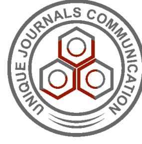

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Review Article

DEMAND FOR DENTAL CARE IN INDIA: AN OVERVIEW

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ABSTRACT

Dental diseases are universally distributed affecting all age groups. Despite the universal distribution of dental disorders, only a few care to seek dental care creating a wide gap between the actual dental needs of the population and the demand for dental care. Low perceptions of need by individuals may cause different backlogs of professionally determined need which influence the supply of care. Closing the gap between need and demand for dental care is the key to improve oral status of a country. The present review gives an overview of the factors which tend to influence demand for dental care and emphasizes on strategies to narrow the gap between need and demand for care.

Keywords: Demand, Treatment Needs, Dental Care, Perceived Needs.

INTRODUCTION

Dental diseases are universally distributed affecting all age groups. The prevalence of dental caries in India is 68.5% among 5 year old children and 30.5% among 12 year old children. Gingival bleeding on probing is observed among 13.76% and 30.0% of 5 year and 12 year old children respectively, whereas calculus is observed among 2.73% and 18.75% respectively. About 7.5% of 12 year old children have either questionable or mild fluorosis[1]. Despite the universal distribution of the dental disorders, only a few seek dental care creating a wide gap between the actual dental needs of the population and the demand for dental care.

All the assessable literature was utilized through google, google scholar and PubMed using words like dental demand, utilization rates, demand and supply in dental care, dental needs

Actual dental needs and demand for dental care

The level of need for dental care can be estimated from two perspectives[2].

1. From a dentists perspective
   Need for dental care as perceived by a dentist. The needs are assessed based upon an agreement against an agreed set of criteria by professionals. These are called as normative needs.
2. From the patients perspective
   Need for care as perceived by an individual. When people express their needs they are called demands.

The concept of need is central to planning provision and evaluation of health services[3].Appropriately assessed population needs improve estimates of resources, rational allocation of dental services and efficient dental care expenditure. Low perceptions of need by individuals may cause different backlogs of professionally determined need which influence the supply of care. Oral health services appear to be designed to meet the needs of the provider rather than the public[4]. The paucity of the information pertaining to treatment needs and demands of populations may be the possible reason. Closing the gap between need and demand for dental care is the key to improve oral status of a country.

DEMAND FOR DENTAL CARE DEPENDS ON FOLLOWING FACTORS

1. Population factors
- Population growth
- Increased life expectancy
2. Demographic
- Age
- Gender
- Education
- Marital status
- Socio-cultural issues
3. Economic factors
- Income of the family
- Cost of the treatment
- GDP of the nation

- Household size
- Insurance
4. Accessibility
- Location
- Cost of travel
5. Workforce
6. Acceptability of the services
7. Severity of the disease

Population factors

A growing elderly population will have greater need for healthcare services and products associated with increased prevalence of complex medical conditions and chronic diseases. Same scenario can be attributed to dental care demand[5,6]. Increased population growth increases the demand. Aging and population growth are projected to account for 81 percent of the change in demand between 2010 and 2020[7].

Demographic features

Demographic features like age, gender, marital status, education and social and cultural characteristics play a major role in determining the demand for care[8]. Young adults are at a better position to avail the services as compared to the older individuals or children. The older population and children is influenced by financial barriers, physical dependency and other health concerns[9]. Studies show that the elderly typically underuse needed dental services[10]. A person's level of education also imparts demand for dental care. Most studies find a negative relationship between education and demand for dental care- as education level increases, demand decreases[11]. According to Feldstein 2005, as education attainment increases, individuals are likely to be more adept at recognising early symptoms of diseases, thus early attainment of treatment or change their lifestyle to avoid illness.

Economic factors

Income of the family forms the key factor in defining demand. Income determines the ability of an individual to purchase the available health care facilities. At the same time cost of the treatment is an important factor which influences demand for care. Higher the costs lesser the affordability by general population, which in turn increases the demand. The overall economic situation of a country determines the private and public spending on health care[12]. A high standard of living indicates the prosperity of a society to provide the basis for a broad spectrum of health care services and the application of new technologies. The living standard can be measured by the Gross Domestic Product per capita. In health care systems that are principally financed by taxes as well as those mainly financed by contributions to health care insurance schemes the amount of tax contributions depends on the added value or earnings/income[13]. High economic growth rates assist the financing of public and private health care costs[14]. There lay a positive relationship between insurance and demand for dental care. Those having dental insurance were more likely to go to check-ups[15]. Persons without health insurance are not only less likely to receive the health coverage afforded by typical health insurance plans; they are also less likely to get needed dental care. Children with no health insurance are three times as likely as privately insured children to be unable to get dental care when they need it. Working-age adults are four times as likely as their privately insured counterparts to be unable to get dental care when they need it. Lack of dental insurance can be a barrier for seeking dental care for some; particularly those in the lower socioeconomic classes. People with limited financial resources may give dental care a lower priority than other expenses which they perceive to be more pressing[16].

Accessibility

Location of the health care units plays a major role in influencing the choices of people to accept the treatment. If the health care unit is located far away, it is difficult for the people to travel for such long distances to avail the services. Cost of travel is of prime concern. When people with lower socio-economic status find difficulty to afford treatment cost, travel cost acts as an additional burden[17.] A survey by Bali, et al. in 2004 revealed that the prevalence of dental caries and periodontitis was more in rural population as compared to urban population[18]. More than 70% of the people of India live in more than 5,50,000 villages, and the remainder in more than 200 towns and cities. There are estimated 3708 community health centers, of which 26952 are primary health centers and 136815 serve as sub centers in India, but in most of the states the primary health care center and community health care centers do not have a dentist.

Workforce

There are two basic work force considerations: the effective number of dentists in the system relative to the demand for dental care, and the distribution of the available dentists relative to where the patients who are seeking care are located. The other aspect of workforce adequacy that must be considered is real the absolute number of dentist in an area which is an important factor to consider, but the actual output produced by the dentist is the end result that, if enhanced, will improve the access to care[16]. Since output is the product of the number of dentists and their productivity (workforce x productivity=output), increase in either factor can enhance output and help improve access to dental care[16]. There are 292 dental schools in India producing more than 30,000 graduates every year. More than 2800 postgraduate students are enrolled every year. There is geographic imbalance in the distribution of these colleges. Dentists-to-population ratio of India, which was 1:300,000 in the 1960's, stands at 1:10,000 today. However, the reality is that; in rural India one dentist is serving over a population of 2, 50,000.About 80% of dentists work in major cities in India; compared to the population where more than 70% of the Indians reside in the rural areas[19]. There are a few private colleges with mobile dental units used for service of the rural population. Availability and distribution of the dentists represents the extensiveness of the oral health care system[20].

Acceptability of the services

Users and providers of health services have expectations about how services should be delivered and received. These expectations are not always shared. Barriers could arise from both providers side as well as from the recipient side or the patient

SCOPE FOR IMPROVING THE DEMAND

People of a community are continually challenged to make healthy lifestyle choices and manage their personal and family journeys through complex environments and health care

systems but are not being prepared or supported well in addressing these tasks. "Modern" societies actively market unhealthy lifestyles. Health care systems are increasingly difficult to navigate (even for the best educated people) and education systems too often fail to provide people with adequate skills to access, understand, assess and use information to improve their health[21].The health care industry like any other industry strives for growth and expansion for survival. The main aim of the health care industry is to bridge the gap between need and demand in order to generate supply. Few measures which can narrow the gap between need and demand for care are discussed

Improving health literacy— it implies the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions—is critical to achieving success for national health. Limited health literacy affects people of all ages, races, incomes, and education levels, but the impact of limited health literacy disproportionately affects lower socioeconomic and minority groups. It affects people's ability to search for and use health information, adopt healthy behaviors, and act on important public health alerts. Limited health literacy is also associated with worse health outcomes and higher costs[22] .

Increasing awareness about oral health by advertising through brand development, electronic and printed media, websites, e-mail communications, and direct mail and through mobile dental care.

The key to enhancing the growth is to improve the affordability of quality health care to the general masses. To create a market and to meet the challenges are two sides of the same coin. Quality health care comes at a cost not everyone can afford. About 80-85% of people are spending money from their pocket. May be due to this fact - oral health care seeking behavior is very low in India, people rarely visit dentist and that too only in the event of pain. In the year 2009 only 6% of the total GDP was allocated to health-related expenditures in India, with no separate allocation of budget for oral health care[19].

Private public partnership should be encouraged where in public sector can provide tax incentives to encourage private sector invest in health care and private sector can plan, design and develop health care facilities in whole or specialty wise.

Publicly-funded programs, such as Medicaid, and the Children's Health Insurance Program (CHIP), are the primary sources of coverage for underserved and vulnerable individuals in many western countries.Unfortunately Indian dental insurance sector is in its nascent stages. The role of third party payment and health insurance should be improved.

India is a country of myriad contradictions. On the one hand, it has grown to be one of the largest economies in the world; on the other hand, it is still home to the largest number of people living in absolute poverty. The root cause of social unrest is a picture of uneven distribution of the benefits of growth. Companies too have been the target of those perturbed by this uneven development. India's ancient wisdom, which is still relevant today, inspires people to work for the larger objective of the well-being of all stakeholders. To contribute to sustainable economic development by working with employees, their families, the local community and society at large, to improve their lives in ways that are good for business and for development, the companies have come up with the idea of Corporate Social Responsibility. In CSR, a given company would spend at least 2 per cent of its average net profits of the previous three years on education, health and arts and cultural activities of the employees[23].

Philanthropic giving is emerging as a significant means by which health systems can enhance financial resources [24].

Improving the access to oral health care through organised outreach programs and mobile dental unit services should be encouraged.

Telemedicine and its counterpart in dentistry, teledentistry have achieved rapid strides to counter misdistribution of workforce. It is the use of information-based technologies and communications systems to deliver healthcare across geographic distances. It uses electronic information to communicate technologies to provide and support healthcare when distances separate the participants. It is part of a wider process or chain of care. It can improve this chain and thus enhance the quality and efficiency of health care. It is being used today in academic medical centres, community hospitals, managed-care companies, rural hospitals, and is also being used internationally to link providers in developing countries to hospitals in developed countries. Advances in digital communication, telecommunication and the internet introduce an unprecedented opportunity to remote access to medical care[25].

The field of dentistry has seen extensive technologic innovations in recent years. Advances have been made in the use of computers, telecommunication technology, digital diagnostic imaging services, devices and software for analysis and follow-up. Using advanced information technology, the science of dentistry, today, has crossed much longer distances than it was ever able to. New information technology has not only improved the quality of management of dental patients, but also has made possible their partial or complete management at distances of thousands of kilometres away from healthcare centres for qualified dentists[26].

Clinical patient management system designed specifically to manage episodes of care quickly and safely in demanding unscheduled telephone advice and face-to-face care settings, such as urgent care centres, out-of-hours services and walk-in centres are the need of the hour. These empower the caregivers to focus on the treatment aspects while managing the patient workflow.

Improving the workforce

An improved and responsive dental education system is needed to ensure that current and future generations of dental professionals can deliver quality care to diverse populations in various settings. Regulations and policies such as scope of practice laws should be brought into action to determine who may provide oral health care, how it may be provided.

Reasons for shortage of dentists in rural areas or inner city residents include the high level of education debt by dental graduates and limited availability of loan repayment and scholarship programs. Enhanced funding scholarship and loan repayment programs for dental students to help recruit and retain an adequate health care workforce. Reducing disparities

in oral health by increasing the representation of minority of students, because minority dentists tend to return to their communities and serve the underserved[27].

Only a few dental hygienists and dental mechanics are trained in India (800 annually). They could potentially help with addressing regional inequalities and preventive work at lower costs[19].Social, legal, and financial incentives should be considered to promote training and employment of therapists

Providing students with clinical experiences in community-based settings and with patients with complex oral health care needs improves their comfort level in caring for vulnerable and underserved populations and increases the likelihood that students will care for such populations in their future careers

Unsatisfactory employment opportunities in various areas now lead to migration to major cities and towns, which disturbs the balance of the dentist to population ratio and further aggravates employment opportunities in these cities and metropolitan areas This vicious cycle needs to be stopped to get at the root of the problem and begin providing sufficient employment opportunities in a well-distributed manner.

CONCLUSION

Oral health is a critical but an overlooked component of overall health and well-being among children and adults. Dental diseases can restricts activities in school, work, and home and often diminishes the quality of life for many children and adults significantly. People in the community should be able to know the importance of their oral health status and seek treatment for the same. In order to achieve this, strives should be made with regards to

- Improving accessibility of services
- Enhance health literacy
- Reduce the cost
- Encourage efficient workforce

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