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Assessment of Dental Health Services in Government Hospitals of Dharwad District

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Conflicts of Interest: Nil.

Abstract

Introduction: Dentistry faces serious problems regarding accessibility of its services to all. In Karnataka state, the dental health services exist only in district hospitals and community health centers at taluka places. Currently, one under researched area has been the assessment of oral health care services in Government hospitals of Dharwad district.

Aim: To assess the dental health services in Government hospitals of Dharwad district.

Material and methods: Performa was used to collect information from 34 various Government hospitals on the type of dental health services, equipments, dental health professionals from the district hospital, primary health centers and community health centers.

Results: Out of 34 government hospitals, dental services were present only in 5 hospitals; only in 14.7% of hospitals dentists and dental chairs were present. Dental equipments like Intra-oral x-ray unit were available only in 2.94% of hospitals and sterilization equipment only in 14.71% of hospitals. Extraction forceps were present only in 14.71 % of hospitals and supra gingival scalers were only in 11.76 % of hospitals. Restorative materials were available only in 8.82 % of hospitals, prosthetic materials like were available only in 11.76% of hospitals and none of the hospital were provided by orthodontic instruments.

Conclusion: There is poor provision of dental services in both quantity and quality at Dharwad Government hospitals. It recommended that the dental services have to be restructured to improve their quantity, quality and efficiency.

Keywords: Dental health, Dharwad, Government Hospitals, Dental health se

Introduction

The most important resource of India is its 1.21 billion population (2011 census), distributed in 29 States, 7 Union Territories, 5564 tehsils/talukas, 640,000 villages and 5161 towns and cities. India is predominantly rural, as over 72% of people continue to live in rural areas. (1) Rural health infrastructure has been well designed to cover rural population through 136815 subcentres (SCs), 26952 Primary Health Centres (PHCs) and 3708 Community Health Centres (CHCs).(2) Oral health care of necessity has to be delivered through primary health care infrastructure, because of limited resources and manpower of dentists. Though, the country is producing 7000 dentists

per annum, the dentist: population ratio is 1:30000, the distribution of dentist to population requirement is grossly uneven. More than 90% of doctors are available in urban settings and only 10% available to 72% of rural population. There are no dental surgeons posted at the level of CHC and PHC in most of the States. Besides this, there is acute shortage of equipment and material and other essential facilities to run the minimal curative services for vast population. (3) Nearly 30% of population lives in urban areas and half of this lives in urban slums. Tertiary level hospitals, district hospitals, nursing homes, private practitioners and nongovernmental organizations provide health services. Besides these, municipal corporations also provide services; however, these services are poorly organized. Urban ICDS projects provide services on geographical basis. Health policy 2002 envisages strengthening of urban health services. RCH urban projects have been launched to increase the coverage of health services for vulnerables. Variable dental health services in urban areas are available-through public and private set up.(4)

WHO focussed its attention on oral health in 1994 and chose the theme "Oral Health for Healthy life" for World Health Day. Ministry of Health and Family Welfare, Govt. of India accepted in principle National Oral Health Policy in the year 1995 to be included in National Health Policy and two plans were introduced to extend minimum oral health to the entire Indian population, one for rural and other for urban India. 1) For rural India - Provision of oral health education, primary prevention in rural areas, training of trainer and provision of at least 1 dentist at PHC (30,000 population) with efficient Equipment and 2) plan for urban India - District and sub-divisional level dental clinics should be strengthened in respect of dental manpower and dental equipment and implementation of Primary Preventive Package through the school health schemes in different urban areas. (5)

In order to consider past efforts to evaluate community or primary health centers, it is necessary to define the term ‘evaluation’. In this context, it means “determination of the value of course of action” This determination can be made with varying levels of thoroughness.

There are number of intermediate stages at which measurements can be made. A review of literature reveals that there are several levels of health evaluation. The levels of evaluation, in ascending order, cover:

1) The provision of resources (personnel, facilities, equipment, etc.)
2) The quantity of services provided and received;
3) The estimated quality of the services; and
4) The improvement in health resulting from the services.

Probably, commonest type of evaluation of primary health centers has been based on a simple description of the personnel, facilities and equipment that have been provided in an area.(6) At present in Karnataka state, the dental health services exists only in district hospitals and community health centers at taluka places.(3) No data concerning the assessment of dental health services in Dharwad district has been gathered since so many years, therefore objective of study was to determine dental personnel employed in Government hospitals and to determine dental equipments, materials present and type of services being rendered in government hospitals by interview method. This can provide health administration with reliable information for sound decision making and long range planning to meet dental health needs of the community in Dharwad district.

Methodology

This present study was conducted to assess the dental health services in government hospitals of Dharwad

district, Karnataka, India. Dharwad is the district headquarters situated in northern part of Karnataka and it is the administrative centre for Dharwad district. The district has 5 talukas namely Dharwad, Hubli, Kalaghatgi, Navalgund and Kundagol. According to 2001 census, Dharwad district has 390 rural and 6 urban areas. The district has an area of 4265 Km2 and a population of 1,604,253 of which 54.97% is urban and 45.03% is rural. District has 28 primary health centers, 182 sub-centers, 4 community health centers and one district hospital.

The required official permission for the study was obtained from District Health & Family Welfare Office of Dharwad District and local medical officers of primary health centers and sub-centers for collection of information in the rural health centers. The present study was conducted in December - 2009. A detailed schedule of the survey was prepared well in advance and the concerned authorities were informed regarding place, date and timings. Interview of each government hospital took approximately 8-10mins. Performa was used to collect information on the type of dental health services, equipments, dental health professionals and number of patients visited to the health centers from the district hospital, primary health centers and community health centers. Data was collected from 34 various Government hospitals of Dharwad district.

Statistical Analysis

The data was entered into the computer (MS-Office, Excel) and subjected to statistical analysis using the statistical package-STATA 9.2.

Results

This study provides information on availability of dental health services in government hospitals of Dharwad district. The study covered 34 government hospitals results showed that out of 34 government hospitals dental services were present only in 5 hospitals.

Presence of dentists in various hospitals

Out of 34 hospitals only in 14.7% of hospitals dentists and dental chairs were present and out of 8 chairs in various hospitals only 3 chairs were in working condition**.**

Presence of dental personnel in various hospitals

It shows the maldistribution of staff, the dental mechanics and dental hygienists were also very few covering only 2.94 % of hospitals. Staff nurse were available only in 14.71% of hospitals and ward boy or attender were available only in 11.76% of hospitals. (Fig. 1)

Presence of dental equipments in various hospitals

Intra-oral x-ray unit was available only in 2.94% of hospitals and sterilization equipment (autoclave) only in 14.71% of hospitals. (Fig. 2)

Presence of dental instruments in various hospitals

None of the hospitals were provided by sub gingival scalers & ultrasonic scalers. Extraction forceps were present only in 14.71 % of hospitals and supra gingival scalers were only in 11.76 % of hospitals. (Fig. 3)

Presence of dental materials and instruments in various hospitals

Restorative materials were available only in 8.82 % of hospitals, prosthetic materials like impression trays and materials were available only in 11.76% of hospitals and articulators were only in 5.88% of hospitals and it is surprising that none of the hospital were provided by orthodontic instruments. (Fig.4)

Presence of primary preventive measures in various hospitals

Primary preventive measures in various hospitals, like oral health education, tobacco cessation measures, pit & fissure sealants and topical fluoride application, none of the hospitals were provided by primary preventive measures. (Fig.5)

Presence of secondary preventive measures in various hospitals

Secondary preventive measures in various hospitals, like oral prophylaxis, filling and root canal treatments. Only in 11.76% of hospitals there was a provision of oral prophylaxis, only in 5.88% of hospitals there was a provision of filling and in none of the hospitals there was provision of root canal treatments. (Fig. 6)

Presence of Tertiary preventive measures in various hospitals

Only in 14.71 % of hospitals there was a provision of extraction and in only 2.94 % of hospitals there was provision of complete denture/ fixed partial denture/removable partial denture. (Fig. 7)

- Average numbers of patients attending dental OPD /day were -109.
- There was no record of number of patients treated in the previous year.
- There was no separate budget for dental clinic.
- There was no separate provision of drugs for dental department in various hospitals.

Discussion

The irony of the budget allocation in India is that, out of the total budget, the amount that is dedicated to health expenditure is very meager and out of this amount only a minute percentage is allocated for oral health-related activities. In fact, there is no specific separate allocation for oral health in the Indian budget. Also, in India the central budgetary allocation for health over this period, a percentage of the total central budget, has been stagnant at 1.3 percent, the annual per capita public health expenditure in the country is no more than Rs. 200. Given these statistics, it is no surprise that the reach and quality of public health services have been below the desirable standard. No studies could be found in literature that investigated the quality of primary health care in Dharwad using different levels of evaluation. It is hoped that such a study will identify strengths and weaknesses in services, and delineate strategies for improvement.

Out of 34 hospitals only in 14.7% of hospitals dentists and dental chairs were present and out of 8 chairs in various hospitals only 3 chairs were in working condition**.** These findings were quite similar to the studies conducted by Yousif R, Miskeen E. (7) in urban and rural clusters of Gezira Locality, Sudan where there was presence of only one complete unit dental chair and dental machine but there was no trained dental personnel to use it and in other rural councils there was presence of trained dental auxiliary staff but without suitable dental units.

Availability of equipment: The study on availability of equipment in dental department revels that there is lot of deficiency in the equipments like x-ray unit, which hinders proper diagnosis and treatments; also there is lack of certain equipments and instruments like orthodontic materials and endodontic instruments etc. hence particular treatments are not being done.

These results agreed with Taylor and Carmichael (8) Muneera H AI-Osimy (9), Wissa AA, Zaharan MA (10) reported that only 31% of rural health centers of the selected governorates had dental facilities in Egypt. Results of the study done by Yousif and Miskeen (7) also found that there were no instruments for orthodontic, peadodontic and even prosthesis in Gezira locality Sudan.

Presence of primary, secondary and tertiary treatment measures in various hospitals:

Primary preventive measures in various hospitals, like oral health education, tobacco cessation measures, pit and fissure sealants and topical fluoride application none of the hospitals were provided by primary preventive measures. Secondary preventive measures, like oral prophylaxis, filling and root canal treatments, only in 11.76% of Hospitals there was a provision of oral prophylaxis, 5.88% of hospitals there was a provision of

filling and in none of the hospitals there was provision of root canal treatments. Tertiary preventive measures like extraction, complete/fixed/partial dentures, only in 14.71 % of hospitals there was a provision of extraction and 2.94 % of hospitals there was provision of complete denture/ fixed partial denture/removable partial denture. These results agreed with Yousif and Miskeen (7)and Wissa AA, Zaharan MA (10) found that most of the treatments performed in rural health centers were extractions (52.52%), while conservative treatments were minimal (0.85%), prosthetic treatments were not available in rural health centers.

Average numbers of patients attending dental OPD per day were -109 in various hospitals. There was no record of number of patients treated in the previous year also; there was no separate budget for dental clinic and no separate provision of drugs for dental department in various hospitals. This may be due to the irony of the budget allocation in India, out of the total budget, the amount that is dedicated to health expenditure is very meager, and out of this amount only a minute percentage is allocated for oral health-related activities. In fact, there is no specific separate allocation for oral health in the Indian budget.

Conclusion

All stated results in this study showed meager dental health services in Dharwad district and this affect utilization together with problem of accessibility and affordability. Dental services lack preventive and promotive components. This study is meant to assemble and assess the quality, quantity and distribution of oral health services and health personnel in Dharwad district. The available data revealed by this research showed a low dentist population ratio and there is lot of deficiency in dental equipments. Effort and commitment from the state national and federal government is highly needed to promote oral health services.

Recommendations:

There is an urgent need to construct a strategy; not a policy for comprehensive oral health care. Therefore, there is a need to determine the amount of oral health care needed, assess the level of present and future demand for oral care and formulate oral health facilities and their optimal utilization.

The following recommendations are suggested to make this plan feasible:

1. Development of standards and indicators for dental health services to be used for assessment of services at different levels considering buildings, staff, equipment and materials.
2. The establishment of qualitative and quantitative manpower production goals linked with national oral health goals and based on dentist-population ratio.
3. The number of oral health auxiliary staff should carefully be considered, and the establishment of dental assistant and other paramedical staff in schools of Dharwad district is highly recommended.
4. Introduction of an effective and strong evaluating progamme for promoting and improving oral health services through active oral health teams.

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Figures:

Fig.1: Presence of dental personnel in various hospitals

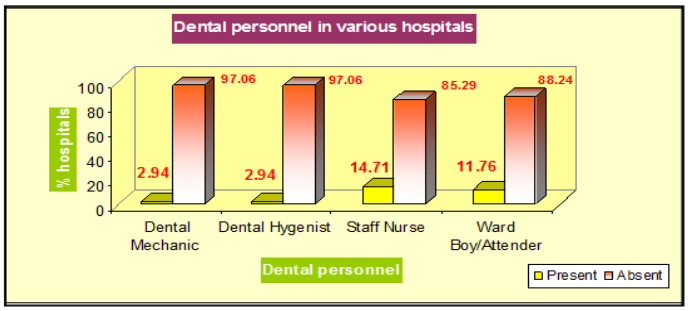

Fig. 2: Presence of dental equipments in various hospitals

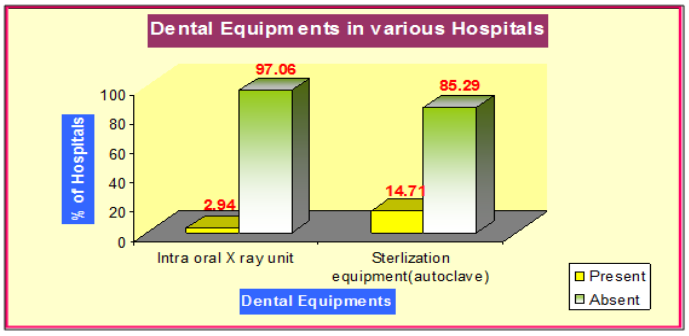

Fig. 3: Presence of dental instruments in various hospitals

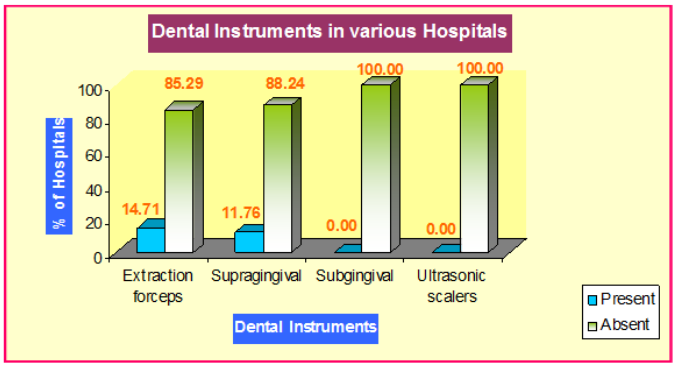

Fig. 4: Presence of dental instruments in various hospitals

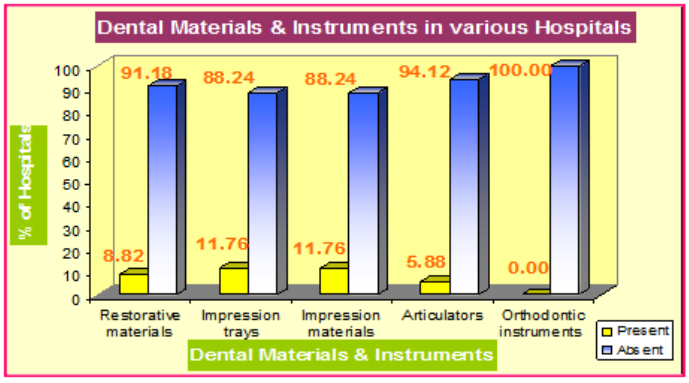

Fig. 5: Presence of primary preventive measures in various hospitals

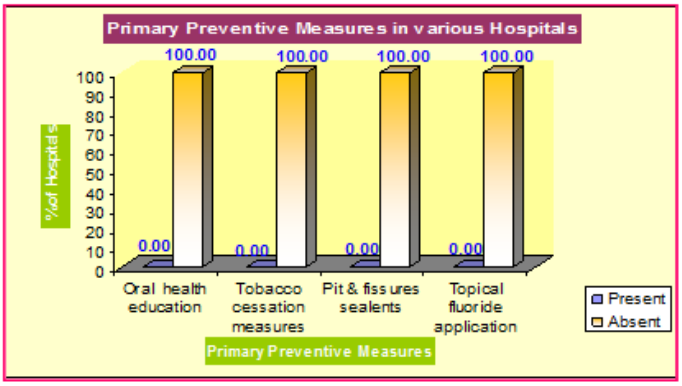

Fig. 6: Presence of secondary preventive measures in various hospitals

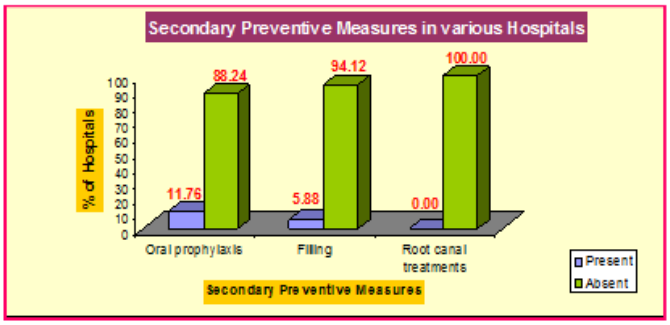

Fig. 7: Presence of Tertiary preventive measures in various hospitals