ORAL HEALTH CARE IN MALAYSIA – A REVIEW

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SUMMARY

This paper reviews oral health status of population of Malaysia. A computer based search was made on 136 articles from eight journals. Indicators were selected according to CDC (Centre for Disease Control and Prevention) to explain oral health care in Malaysia. Oral diseases are mostly preventable. Nevertheless dental caries continue to be a significant public health problem in Malaysia. Studies among children found caries prevalence to be 75.5%. A school based sealant programme was implemented in 1999 as preventive strategy for caries. In adults caries figure was estimated to be 80%. About half of adults were found to have visited dentists more than two years ago. Oral cancer was found to be fifth most common cancer in Malaysia. Tobacco use and quid chewing habit contributed to oral cancer. Fluoridation of public water is a great step in control of caries. So improving oral health is a multi prong attack. Lack of resources and dental staff was also contributing factor in oral health problems. A National Oral Health Plan 2010 based on four oral health conditions, i.e. dental caries, periodontal conditions, dental injuries and oral malignancies has been launched. Targets are set up for improvement of these conditions. Oral health education is recognized as cornerstone in improvement of oral health of individuals and communities.

Key words: Oral. Healthcare, Malaysia, Review

INTRODUCTION

Malaysia is situated in South East Asia and abuts the neighbouring countries Indonesia, Singapore and Thailand. Malaysia is made up of two geographical wings namely, Peninsular Malaysia and East Malaysia, which is composed of the states of Sabah and Sarawak. The beauty of Malaysia lies in its multi ethnic culture. The ethnic breakdown is comprised of Malays 54.1%, Chinese 25.4%, Indians/ Pakistani 7.5%, Indigenous groups 11.7% and others 1.3%. The historical record of dentistry in Malaysia can be traced back to 1869, when first practitioner named Cheong Chun Tin started private practice.

Oral Health is being considered as an integral part of general health. Oral healthcare was given considerable importance in Malaysia during the last decade. This paper gives an overview about oral healthcare in Malaysia. Following indicators about oral healthcare are taken from CDC to explain oral healthcare programme:

- Caries Experience, Dental Sealants use in children
- Dental Visit and Teeth Cleaning among Adults aged 18 years and above
- Complete Tooth Loss and Loss of 6 or more teeth in Old Age group of 65 years and above
- Cancer of the Oral Cavity and Pharynx
- Fluoridation Status. Percentage of people served fluoridated water through public water systems

ORAL HEALTH CARE FOR CHILDREN IN MALAYSIA

1 Demographic Profile of Dental Caries among School Children in Malaysia

Caries control in children continues to be a big challenge. Various National epidemiological surveys were done to assess the prevalence of dental caries among children in Malaysia. The Malaysian Oral Health Survey on 5-years old children carried out in 2005 showed caries prevalence was 75.5%. Mean dmft was 5.57. Dental epidemiological study showed that 95.4% of 6 years old children had carious primary teeth in Peninsular Malaysia. This figure dropped to 88.6% in 1988, and by 1997 a further reduction to 80.6% was
ORAL HEALTH CARE FOR ADULTS

In Malaysia, multiple oral health surveys were carried out about oral health of adults, namely the Dental Epidemiological Survey of Adults in Peninsula Malaysia 1974/1975 and the Dental Epidemiological Survey of Adults in Malaysia 1990. The estimated results of the latter provided a baseline data for caries and periodontal conditions of the adult population. The Oral Health Survey of Malaysian Adults 2000 was a ten yearly survey, and findings provided a comparison in adult oral health profile since 1990. The main objective of this survey was to determine oral health conditions, effects and treatment needs of 15 years and above, and to assess their utilization of dental services. In this survey a sample of 10,891 adults was selected and examined, of which 87.2% belonged to Peninsula Malaysia, 5.2% from Sabah and 7.6% from Sarawak. 55.9% were females and 60.2% were urban population. There was no edentulous case among those aged 15-29 years. Prevalence of edentulism increased with increasing age from 30 years and above. Utilisation of dental care services can be seen in Fig 1. Table 1 tells about the reasons for seeing dentists. Caries prevalence by age groups is shown in Fig. 2.

A survey was conducted on 537 adults, aged 15 years and above, about oral hygiene practices. About 89.7% adults reported that they brushed their teeth, 68% used tooth paste having fluoride, but only 8.4% reported about use of floss. Better tooth cleaning habits were observed with higher socio-economic class.

ORAL HEALTH CARE IN OLD AGE GROUP (65 YEARS AND ABOVE)

According to Malaysian Demographic profile, 2011, elder population comprise about 5% of population. These numbers have increased considerably from 2000. By the year 2020, when the nation is expected to achieve status of a developed nation, it is assumed that this population will be increased to 12.0% of total population. This rapid ageing necessitates economic and social strategies while controlling health problems of old age. In National Oral Health Survey 2000 about 39.1% cases were found to be edentulous in age group 65-74 years.

A study was carried out in Kelantan to analyze dentition status of elder population. A cross sectional designed study was done taking a sample of 369 adults. Majority of subjects were found to be edentulous (81.0%). The mean number of natural teeth, functional natural teeth, decayed teeth (D), missing teeth (M) and

Among the states, Sabah reported highest caries prevalence among 6 years old, which was 96.9% in 1985 and 94.7% in 1997. There was little decline of 2.2% in 12 years. This gives an idea about high level of unmet treatment needs. Similar conclusion was drawn in a study in Petaling Jaya, where only 15.4% of 5 years old and 14.8% of 6 years old were found caries free. The mean dft was 5.5 for 5 years old and 5.9 for the 6 years old children. As a part of National Oral Health Survey of Pre-School Children (NOHPS), 2005, survey in Johor gave an insight idea about caries prevalence in children. A sample of 1,929 children were examined, out of which 87.2% belonged to Peninsula Malaysia, 5.2% from Sabah and 7.6% from Sarawak. 55.9% were females and 60.2% were urban population. There was no edentulous case among those aged 15-29 years. Prevalence of edentulism increased with increasing age from 30 years and above. Utilisation of dental care services can be seen in Fig 1. Table 1 tells about the reasons for seeing dentists. Caries prevalence by age groups is shown in Fig. 2.

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Teeth indicated for extraction (X) were 3.22 (SD 7.54), 2.75 (SD 6.70), 0.06 (SD 0.48), 28.80 (SD 7.51) and 0.41 (SD 1.60) respectively. Among 70 dentate subjects, the mean number of natural teeth, functional natural teeth, occluding pair of functional natural teeth, decayed teeth (D), missing teeth (M), teeth indicated for extraction (X) and DMFX(T) index were 17.1 (SD 8.00), 14.5 (SD 8.11), 6.3 (SD 4.22), 0.3 (SD 1.06), 15.1 (SD 8.20), 2.2 (SD 3.14) and 17.6 (SD 8.08) respectively. Another study was carried out in Kota Bharu, Kelantan about prevalence of edentulism in elder population. The prevalence of edentulism was 55.9%. Females were found to be more edentulous than males.

CANCER OF ORAL CAVITY

Oral cancer is the sixth common cancer in the world. In India, Pakistan and Bangladesh, oral cancer is the most common cancer. In Malaysia it is the fifth...
most common cancer. In Malaysia one of the characteristics features of oral cancer is that its prevalence is noted higher among Malaysians of Indian origin. About 60% of cases of oral cancer are reported in Indian population although they make up only 8% of population.

**FLUORIDATION STATUS IN MALAYSIA**

Fluoridation of water supplied in Malaysia is the keystone of the dental public health programme and represents one of three national primary preventive projects of the Oral Health Division. When the Cabinet gave permission for this project, at that time recommended optimum level was 0.7 parts per million (ppm). Later it was changed to 0.5 ppm in 2004, based on studies among school children in Malaysia. Currently about 69% of community gets benefitted from this project. As more than 95% of community get public water supply, fluoridation is most suitable public health strategy for control of caries.

The first fluoridation survey in Johor Baru reported an overall decline of 44.8% caries, with 60.1% in permanent dentition and 29.4% in deciduous dentition. A survey was done to assess the impact of fluoride mouth rinsing on caries in school children three years after implementation in Malaysia. A caries reduction of 47.6% was found in test subjects.

**DENTAL HUMAN RESOURCE IN MALAYSIA**

**ORAL HEALTH PLAN**

The government has set a target to achieve a developed nation status by year 2020. It is from Vision 2020 that National Oral Health Plan for the year 2010 was developed. There has been considerable improvement in oral health status of Malaysians for the past 50 years. The main focus of the National Oral health Plan was to improve oral conditions of public health significance. Four oral conditions were identified for this purpose i.e. dental caries, oral malignancies, dental injuries and periodontal conditions.

**CONCLUSION**

There has been tremendous improvement in the oral health of Malaysians over the past 50 years. However, there still exist areas with major oral health problems and inadequate resources availability. Dental caries continue to be a major problem amongst children. National Oral Health Survey 2005 among children showed caries prevalence was 75.5%. Adult Survey 2000 showed caries prevalence around 80%. Oral cancer is the fifth most common cancer in Malaysia. 69% of population is being supplied with fluoridated water. Oral health education is recognised as the key element in the empowerment of individuals and families towards achieving their health potential.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentists (whole country)</td>
<td>3 165</td>
</tr>
<tr>
<td>Dental therapists</td>
<td>2 271</td>
</tr>
<tr>
<td>Chair side assistants</td>
<td>2 567</td>
</tr>
<tr>
<td>Dental Laboratory Technicians</td>
<td>653</td>
</tr>
</tbody>
</table>

Source: Malaysian Dental Council

**TABLE 2: TOOTH MORTALITY IN OLD AGE GROUP**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Missing Teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>65-74 years</td>
<td>21.1</td>
</tr>
<tr>
<td>75+ years</td>
<td>22.2</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Peninsular Malaysia</td>
<td>8,819,928</td>
<td>11,188,100</td>
<td>14,667,000</td>
<td>17,670,092</td>
<td>24,769,500</td>
</tr>
<tr>
<td>Dentist</td>
<td>259</td>
<td>592</td>
<td>1,289</td>
<td>1,967</td>
<td>2,866</td>
</tr>
<tr>
<td>Ratio</td>
<td>1:34,186</td>
<td>1:18,899</td>
<td>1:11,379</td>
<td>8,983</td>
<td>1:8,582</td>
</tr>
<tr>
<td>Sabah</td>
<td>654,943</td>
<td>1,003,847</td>
<td>1,479,000</td>
<td>2,519,906</td>
<td>3,063,600</td>
</tr>
<tr>
<td>Dentist</td>
<td>n.a.</td>
<td>19</td>
<td>49</td>
<td>79</td>
<td>134</td>
</tr>
<tr>
<td>Ratio</td>
<td>n.a.</td>
<td>1:52,815</td>
<td>1:30,184</td>
<td>1:31,897</td>
<td>1:22,863</td>
</tr>
<tr>
<td>Sarawak</td>
<td>977,438</td>
<td>1,249,846</td>
<td>1,807,353</td>
<td>2,012,616</td>
<td>2,404,200</td>
</tr>
<tr>
<td>Dentist</td>
<td>n.a.</td>
<td>35</td>
<td>63</td>
<td>98</td>
<td>145</td>
</tr>
<tr>
<td>Ratio</td>
<td>n.a.</td>
<td>1:36,996</td>
<td>1:28,688</td>
<td>1:20,536</td>
<td>1:16,581</td>
</tr>
<tr>
<td>Malaysia</td>
<td>10,452,309</td>
<td>13,486,433</td>
<td>17,953,535</td>
<td>22,202,614</td>
<td>27,173,700</td>
</tr>
<tr>
<td>Dentist</td>
<td>n.a.</td>
<td>645</td>
<td>1,401</td>
<td>2,144</td>
<td>3,165</td>
</tr>
<tr>
<td>Ratio</td>
<td>n.a.</td>
<td>1:20,877</td>
<td>1:12,815</td>
<td>10,356</td>
<td>1:8,586</td>
</tr>
</tbody>
</table>

n.a. = Not available  Source: Oral Health Division Malaysia

REFERENCES


