ejpmr, 2022,9(8), 552-557

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

ASSESSMENT OF KNOWLEDGE AND ATTITUDE OF MEDICAL PRACTITIONERS TOWARDS PEDIATRIC DENTAL CARE IN CENTRAL INDIA - A CROSS-SECTIONAL ONLINE SURVEY

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Article Received on 10/06/2022 **Article Revised on 10/07/2022** **Article Accepted on 31/07/2022**

ABSTRACT

Aim: To determine the knowledge and attitude of medical practitioners towards dental care of children in India. **Materials and methods:** The present study is an Cross-sectional online survey conducted among the medical practitioners in various states of india the study was conducted on 200 practitioners, randomly selected. The data pertaining to their knowledge and attitude about oral health was gathered using a self-administered online questionnaire. Data were analyzed using descriptive studies. **Results:** A total of 65.3% respondants considered that dental caries is not infectious. About 82.7% of the physicians thought that scaling causes tooth sensitivity and only 22.7% knew that tooth brush-ing should be initiated after the eruption of the first milk tooth. About 43.5% doctors agrees that they refer the dental cases related to children to the concerning specialists. **Conclusion:** Medical practitioners had a moderate knowledge and attitude towards pediatric dental care.

KEYWORDS: Attitude, Knowledge, Medical practitioner.

INTRODUCTION

One of the significant challenges posed by the dental fraternity is the maintenance of a population with good oral health. The dental disorder is not just a minor disease of the gums and teeth, but a disease of the body that happens to commence in the oral cavity.[1] Medical prac- titioners especially the pediatrician and gynecologist are the first to get in touch with the child since birth and has a responsibility to educate the parents. Thus, the physicians are in the supreme position to align parents regarding the prevention of oral diseases and impart knowledge leading to healthy oral environment.[2] Thereby, it is prefer-able for the physicians to possess the fundamental dental understanding to unmask signs and symptoms of dental diseases. Very few studies have collected data concerning the dental knowledge of physicians. The present study seeks to assess the knowledge and attitude of medical practitioners towards child dental care.

MATERIALS AND METHODS

A cross-sectional survey was conducted among the medical practitioners from the States of Maharastra, Madhya Pradesh Chattisgarh. A simple random sampling was done. Data regarding their knowledge and attitude towards dental health was gathered using a self-administered questionnaire comprising of 25 close-ended questions divided into two sections. One section contained the questions to assess the knowledge and the other section for attitude. The investigator approached each practitioner through as online Google form which was either mailed to them or sent to them through Whatsapp. It was informed that responses would remain anony-mous. At the end of the questionnaire queries about their personal details like name, gender, and medical specialty were recorded.

Inclusion Criteria

The practitioners should have registered in the state medical council of the state they practiced in.
They should be practicing in india.
They should either be pursuing postgraduation or should have completed their postgraduate course.

Scoring Criteria

The scores were assessed as follows:
< 50%: Poor
50 to 75%: Moderate
> 75%: Good

Statistical Analysis

Descriptive statistics such as frequency and percentage was used to present the data. Data analysis was done by using Microsoft Excel.

RESULTS

Responses of the study subjects on polar questions based on their knowledge and attitude towards pediatric dental

care are tabulated in Table 1. The results showed that 97% of the practitioners knew about primary and permanent dentition. About 94 % of the respondents knew about the oral habits and its affects.

A total of 75.1 % were aware that pregnant women need a dental check-up, 45.2% considered that dental caries is infectious and 69.7 knew it is transmis-sible from mother to child. The graphical representation of the polar question on knowledge is illustrated in Graph 1 and attitude in Graph 2.

Table 2 displays the response on multiple choice questions (MCQs). The results indicate that about 82.5% of physicians thought that scaling causes tooth sensitivity. Only 65.9% of respondents knew that tooth brushing should be initiated after the eruption of the first milk tooth and 50.4 answered that frequency of dental visits is once in a year. Graphs 3 and 4 summarize the response of the MCQs on knowledge and attitude respectively.

The results of the study revealed that the knowledge and attitude of medical practitioners towards pediatric dental health was moderate.

Table 1: Polar questions based on knowledge and attitude.

1. Are you aware about primary and permanent teeth?
2. Do you consider oral examination as a part of routine general check up?
3. Is treating deciduous teeth important?
4. Are you aware of any oral habits in children?
5. Familiar with the effect of fluoride on oral health?
6. Do you have any knowledge about Minimal invasive or atraumatic dentistry?
7. Relation between oral health and general health
8. Are you aware about effects of severely decayed teeth of children?
9. Do you think dental carious is contagious?
10. Is there a Relation between oral health and general health?
11. Is dental caries inherited from a mother to her child?
12. Do you treat any of your patients for dental complaints ?
13. Common causes of dental problems?
14. Common cause of pain in the oro facial region?
15. First dental visit for a child?
16. Commencement of tooth brushing?
17. Frequency of dental visits?
18. Adverse effect of scaling on teeth?

POLAR QUESTIONS BASED ON ATTITUDE

19. Do you recommend dental checkup for the patients who are pregnant?
20. Educate your patients about importance of oral health?
21. Is dental caries an infectious disease?
22. Is dental caries transferred from mother to child?
23. Interested to receive oral health care training?
24. In your clinic if you come across a child with dental problems, whom would you refer the child to?

Table 1

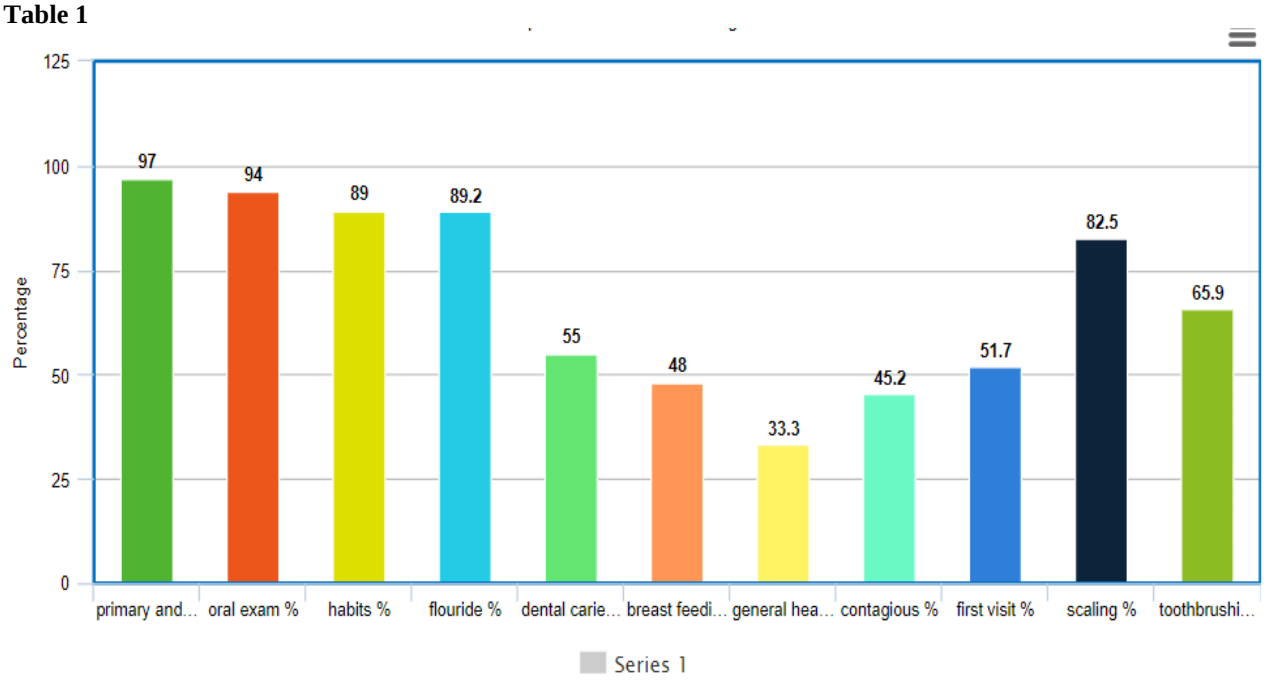


Table 2

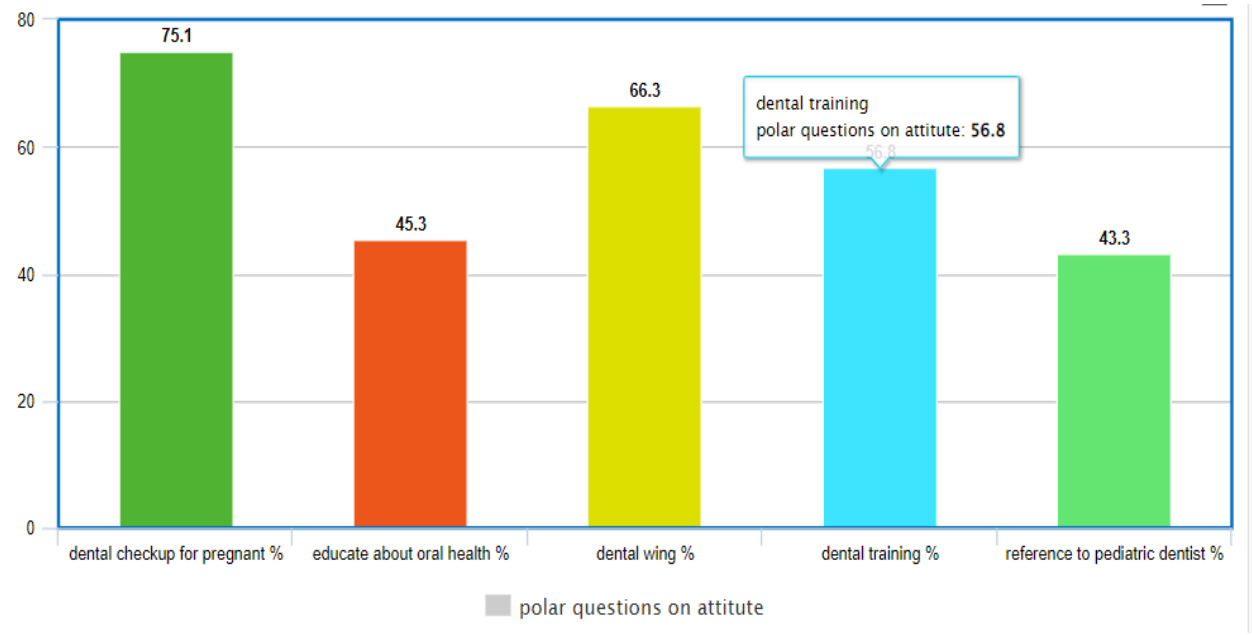
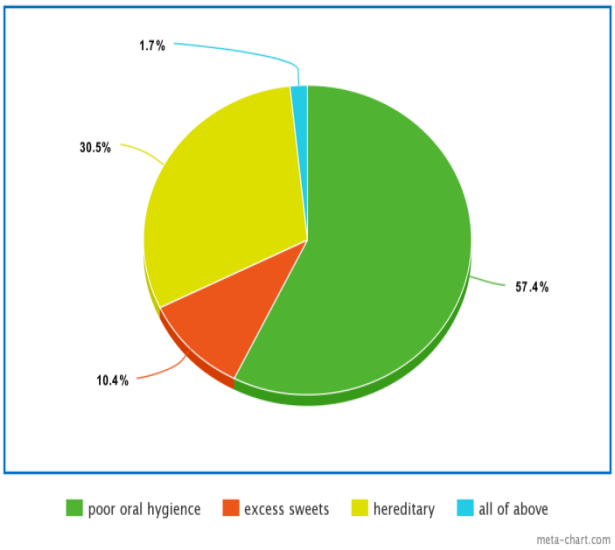
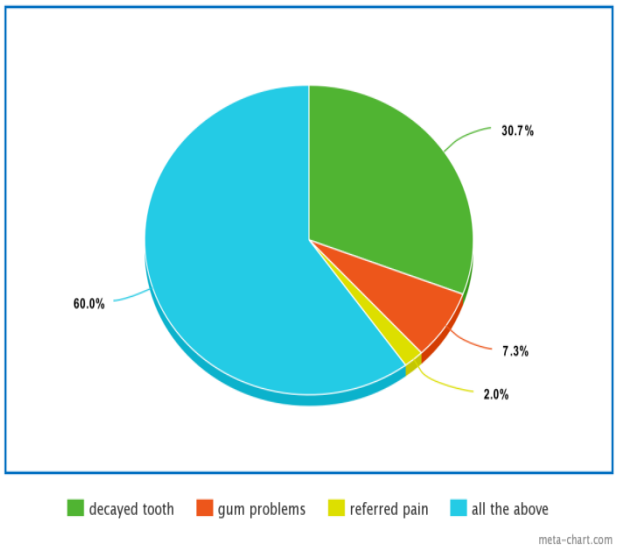
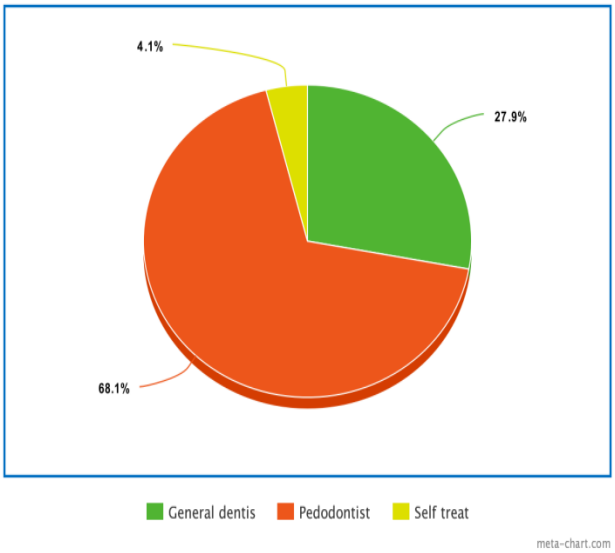


Table 3: Response of study subjects on MCQs based on dental knowledge.







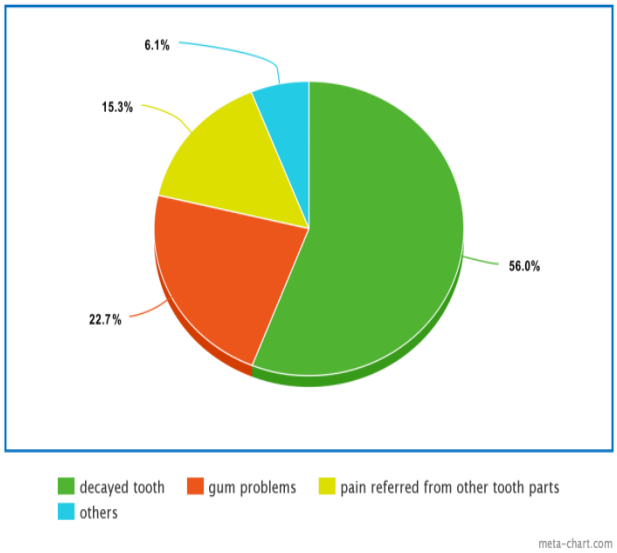
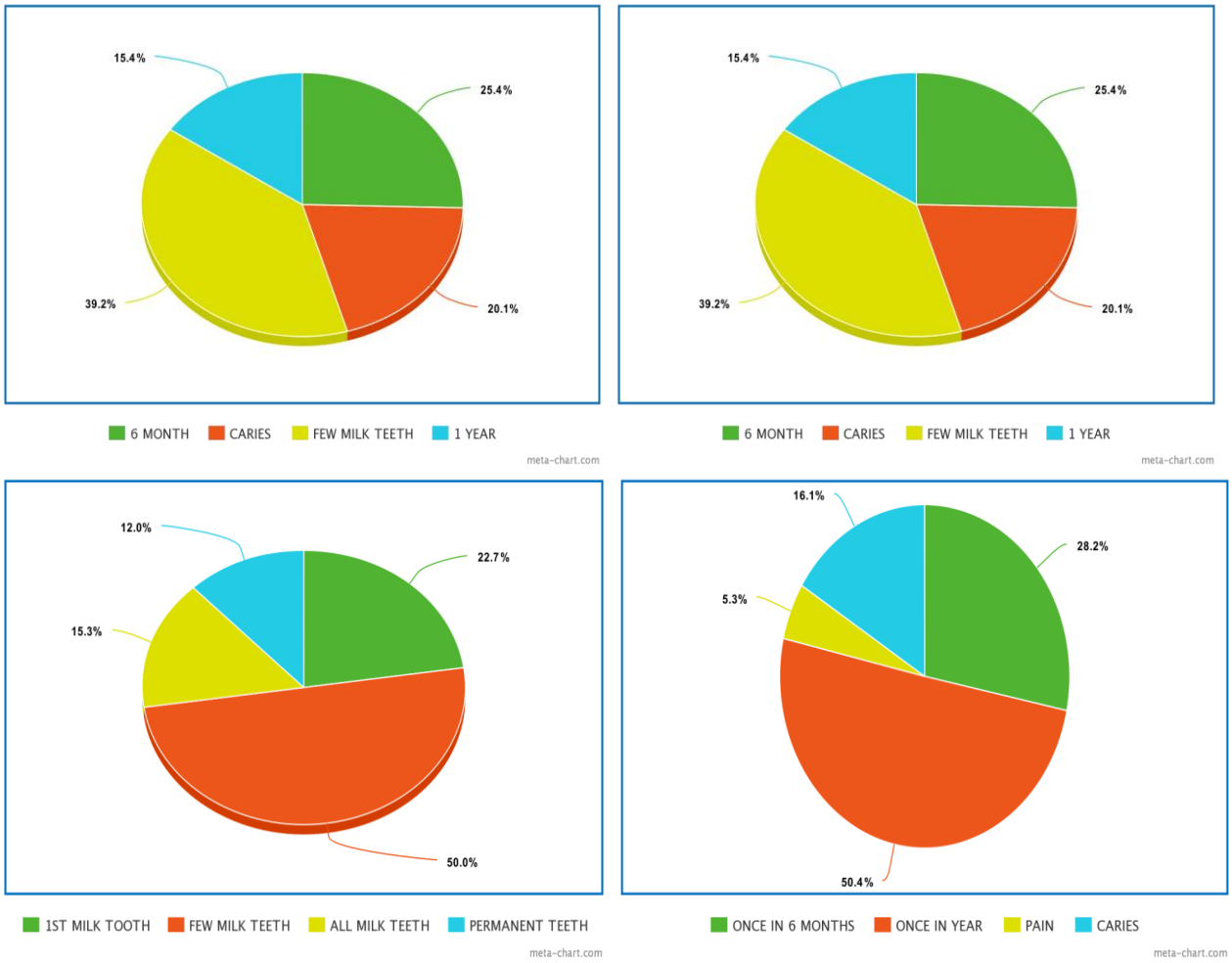


Table 4: Response of study subjects on MCQs based on dental attitude.



DISCUSSION

Medical practitioners are considered the primary bond between dentists and children. Dental diseases can be treated at early stages if the physicians examine the oral cavity regularly. This study emphasizes the crucial role that the physicians can play to enhance oral public health.

In the present study with regards to dental knowledge, 67.3% of medical practitioners knew the importance of treating deciduous teeth and 60.7% of the respondents examined oral cavity routinely. However, Al-Hussyeen et al. reported that almost half of pediatricians did not routinely include dentition in their examinations.[3]

Among the surveyed doctors 48% were familiar with the harmful effects of long-term breastfeeding/ bottle feeding. Appropriate breastfeeding is considered the best feeding method for infants. But, certain feeding habits like nocturnal breastfeeding, at will-breast feeding, and weaning delayed beyond the age of 2 years could all harm the dentition.[6-8]

But there is evi-dence to show that infants who sleep with the mother and nurse throughout the night are prone to increased caries risk.[9-11]

With regards to fluoride, 89.2% of the practitioners were aware of the effect of fluoride on oral health.

Oral habits include digit sucking, pacifier sucking, lip sucking and biting, nail-biting, bruxism, self-injurious habits, mouth breathing, and tongue thrust. Among the respondents, 89% were aware that oral habits affect the dentition of the child. The physicians can provide the parents with information regarding the consequences of a habit and there ill effects on the appearance and aethetics of childs dentition.

Among the investigating population, about 63.3% were well acquainted of the relation between oral and general health, The harmful role of gum/periodontal disease in many serious and life-threatening diseases is evident from recent studies. For example, periodontal disease is associated with coronary heart disease; diabetes; low pre-term birth weights; respiratory disease; improper digestion; osteoporosis; stress the immune system; lower resistance to infections; and minimizes life expectancy.[14-18] In the present study, most of them (77.3%) have rightly answered that untreated dental disease can lead to systemic complications.

Pregnancy is an essential phase in a woman's life, and good oral health is essential for the mother and the baby as well. Although prenatal education is considered the key to dental care of the infant, proper instructions regarding oral health are not delivered to the pregnant women.[19] Among the study subjects, 75.1 % suggested the need for a dental checkup in pregnant women whereas Srinidhi et al published a study in which a majority (91%) of the practitioners were aware of its significance.[20]

The present study showed that more than half (62.7%) of the doctors alert their patients about the importance of oral health. Among the participants, 65.3% were unaware that dental caries is a disease which is infectious. 45.2% of them knew that cavity-causing bacteria could be transmitted from the mother to children, which is also cited in the pediatric literature.[21] *S. mutans* can be transmitted by Vertical transmission (from mother to child) and/or horizontal transmission (between members of a group e.g. family members or students in a classroom). Poor maternal oral hygiene, dietary habits, child-rearing habits, sharing food and utensils, breastfeeding and sleep-ing beside the mother, were all significantly associated with colonization of *S. mutans*. The major source from which infants acquire *S. mutans* is their mothers.[22-25]

Since majority were not trained with respect to oral health aspects, 56% of the respondents showed their interest to receive oral health care training and 66.3% recommended for a dental wing in primary health centers.

When questioned about the common causes of dental problems, 57.4 % of the doctors thought it could be because of poor oral hygiene, 10.4% because of excess sweet and 1.7% said heredity, while 30.5% believed that dental problems are multifactorial.

On investigation about the common cause of pain in the orofacial region, 66.9% said decayed tooth could be the etiology, 22.7% opted for gum problems, and 6.9% of the practitioner's reflection was on referred pain from other parts of the body while 60% answered for all of the above factors.

Among the participants, 67.3% of the doctors were aware of the existence of pediatric dentistry as an exclusive specialty. Only 43.3% of practitioners referred children to a pedodontist while 30% refer to a general dentist. In a study conducted by Poornima et al.[2] around 86% of pediatricians referred children with oral disease/dental caries to pedodontist.

When investigated about the first dental visit, 25.4% of the practitioners suggested the parents for the first dental visit of the child at 6 months of age, 39.2% when the baby is one year and 15.2% after the eruption of a few milk teeth. Early visits to the dentist are recommended since it facilitates preventive measures, early diagnosis, alignment regarding proper diet and nutrition, oral hygiene instructions and prevention of non-nutritive sucking habit.[26-28]

According to the American Academy of Pediatric Dentistry (AAPD) guidelines, tooth brushing should be initiated after the eruption of first milk tooth and the AAPD recommends for a biannual dental visit.[29] In the present study, half of the doctors thought tooth brushing should be initiated after the eruption of a few milk teeth and only 22.7% of them rightly counseled the parents for brushing after the eruption of first milk tooth. Murthy and Mohandas reported 33.3% of physicians recommended commencement of tooth brushing after the eruption of first milk tooth.[9]

Regarding the frequency of dental visits, only 28.7% of the respondents suggested their patients visit the dentist once in six months while 50% thought once in a year. Chandra et al.30 revealed that regular visit of once in six months was suggested by 86.3% of practitioners which is high when compared with the present study.

LIMITATION

The limitation of the survey was the inability to use open-ended questions to probe the participant's responses to a greater extent.

CONCLUSION

The study indicates that the practitioners had Good knowledge and attitude towards pediatric dental health. They feel they have a crucial role to be played in the promotion of oral health, the only issue that stands in between is the application of knowledge to bring about an impact as compared to a pedriatic specialist. The doctors can only recommend them to pedodontists for treatments. There should be a medium in between both the specialities to come togather and create a modality of treatment planning or diagnosis where both ends of treatments could be met.

RECOMMENDATIONS

- Collaboration between dentists and medical practitioners for implementation of oral health programs and seminars.
- To inspire the establishment of associate clinics which includes providing medical and dental services under one roof.
- Publish the preventive dentistry articles in medical journals.
- Imparting oral health education in the form of brochures, posters, etc.
- Establish a dental home along with the medical home.

These measures help in establishing a good rapport between the dentist and medical practitioners and helps to impart oral health knowledge to the medical doctors.

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