Indian Journal of Dental Sciences.
June 2012 Issue:2, Vol.:4

www.ijds.in

Review Article

Indian Journal
of Dental Sciences

E ISSN NO. 2231-2293
P ISSN NO. 0976-4003

"A Journey Of Thousand Miles Begins With A Single Step" - An Adage For Incremental Dental Care

[1] Mythri H.
[2] Ananda S R.
[3] Chandu G. N.

[1] Senior lecturer, Dept of Community Dentistry, Sree Siddhartha Dental College, Tumkur, Karnataka-572107, India.
[2] Senior Lecturer, Dept of Community Dentistry, Hasanamba Dental College, Hassan, Karnataka - 572107, India.
[3] Prof. and Head, Dept of Community Dentistry, College of Dental Sciences, Davangere, Karnataka-577 004, India.

Address For Correspondence:
Dr. Mythri H.
Senior lecturer,
Department of Community Dentistry,
Sree Siddhartha Dental College,
Tumkur, Karnataka-572107, India.
Phone No. : 08162206451
Fax No. : 08162275536
Mobile No. : 9886950367
E-mail : mythrisanya@gmail.com

Submission : 17th September 2011
Accepted : 14th February 2012

Quick Response Code

Abstract
Although, most oral diseases are preventable, not all individuals and communities benefit fully from the available preventive measures. In such cases, most frequently children make one of the important groups of community, as they are future citizens. To be a healthy citizen of a country one should have healthy habits. To learn healthy oral habits, requires active participation of the learners. The school based dental health programmes provide the best opportunity to reach the largest number of children at a time.[1] And incremental dental care is one such method to deliver a priority dental care for children.

Key Words
Incremental dental care, maintenance care, school based dental health programmes

Introduction:
In the context of WHO, aim of "health for all by 2000", the global status for children, should be that 50% of children between the ages of 5 and 6 years will be free of dental caries and at 12 years of age they should have 3 or fewer decayed, missing or filled teeth. One of the methods by which the dental surgeon can approach a community is the assignment of a dental surgeon or dental committee for school children. The school is the most logical and practical place to implement large scale school dental health programmes.[2]

History:
In **1885** William Fisher published a paper entitled "compulsory attention to teeth of school children". Following this, British Dental Association appointed a committee to investigate child dental health.

In **1898**, School Dentists Society was formed in London.

In **1907**, George Cunningham in England proposed a method of delivering priority dental care to a group of children, known as incremental care.[1]

The statistics of dental need:
A startling statistic revealed that more than 80% of dental decay was found in 25% of population.[3] Moreover, these children are from lower - income households, ethnic minorities and many times have special needs.

a. Over 5 % of 5 to 9 year olds have at least one cavity or filling, by age 17, the percentage has increased to 78%.
b. 25% of the children have not seen a dentist before entering kindergarten.[4]

The consequences of this widespread problem are alarming. More than half (57%) of parents report unmet dental needs of their children.[5]

Unfortunately the children who most need dental care are not receiving it. This raised the concept of dental public health.[6]

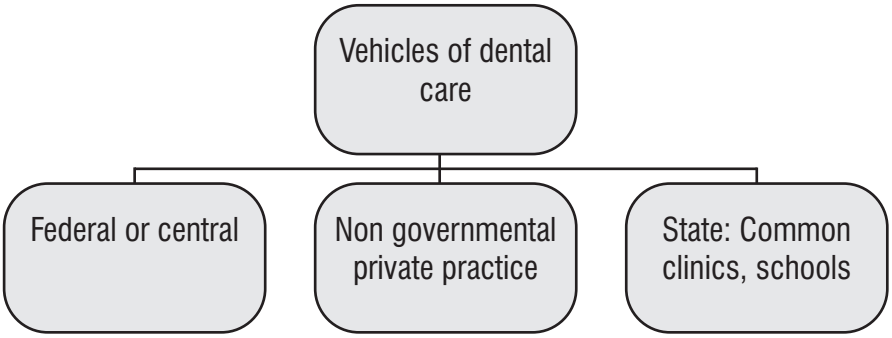
DENTAL CARE DELIVERY SYSTEM IN THE UNITED STATES
"Even though the U.S spends twice as much per person as any other developed country on health care, it fails to provide universal coverage for all its citizens." - **Carole Simpson quotes.**

Many issues has proven that delivery of dental care in the US is ineffective in providing care to all segments of the population.[5]

The search for effective strategies to deal with prevention and treatment of oral disease hence focuses on children as a natural target population.

Treatment is not the answer to solving children's oral health problems; rather primary prevention is the key. This gave raise to the concept of Incremental Dental Care.

Definition:[7]
It may be defined as "**Periodic care so spaced that increments of dental disease are treated at the earliest time consistent with proper diagnosis and operating efficiency, in such a way that there is no accumulation of dental**



needs beyond the minimum".

Aim:
It's a rational approach on annual basis to the dental problems and a plan for life long dental care. It aims at prevention and maintenance as the programme starts at an early age. It provides a complete oral examination during early child hood.

Why deciduous teeth have to be taken care?
The early loss of the temporary molars, causes forward drifting of the first permanent molars in the lower and the upper arches which necessitates extraction of caries-free premolars in those areas.[8]

Method:
These programmes are "gotten off the ground" by taking the youngest available group the first year and carrying it forward in subsequent years as far as funds permit, each year adding a new class of children at the next earliest available age until an entire child population is being served to as high an age as available resources permit. Six year olds or the first year of the children in school are a convenient way to reach them and then reaching back to pick up four and five year olds, while maintaining the six year olds when they become seven year olds and so on.[9]

Enrollment of the patient population:
This is accomplished in cooperation with the educational agencies in the area. On entering the first grade, each child is provided an enrollment card to be completed by the parent or guardian and returned to the school.

Instructions were provided to the principal and each teacher before the distribution of the cards, and procedures were established for follow up of those children failing to return the cards. After one week, project personnel return to the schools and collect the cards, which are then reviewed by the eligibility clerk.[10]

Enrollment of the provider population: Unlike the child population, the provider population remains relatively stable from year to year. The initial enrollment procedure was accomplished by voluntary basis and has to accept usual, customary and reasonable fee and they were asked to indicate how many children they could accommodate and what days and what hours of the week they would accept the children. Along with this the participating dentists should prefile their fees.

After the geographical distribution of the providers and recipients was analyzed, an examination form is completed; this provides base-line data on the oral health status of the population. When a child's treatment is completed, the provider submits a form including a record of all treatment that they received.[10]

Advantages[11]:
1. Ideal pattern of care where incidence of new dental diseases are expected each year.
2. Initial cost is less.
3. Man hour for initial care is less.
4. Lesions of caries are treated well before there is a chance for pulp involvement.
5. Periodontal disease is intercepted at/near the beginning.
6. Topical and other measures can be maintained on a regular basis.
7. Bills for dental service are equalized and regularly spaced.
8. Child develops the habit of visiting the dentist periodically.

Limitations:
Financing which has been customary in the United States, along with dental manpower limitations, the programme usually terminates about the fourth grade (age 10) and is almost never carried through the high school period.[12]

Controlling factors:
The recent drop in childhood dental caries and higher costs per child per year above that age level, in both average and stress areas.[12]

Disadvantages:[6]
The foremost one is that operative dentistry is more time consuming on a piece meal basis. The others are,

1] Attention to deciduous teeth:
Few dentists will deny the importance of the deciduous teeth, but conversely, few will assign them a value as great as that of permanent dentition. Where priority decisions must be made the permanent teeth deserve top listing.

2] Psychology and changing patterns of modern family:
No longer do children move steadily from the habits taught them by their parents during childhood into similar adult habits of their own. One of the good features of teen-age rebellion is the responsibility young people feel for developing their own ways of life. Healthy habits and many other matters must therefore be taught directly to the teenagers. They must be reconvinced in terms of their own new motivation that teeth are worth keeping and that incremental care is the best way to assure this. Teenagers can be reached by reason much better than younger children. They have social motivation, not only in relation to their personal lives, but usually toward the community as a whole.

3] Increasing likely hood of interruption in children's dental health programmes:
In the social groups where systematic health care is easiest to attain, programme breaks occur because of rising divorce rates and increasing mobility of the average American family. Children are far more often involved in broken homes today and are more often moved with their families around the

country in such a way as to interrupt programmes for dental maintenance care.

4] Inertia toward the seeking of private dental care:

Lambert and Freeman, in a study of high school children in Brookline, Massachusetts, have observed that those children who received dental care on an incremental basis till fourth grade in school were in significantly poorer dental condition later on than were those children of a similar in4come level who had received care elsewhere. There is a sound basis to argue that given limited resources, young children should not be the sole focus of programmes, but that teenagers should be given at least equal consideration.

Summary:

In any event, if one accepts the thesis that routine appropriate care over a lifetime will decrease the cost of restorative care and perhaps subsequent endodontic and prosthodontic care, one might logically accept the argument that **an incremental dental care should be the choice** when a dental health care programme is being recommended for a group of children.

There are others who argue that a graduated incremental approach is much more logical way of proceeding, particularly when introducing with limited resources available. It allows the programme to start on a limited scale, expand gradually, and be phased in with no large backlog of needs in eligible children at any one time. This approach has not always been accepted by some thoughtful analysts of the procedure.

The careful pencil-and-paper analysis with what limited data were available led to the following finding; that although not backed by a project of prospective research, the annual "front end" costs of an incremental programme [that is, routine examination, radiographs, prophylaxes, reinforcement of patient education, and application of any preventive procedures that might be indicated] added up to considerably more than the costs of the accumulated restorative care.

Certainly if the downward trend in caries attack continues, incremental maintenance care may not be indicated at least for extremely young children. Emphasis might be shifted to preventive visits beginning in early teenage when periodontal disease begins its subtle attack. [13]

Conclusion:

Incremental Dental Care, a type of maintenance care was an old concept and it is similar to "weather" - a lot of people talk about it, but nobody does anything about it. Actually, a lot has been done about the weather. We measure it much more accurately now than we did a generation ago with the aid of computers. This accurate forecasts can better prepare us for the changes in the weather if can't change the weather.[14]

Similarly, if we identify the needy, treatment providers, financing source and use modern data processing techniques to collect and study the information, we can better understand many factors involved, perhaps make better predictions, and make better decisions about the allocation of resources to solve the problems in health care.

As Leninist road to universal health care says - "things have to get worse before they get better",[15] in spite of some limitations and with certain disadvantages, incremental dental care can be implemented as "Whoever wants to reach a distant goal must take small steps initially."

References:

1. Hiremeth S S. Text Book of Preventive and Community Dentistry. 1st Edition, 2007.
2. Satish Chandra, Shaleen Chandra. Textbook of Community Dentistry. 1st edition, 2000.
3. Kaste L M, R H Selwitz, R J Oldakowski et al, Coronal caries in the primary and permanent dentition of children and adolescents 1 - 17years of age. J Dent Res. 1996: 75: 631 - 641.
4. Norman O Harris, Primary preventive dentistry. 6th Edition, 2004.
5. Christine N Nathe, Dental Public Health, contemporary practice for the dental hygienists.
6. Dunning J M, Principles of Dental Public Health. 4th Edition, 1986.
7. Soben Peter. Essentials of Preventive and Community Dentistry. 3rd Edition, 2006.
8. Graham turner, Organization in the school dental service. British dental journal, December 21, 1971:561 - 565.
9. David F Striffler, Wesley O Young, Brian A Burt, Dentistry, dental practice and the community. 3rd Edition.
10. Gene P Lewis, G. Fox Monroe, Children's incremental dental care program: an overview of the southeast Tennessee-northwest Georgia project. JADA, Vol 88, April 1974,789 - 794.
11. Joseph John .Textbook of Preventive and Community Dentistry.
12. Aubrey Sheiham, Impact of dental treatment on the incidence of dental caries in children and adults. Community Dent Oral Epidemiol 1997: 25; 104 - 112.
13. David F Striffler, Wesley O Young, Brian A Burt, Dentistry, dental practice and the community. 3rd Edition.
14. Clifton E Crandell, Comprehensive Care in Dentistry, postgraduate dental handbook series, Volume 3, 1979.
15. Incremental versus Wholesale Health Care Reform, Economist view, August 26, 2006.http://economistsview.typepad.com/economistsview/2006/08/incremental_or_.html dated on 16/7/09.

Source of Support : Nill, **Conflict of Interest** : None declared