ORAL HEALTH CARE DELIVERY THROUGH PRIMARY HEALTH CENTERS AT BANGALORE URBAN DISTRICT, INDIA- A SITUATION ANALYSIS
Dr. Mridusmita Pathak

ABSTRACT

Background
Utilization of health service is a concept of expressing the extent of interaction between the service provider and the people for whom it is intended. There has been a lot of interest in understanding oral health care utilization behaviour as it is important for the delivery of effective oral health care.

Aim
Aim of the present study was to assess the utilization of dental health care services among the urban and rural districts in the primary health centres in Bangalore.

Methods and Material
A structured interview format was used to assess the current situation. All the primary health centres of the Bangalore district were included.

Statistical analysis used
Descriptive analysis.

Results
It was found that 97.6% Primary health centres receive patients with oral and maxillofacial complaints and only 21.6% primary health centres had a separate dental unit with dental officer. Toothache, bleeding gums and abscess were the most common problems. 48.8% of the patients were reported to be dispensed with initial emergency care followed by a referral to government hospitals only (39%). Non-availability/inaccessibility and lack of awareness among patients about importance of oral health were the most common factor for not visiting to the referred hospitals for treatment.

Conclusions
The utilization and provision of the dental services of the population was poor in the primary health centres of Bangalore urban district.

Key-words: primary health centres, oral health, medical/dental officers

Correspondence:
Dr. Mridusmita Pathak
Senior lecturer, Department of Public Health Dentistry
Al Azhar Dental College, Thodupuzha, Kerala
Email Id – mamatoopathak12@gmail.com
**Introduction**

Health has been considered as a basic human right and it is also a wider social goal. Oral health is an integral to general health and essential for well being. Since, India became free, several measures has been undertaken by the national government and non-governmental organization to improve the health of the people.\(^1\)

In 1978, the Alma Ata Conference reaffirmed the health for all as major social goal of governments and stated that the best approach to achieve the goal of HFA is by providing primary health care, especially to the underserved rural people and the urban poor.\(^2\)

Primary health centers serves as a basic health unit, to provide health service, as close to the people as possible, an integrated curative and preventive health care to the rural population with emphasis on preventive and promotive aspects of health care. Even though, during recent years dramatic changing pattern of oral diseases have been observed at a global level, oral health equality still remain as a dream to achieve.\(^2\)

Oral diseases created burden on public health in India, among 60 to 65\% of the population is affected by dental caries and 50 to 90\% by periodontal diseases. According to research, higher rates of dental diseases occur in rural areas.\(^1\)

According to WHO, the provision of oral health care services is very little in rural parts of India, further complexity is lent by the great variation that occurs across this population on social parameters such as income and education. Few of the studies conducted on the rural population of India have concluded that the unmet treatment need of the population is very high and the services present are inadequate in most parts of the country.\(^3\)

Equity in access to health care is one of the objectives of health care system. Mooney et al argues that access is merely a question of supply, while utilization depends on both supply and demand. Individual utilization of health care is possibly affected by many factors that are not connected to health care per se but shape individuals’ demand for health care.\(^4\)

Primary health centers serve most of the rural population. Therefore, the aim of the present study was to assess the oral health care delivery through the primary health centers of Bangalore urban district, India.

**Subjects and Methods**

The present study was a descriptive cross sectional study. A pilot study was carried out among 10\% of the sample. Inclusion criteria was Medical/Dental officers who are willing to participate and fill the questionnaire.Subjects who are present on the day of the examination. Exclusion criteria was that non respondents were excluded from the study. Data were collected over a period of 3 months from the month of July to September 2015. Bangalore urban district has been divided into 4 zones. They are:

1. East zone
2. Anekal Taluks (West)
3. North zone
4. South zones.

There are 76 primary health centers in total. The East, North and South zones has primary health centers in the urban and in the rural. They are:

1. Bangalore East has 20 Primary Health Centers (14-urban and 6 rural).
2. Bangalore North has 29 Primary Health Centers(17 urban, 12-rural),
3. Bangalore South has 13 Primary Health Centers (8-urban, 5-rural) and
4. The Anekal Taluk (West) has 14 primary health centers.
All the Primary Health Centers were visited in each zone. Among the 76 primary health centers, 65 medical/dental officers of the Primary Health Centers responded and 11 did not respond on repeated visits. Hence, only these 65 Primary health centers were included in the present study.

Among the 65 primary health centers, there were 18 primary health centers in the East zone, 24 primary health centers in the North, 12 primary health centers in the South and 11 primary health centers in the Anekal Taluk.

Data was collected using a structured and pre-validated questionnaire. Questionnaire was filled in the presence of the investigator by the Medical officer of the primary health center or the Dental officer of the Primary Health Center (if available). In the primary health centers, where the dental surgeons were present, the questionnaire was filled by the dental surgeon.

**Statistical analysis**

Descriptive statistical analyses were carried out in the present study.

**Results**

It was observed that 92.3% of the PHC’s received patients with dental complaints. However only 27.3% of the facilities had dental officers. 83.34% of the PHC’s responded that they were ill equipped with equipment and staff to handle dental complaints.

It was observed that majority of the PHC’s had a dental unit which were run by private dental colleges (89%). Only 5.5% of the dental units were set by the state government.

Table 1 shows the most common complaints the patients reported with to the PHC. Majority of the patients complained of tooth ache followed by bleeding gums. Provision of analgesic was the most commonly practiced treatment among the medical officers (Table 2).

Non availability of dental professionals has led the patients to seek symptomatic treatment rather than appropriate dental care. (Table 3).

Recruitment of dental personnel and upgradation of existing dental units were the recommendations given. (Table 4)

**Discussion**

Health is a universal human need across all cultures and groups. It has been established beyond doubt that optimal health cannot be attained or maintained independent of oral health. Oral health services is a multi-factorial phenomenon, and this utilization depends on various factors like dental conditions, socio-economic conditions, attitude and financial conditions. Social factors are important as shown in various models.3

This study included 65 primary health centers and it was reported by 92.30% medical officers that they received patients with dental and maxillofacial complaints. In a study done by Pewa P et al, the dental attendance was 72.7% among the Jodhpur rural population. 90% of the rural population is being served by the primary health centers.4 Hence, it is commonly practiced for the patients to visit a primary health center for oral and maxillofacial complain as well.

Among all the primary health centers, most of the medical officers reported that the most common complaint or problem related to the dental and maxillofacial region among the patients visiting the primary health center was toothache 62(92.53%) followed by bleeding gums 30(44.77%). Almost an equal number of the medical officers reported that the bad breath, 16(23.88%), tooth stains and swelling being 15(22.38%) to be the most
Table 1: Most common complaint or problem related to dental and maxillofacial region.

<table>
<thead>
<tr>
<th>Options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tooth ache</td>
<td>62</td>
<td>92.53</td>
</tr>
<tr>
<td>Bleeding gums</td>
<td>30</td>
<td>44.77</td>
</tr>
<tr>
<td>Tooth stains</td>
<td>15</td>
<td>22.38</td>
</tr>
<tr>
<td>Bad breath</td>
<td>16</td>
<td>23.88</td>
</tr>
<tr>
<td>Swelling</td>
<td>15</td>
<td>22.38</td>
</tr>
<tr>
<td>Trauma</td>
<td>9</td>
<td>13.43</td>
</tr>
</tbody>
</table>

Table 2: The symptomatic relief (with medication) seeking behavior of the patients with the complaint of dental and maxillofacial complaints visiting the Primary Health Center.

<table>
<thead>
<tr>
<th>Options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>58</td>
<td>89.23</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>10.77</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3: The most important reason for patients with dental complaints repeatedly seeking symptomatic relief rather than appropriate dental care.

<table>
<thead>
<tr>
<th>Options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable (frequency of those who answered ‘no’ to question 10-)</td>
<td>7</td>
<td>10.80</td>
</tr>
<tr>
<td>Anxiety and Apprehension</td>
<td>2</td>
<td>3.07</td>
</tr>
<tr>
<td>Non availability/In-accessibility for dental treatment</td>
<td>30</td>
<td>46.15</td>
</tr>
<tr>
<td>Non-affordability</td>
<td>12</td>
<td>18.46</td>
</tr>
<tr>
<td>Lack of awareness about importance of oral health</td>
<td>14</td>
<td>21.52</td>
</tr>
</tbody>
</table>
Table 4: Recommendations for improving the treatment facilities for the Dental and maxillofacial OPD in Primary Health Centers.

<table>
<thead>
<tr>
<th>Options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set up a separate dental unit with dedicated and sufficient dental workforce within the center</td>
<td>32</td>
<td>49.23</td>
</tr>
<tr>
<td>Up gradation of existing dental unit</td>
<td>18</td>
<td>27.69</td>
</tr>
<tr>
<td>Public Private Partnership with colleges or hospitals</td>
<td>3</td>
<td>4.62</td>
</tr>
<tr>
<td>To increase awareness about importance of oral health and utilization of existing facilities at the center</td>
<td>12</td>
<td>18.46</td>
</tr>
</tbody>
</table>

common dental and maxillofacial related problem and only 9(13.43%) medical officers reported the most common complaint to be trauma. Similarly, Singh V K and Tandon S et al, reported that the most common complaint of the patients visiting PHC were toothache (59%) and bleeding gums (37%). Preksha P et al reported the most common dental problem was pain (61.8%) followed by difficulty of chewing (17.9%) and bad smell in mouth (7.6%). Only 6.4% were come for the routine check-up.

Among the 58 primary health centers which were reported to receive patients with the complaint of dental and maxillofacial complaints who seek symptomatic relief (with medication) repeatedly, the most common reason according to the medical/dental officers were as follows, most of the medical/dental officers, 30(46.15%) reported non availability/in-accessibility for dental treatment, followed by 14(21.52%) medical/dental officers reported that lack of awareness about importance of oral health can be a reason for seeking symptomatic and only 2(3.07) medical/dental officers reported Anxiety and Apprehension. Preksha et al reported almost 29.9% to come for symptomatic relief repeatedly.7

Among the 14 primary health centers in the Anekal Taluk, the mean number of patients visiting in a one day was reported to be 5.15±0.2. In a study done by Fotedar et al reported 7.2±1.6 mean number of patients visiting the PHCs in Shimla which was higher than the present study.5

Recommendations
- Government of Karnataka should appoint dental health officer for every primary health centre along with a good infrastructure of the dental unit.
- Maintaining a separate OP register for all the patients visiting with oral and maxillofacial complaints in the primary health centre is very important from the point of following up the trends for seeking different types of dental treatment.
- There should be an effective health education program for the rural population to maintain good oral health status and effective motivations to be done to utilize the services available in primary health centres.
**Conclusion**
The study showed that majority of the PHC’s received dental complaints. However the units are ill equipped and improperly staffed. The primary treatment being provided is symptomatic.

Dental units are being set up by private college rather than government. Better infrastructure is the need of the hour to improve the oral health status and to provide treatment to the patients.

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Authors Information

Dr. Mridusmita pathak
Senior lecturer
Department of public health dentistry
Al azhar dentalcollege
Thodupuzha, kerala

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