Age	Number of Patients
18-24 months	1
25-36 months	10
37-48 months	5
49-60 months	4
61-72 months	7
73-84 months	7
85-96 months	2
97-108 months	2
109-120 months	1
121-132 months	2

**Table 2.** Questionnaire

Please check the appropriate answer:

1. Were you adequately informed about the use of sedation techniques in aiding in the treatment of your child?  
Yes \_\_\_\_\_ No \_\_\_\_\_
2. How long did it take your child to become fully alert following the sedation procedure?  
less than 1 hour \_\_\_\_\_ 3 to 4 hours \_\_\_\_\_  
1 to 2 hours \_\_\_\_\_ 4 to 5 hours \_\_\_\_\_  
2 to 3 hours \_\_\_\_\_ more than 5 hours \_\_\_\_\_
3. Was there at any time any evidence of illness (e.g., nausea)?  
Yes \_\_\_\_\_ No \_\_\_\_\_
4. What does your child recall regarding this experience?  
No recall \_\_\_\_\_ Detailed memory \_\_\_\_\_  
Vague memory \_\_\_\_\_
5. Do you think that the technique of sedation was effective in allowing your child to receive the needed dental care with minimal psychological trauma?  
Yes \_\_\_\_\_ No \_\_\_\_\_
6. Would you permit your child to be treated again with this method?  
Yes \_\_\_\_\_ No \_\_\_\_\_
7. Prior to your child's sedation, what were some of your concerns (if any) regarding this method of dental care delivery?
8. If you have any comments you wish to add, kindly note them on the back of this sheet.

Thank you for your cooperation.

the treatment in 1 session if at all possible. This frequently meant anesthetizing 2 or more quadrants. This was accomplished by anesthetizing the quadrants in stages, and by keeping the overall amount of anesthetic solution to three carpules. A rubber dam was used routinely, and the appointments usually lasted 1 hr or less.

A self-administered questionnaire (Table 2) was mailed to the parents of 64 children who had undergone dental treatment under sedative medication. The questionnaire was mailed approximately 1 week following the child's dental appointment. Also included in the mailing was a covering letter and a stamped, self-addressed envelope. Of the 64 questionnaires, 41 were returned (64.1% response rate).

## Results

The majority of parents (90.2%) responded that they felt they had been informed adequately about the sedation technique prior to the child undergoing the

**Table 3.** Postoperative Recovery Time to Full Alertness

Less than 1 hr		1-2 hr		2-3 hr		3-4 hr		4-5 hr		5 hr +	
N	%	N	%	N	%	N	%	N	%	N	%
5	12.2	3	7.3	1	2.4	1	2.4	8	19.5	23	56.1

**Table 4.** Incidence of Postoperative Illness

Illness Experienced		No Illness Experienced	
N	%	N	%
14	34.1	27	65.9

procedure. Only 4 (9.8%) felt that they had been prepared inadequately.

Parents of 56.1% of the children reported that it took more than 5 hr for their child to become fully alert again following sedation, while a few children (12.2%) were alert in less than 1 hr (the others had varying time periods in between, Table 3).

No postoperative illness was experienced by 65.9% of the children, while 34.1% experienced a degree of illness, usually in the form of nausea and vomiting (Table 4).

Children varied in their recall of the dental experience with 63.4% having only a vague memory, 26.8% having no recall, and 2.5% having detailed memory of their experience (Table 5).

All parents who returned questionnaires reported that they thought the technique of sedation effectively allowed their child to receive dental treatment with minimal psychological trauma and that they would permit their child to be treated again by this method.

## Discussion

Patients referred to the dental clinic are, for the most part, preschoolers (many of whom have nursing caries), and those who pose a behavior management problem. For those categories of patients, dental treatment can be rendered only by the use of sedation or general anesthesia. Since operating room time is limited and shared by many different specialties, use of sedation often becomes necessary to accommodate the number of patients referred. Since this procedure has been used for a number of years, it was felt that a posttreatment questionnaire would allow evaluation of treatment techniques and procedures from the parents' perspective.

From the responses obtained, it appears that presenting an instruction sheet at the child's initial visit as well as verbally emphasizing the important points would inform most parents adequately about the

**Table 5.** Children's Recall Following Dental Treatment

No Recall		Vague Memory		Detailed Memory		No Response	
N	%	N	%	N	%	N	%
11	26.8	26	63.4	1	2.5	3	7.3

sedation technique (90.2%). Only 9.8% felt that they were informed inadequately. The responses encourage continuing the method of presentation to the parents. However, it would appear prudent to repeat the presentation prior to each additional sedation appointment, and not to assume that parents automatically will remember the information and instructions from their child's previous appointment.

Individual drug response appears highly variable. While drug dosages for all children were uniformly weight related, most children were not fully alert for 5 hr and a few parents reported durations of 8-10 hr. Some children were alert in less than 1 hr with variations between the 2 limits.

Most of the children experienced no postoperative illness, but about 1/3 of the children experienced illness in the form of nausea and vomiting. In one instance, the parent reported the child had a wheezing cough, and another parent reported that the child developed hives following the dental appointment. The authors feel that parents should be informed adequately of individual variabilities in drug responses, cautioned to observe the child until fully alert, and instructed to adjust the child's sleeping position so that vomitus will not be aspirated if the child becomes ill.

Regarding the child's recall of his experience, responses to this question may not be too reliable as some of the children were too young to verbalize their experience. From parents' comments, it was determined that none of the children had any negative recall regarding the dental experience. Many children did, however, have negative feelings regarding the IM injection.

It is important that the dentist can predict the time at which the drug effect peaks in a child so that treatment occurs simultaneously. The IM method affords this with a higher degree of accuracy than the oral method (the only alternative to avoid an injection technique). While not ideal, the authors feel that the advantages of the IM injection technique outweigh its disadvantages. Additionally, since the injection is administered by a nurse rather than the dentist or auxiliary, the child appears to shift the blame for the unpleasant incident on the nurse, leaving the dentist

and auxiliary essentially disassociated from any recalled unpleasantness.

All parents who responded to the questionnaire were of the opinion that the sedation technique was effective in allowing their child to be treated with minimal psychological trauma. They also reported that they would permit their child to be treated again with the aid of sedation. Many parents commented that they felt this was the only way that dental treatment could be provided successfully for their child. For many of those children, prior treatment had already been attempted unsuccessfully at other dental clinics.

A variety of comments were made by some parents regarding their concerns prior to the child's sedation appointment. Most of these were related to the safety of the drugs and concern that the child may "never wake up again." Others were concerned that the child would have negative feelings due to the IM injection, and still others commented that they experienced difficulty in carrying out the NPO instructions.

## Conclusions

From the results of this survey, it was concluded that the sedation technique employed was accepted readily by parents and was essential in providing quality dental care to children whose parents would otherwise have experienced great difficulty in obtaining that care.

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