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An overview of the distribution of dental care facilities in Mangalore taluk, India.

Mangalore taluk, Hindistan'da Diş Hekimliği Tesislerinin Dağılımına Bakış

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ABSTRACT

Objective: Equitable distribution of health care facilities is a guiding principle of Primary Heath Care. Although Mangalore taluk is a reputed center for medical education and health care, location of these facilities has not been evaluated to date. Therefore, a systematic survey was conducted to evaluate distribution of dental care facilities in Mangalore taluk, India.

Material and Methods: List of Primary Health Centers, Community Health Centers and government hospitals, and details of the dental personnel and dental care facilities available at these centers was obtained from the District Health Officer (DHO). Data on registered private dental practitioners was obtained from the DHO and the Indian Dental Association. Information was obtained from dental colleges in the taluk regarding outreach activities and collaborations with the public sector. Descriptive statistics were used for data analysis.

Results: Dentists are posted only at the CHCs and the District Hospital where they provide only basic dental services due to a lack of infrastructure. Of the 189 private dental clinics, 91% are located in urban areas of the taluk. They provide all modalities of dental care but are inaccessible to a majority of the rural population. Dental schools provide dental services to people in their vicinity, conduct outreach camps and have adopted four PHCs.

Conclusion: An uneven distribution of dental care facilities exists with an overwhelming majority concentrated in the urban areas of the taluk.

Key Words: Dental care facilities, dental clinics, distribution.

INTRODUCTION

Oral diseases show striking geographic variations and severity of distribution all over the world. Their impact on individuals and communities in terms of pain and suffering, functional impairment and reduced quality of life is extensive and expensive. Despite credible scientific advances and their preventable nature, they continue to be major public health problems.[1,2,3]

The World Health Organization and UNICEF advocated equitable distribution of health care facilities as one of the guiding principles of the Primary Heath Care concept.[4] Mangalore is one among the five taluks/subdivisions of Dakshina Kannada District of Karnataka State. Spread over an 834 square kilometer area with a population of 882,856 (males - 49.24%, females - 50.76%), Mangalore has the highest population density of 1048 persons per square kilometer among the taluks of Dakshina Kannada district. Urban areas account for 68.08% of the population while 31.92% live in rural areas.[5,6] It is a reputed center for medical education and health care with five dental schools and a multitude of private dental clinics. However, the location of these facilities has not been evaluated to date.

Therefore, a systematic survey was conducted with the aim of evaluating the distribution of dental care facilities in Mangalore taluk.

MATERIALS AND METHODS

To evaluate the distribution of dental care facilities in Mangalore taluk, a cross-sectional descriptive survey was conducted from March to December 2013.

In the public/government sector in India, as in other developing countries, health services are delivered through a network of health facilities. A Primary Health Center (PHC) is the core of the health care delivery system in India. It is usually the first level of contact between individuals and the heath system, and is charged with providing preventive, therapeutic and rehabilitative care to the needy. It refers cases to Community Health Centers (CHCs) and higher order public hospitals at the sub-district and district levels.[7] Dental surgeons are posted to the PHCs and CHCs wherever available. In the private sector, dental care is provided through a network of dental colleges and private dental clinics.

Prior to starting data collection, permission was obtained from the Institutional Ethics Committee and the District Health Officer (DHO) of Mangalore taluk who is the regional head of all health care facilities run by the Government of Karnataka.

The investigators obtained the list of PHCs, CHCs and government hospitals in Mangalore taluk, and details of the dental personnel posted and dental care facilities available at these centers from the office of the DHO. The DHO office is also the repository of data on registered dental practitioners in the taluk. This information was also obtained but the list was found to be incomplete as all dentists in private practice are not registered with the DHO. However, to practice in any part of India, it is mandatory to register with the State Dental Council and the local branch of the Indian Dental Association (IDA). The list of private dental clinics registered with the IDA was obtained from the President, IDA, Dakshina Kannada branch. The lists were then combined to prepare a final list of private dental clinics in the taluk.

Information was also obtained from Heads of the Departments of Public Health Dentistry in the dental colleges in the taluk regarding treatment facilities, outreach activities and collaborations with the public sector (PHCs and CHCs).

Descriptive statistics were employed for data analysis.

RESULTS

According to the data obtained, it was found that dental services were not available at any of the 21 PHCs (five urban and 16 rural) in Mangalore taluk. Dental surgeons were posted at both the CHCs [Mulki (rural) and Moodbidri (urban)] and they provided basic dental services such as extractions, minor restorative care and oral

prophylaxis to those seeking dental care. Two dentists (one among them a paedodontist) were rendering services at the District Government Hospital in Mangalore City. They too were providing only basic dental care to patients due to lack of resources (mainly dental equipment and restorative materials).

One hundred eighty nine private dental clinics were registered with the office of the DHO and the IDA of which 91% (172/189) were located in urban and 9% (17/189) in rural areas of the taluk (Figure 1).

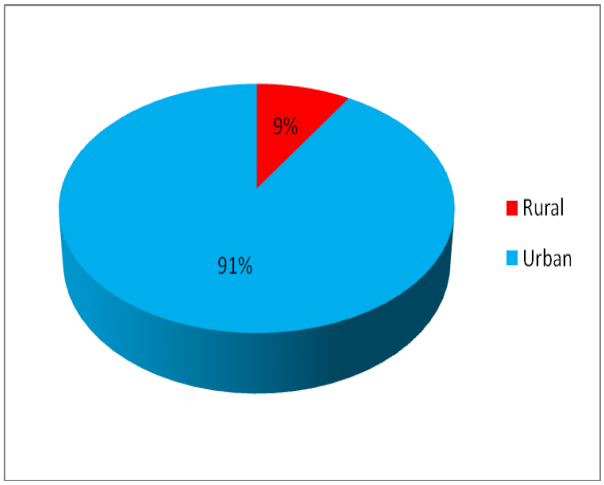

Figure 1: Illustration showing the location of private dental clinics in Mangalore taluk.

DISCUSSION

This is the first study reporting the distribution of dental care facilities in Mangalore taluk. The National Commission on Macroeconomics and Health has identified oral diseases as one among 17 diseases/conditions that public policy needs to prioritize as they will account for a fairly sharp increase in India's disease burden in the future.[8]

India has the most inequitable healthcare scenario feasible. It is the hub for medical tourism; however, these facilities are simply not available to its citizens. Control of oral disease depends on the availability and accessibility of oral health systems and their integration into national or community health programs.[2,3,9] In India, the manpower, financial and material resources are insufficient to meet the need for oral care services.

These clinics, equipped with advanced facilities for diagnosis and treatment, provided all modalities of dental care (pulp therapy and endodontics, prosthodontic care including implants, orthodontic services, etc. in addition to the basic services) but their location made them inaccessible to almost one third of the total population which resided in rural settings.

The dental colleges in the taluk provided either subsidized or free dental services (both basic and advanced) to people living in their vicinity. In addition to the above mentioned modalities of dental care provided at private clinics, a plethora of investigative and therapeutic services such as Cone Beam Computed Tomography (CBCT), CAD CAM, lasers, surgical therapies, treatment of craniofacial defects, etc. and provision for consultations with specialists in the various fields of dentistry were available under one roof. Although three of the five colleges were located in urban milieus, they conducted regular outreach camps in remote areas to provide dental care to those in need. Two colleges had adopted four PHCs (three rural and one urban) where faculty, post-graduate students and interns provided basic dental care to patients on a weekly basis.

This study found that public sector health facilities were able to provide only limited services to the population, while the majority of dental services were obtained at private dental clinics. This mirrored the findings of a previous study.[2]

This study found 91% of dental clinics clustered in urban areas. In India, a community of 100,000 dentists serves a population of one billion. Like anywhere else in the world, urban bias exists, with 75% dentists practising in urban areas.[2,10] Although dental clinics provide a major share of the dental care delivered in India, their inaccessibility forces many rural patients to forgo or delay essential dental treatment. Therefore, although oral health care is accessible in urban areas, it is difficult to obtain in rural areas. That the same scenario is mirrored in Mangalore taluk, a reputed center for medical education and health care, is a matter of great concern.

It is in this context that the services rendered by dental colleges assume importance. They provided dental care to people in the vicinity, conducted outreach programs and provided collaborative services at PHCs. Thereby, dental colleges attempted to bridge the chasm by providing low cost or free preventive and therapeutic services to many communities that otherwise might not access professional care.[11]

The most important challenge facing health administrators in the present scenario is to offer oral health services within the context of primary health programs by integrating oral health care into the national health program. As in other developing countries,[10] it has been proposed to include dental care services at standard levels of health care within the Indian health system, namely: at PHCs – dental check-up, atraumatic restorative treatment (ART), surgical procedures (gingivectomy, flap operation, mucogingival and endodontic surgeries); at CHCs – silver filling, scaling and polishing of teeth, complete dentures, partial dentures (removable), biopsy; and at District hospitals – root canal treatment, aesthetic fillings, surgical extraction (impaction), removable orthodontics, fracture reduction/cyst enucleation/benign growth excision.[12] Another significant collaborative effort worth emulating is the Chitrakoot project in a poor rural area in India whereby a dental clinic provided to an existing hospital offered dental treatment and oral health education to about 150,000 people.[13]

With most healthcare resources lodged with the private sector, it would seem imprudent not to exploit them to improve India's healthcare scenario. Public-private partnership is the need of the hour. The government also has the unenviable task of overcoming the inequitable distribution of personnel by providing incentives for rural service.

A limitation of this study was that the distribution of dental manpower at different levels with number of days/ hours put in and/ or the output in terms of different dental services provided, number of patients attended to, etc. could not be evaluated. Also, feedback from patients on the quality of care provided could not be ascertained. Since this was the first study reporting the distribution of dental care facilities in Mangalore taluk, the authors recommend that these data form the foundation for larger community-based investigations in the future.

To conclude, an uneven distribution of dental care facilities existed in Mangalore taluk with an overwhelming majority concentrated in the urban areas. These facilities were therefore inaccessible to a majority of the rural population. Dental colleges in the taluk tried to bridge the gap by conducting outreach programs and collaborating with the public sector.

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