

Oral Health Care Services for Hong Kong Children

Nigel M King, B.D.S., M.Sc., Ph.D., L.D.S.R.C.S.

Reader Department of Children's Dentistry & Orthodontics

The University of Hong Kong

The Prince Philip Dental Hospital

34 Hospital Road

Hong Kong

Introduction

Before describing the oral health care services that are available to children in Hong Kong, it is proposed to consider the demographic data for the population, then the dental needs and attitudes of the children and their parents.

Hong Kong, which is situated on the southern coast of China is composed of 750 islands and covers an area of 1,075 sq km. The population has increased from 5,238,500 in 1981 to its current size, which is 5,822,500. Ten years ago 24.6% of the population was under 15 years of age; however, it is now only 20.9%. The current birth rate is extremely low at 0.9 per 1,000 people.

Hong Kong can be considered to comprise two regions; the New Territories, and Kowloon plus Hong Kong Island. Although the average population density is 5,360 people per square kilometre, this does not truly reflect the situation because the majority of the people live in Kowloon or on Hong Kong Island where the population density is 26,850 per square kilometre. Consequently, Hong Kong is one of the most densely populated regions of the world.

Fluoridation of the public water supply commenced in 1961 at a level of 0.8 ppm and, based upon contemporary data and recommendations for temperate regions of the United States of America, the level of fluoride was raised to 1.0 ppm in 1967.

Following the gathering of clinical data on enamel fluorosis for children and young adults who were born and had lived continuously in Hong Kong, the level of fluoride in the public water supply was lowered to 0.7 ppm in 1978 and then further reduced to 0.5 ppm in 1988.

A survey of the dental experiences of 5 years old children showed that 70% had never visited a dentist, 12% had attended for extraction of teeth (some would have been because of caries and some because the parents wanted naturally exfoliating primary teeth to be removed), 10% of the children had received restorations while the remaining 8% had attended for a dental examination. Epidemiological surveys have shown that 5 years old children had a dmft of approximately 2.4, depending upon the source of the data. This study high-lighted the lack of dental awareness of the majority of the population.

Twelve years old children appear to have benefited from the effects of water fluoridation because the mean DMFT value for this age group has diminished from 4.4 in 1960 to 1.8 in 1991. However, these figures should only be taken as indicating a trend because the protocols of the studies varied enormously. A study conducted 10 years ago indicated that 68.5% of 12 years old Chinese boys in Hong Kong brushed their teeth once or even less times per day with 0.9% of the sample stating that they had never brushed their teeth. Assessments of the periodontal treatment needs of 15 years old children indicated that 50.4% required oral hygiene instruction and scaling (Table 1). These data further serve to indicate that the Chinese do not attach a high priority to oral health. Generally, when dental treatment is sought for children, it is not done so during school time, so as not to compromise the children's education, which is considered to have a much higher priority.

Dental Manpower

There are 1,526 dentists on the dental register; however, this includes a small number who reside overseas. In addition, there are 98 hygienists. Currently, within the Government Dental Service, there are 191 dentists and three hygienists.

Types of Oral Health Care Facilities

- (i) Private Practice

There are 1,345 registered private practitioners who generally operate single-handed practices which traditionally have been located on the upper floors of high rise buildings, most of which are in the commercial districts of Hong Kong and Kowloon. Only a very small number of these practitioners offer general anaesthetic or sedation facilities. Nevertheless, the dental equipment is modern and the facilities are of a high standard. Since the graduation of approximately 50 dental students per year for the past eight years from the Faculty of Dentistry, University of Hong Kong, there has been a break with tradition and many of these new graduates have opened dental practices at street-level in the residential areas. Patients in these dental practices tend to be of the "walk-in" type, rather than referrals from medical practitioners.

The infamous Kowloon walled-city was, until April 1993, home to 86 illegal dental practitioners who had been trained by apprenticeships and were ineligible for registration with the Hong Kong Dental Council. These people have now been relocated and encouraged to discontinue practicing dentistry. Nevertheless, there are estimated to be between 1,000 and 2,000 illegal dentists operating in other locations in Hong Kong.

(ii) University

The Department of Children's Dentistry, within the Faculty of Dentistry, is able to provide a wide range of dental services for only a limited number of children because children are only treated if they are of teaching interest for the under-graduate and post-graduate students. However, the Faculty does provide a specialist referral system and it conducts two sessions per week under general anaesthesia for the treatment of children with special needs or behavioral problems. Recently, an intra-mural private practice scheme has commenced which involves the senior clinical staff.

(iii) Emergency Treatment

Any child in Hong Kong who is in pain can seek emergency dental treatment at any one of the 12 specially designated Government Dental Clinics. In addition, there is a helicopter service which transports a dentist to the more remote areas. Other sources of emergency treatment are the 44 dental clinics which are operated by voluntary organisations and charities.

(iv) Government Dental Services

The dependents of monthly paid members of the civil service are eligible for regular dental treatment at any of the 50 Government Dental Clinics.

(v) School Dental Scheme

The School Dental Scheme (SDS) came into being as a consequence of the recommendations of the 1974 Medical White Paper on Further Development of Medical and Health Services. Early in 1978, dental therapists commenced training prior to the initiation of the SDS in 1978 when the first enrolment of children took place.

The aim of the SDS was, and still is, to provide a basic form of dental care for all primary school children in Hong Kong, which includes, dental examinations, restorations, simple extractions, and prevention. The Head teachers of the schools were invited to join the SDS, then the parents were issued with application forms. The joining fee was originally HK\$2; this has now risen to HK\$20 (US\$2.6). Children in Grades P.I - P.4, aged 5 to 8 years respectively, are transported by bus to one of the six SDS clinics during school hours, while children in Grades P.5 and P.6 (aged 9 to 10 years) are scheduled for dental care on Saturdays. The majority of the dental treatment is performed by dental therapists under the direct supervision of a dentist; the more complex dental procedures are carried out by the dentists.

An important adjunct to the SDS is the Oral Health Education Unit. This unit was founded in 1989 with the role of developing oral health literature, training schedules and organising oral health campaigns within the community. A major oral health campaign, sponsored by the Royal Hong Kong Jockey Club, call "Brighter Smiles for the New Generation" has just been commenced by the Oral Health Education Unit.

Since 1980, when the first children joined the SDS and only Grade P.I students were involved, the number of participants has risen steadily from 26,988 or 29.4% of eligible school children to 404,570 or 78.4% of eligible children (Table 2). It is encouraging that such a high proportion of primary school children participate in the SDS. However, it appears from currently available figures that each child only receives 1.1 dental appointments per year.

The Future

In late 1993, the Hong Kong Academy of Medicine will be inaugurated and this will include a college of Dentistry. Therefore, the 19 dental practitioners who hold post-graduate qualifications in Paediatric Dentistry will have their credentials scrutinised to determine their eligibility for specialist status. At present, none of 7 private practitioners have restricted their practices to only paediatric dentistry. The other interesting developments are the proposed review of the SDS and the establishment of a Consultant in Paediatric Dentistry within the SDS.

Thus, the quality and availability of paediatric dentistry in Hong Kong should improve, and consequently, there should be an improvement in the attitude of future generations of Hong Kong parents and children towards oral health care.

Acknowledgements

Drs. E. Kwan and R. Choi are thanked for providing some of the data.

Legends

Table 1. The periodontal treatment needs of 13 and 15 years old children living in Hong Kong in 1991.

Table 2. The number and percentage of Hong Kong primary school children aged 5 to 10 years who have enrolled in the School Dental Care Service.

Table 1. The periodontal treatment needs of 13 and 15 years old children living in Hong Kong in 1991

Age in years	Number examined	Treatment requirement		
		No treatment (TN = 0) %	Oral hygiene instruction (TN = 1) %	Oral hygiene scaling (TN = 2) %
13	381	27.3	72.7	37.8
15	379	25.6	74.4	50.4

Table 2. The Number and percentage of Hong Kong primary school children aged 5 to 10 years who have enrolled in the School Dental Care Service.

Year	Primary School Grade						Number of participants	Number of school children	Participation rate %
	P.1	P.2	P.3	P.4	P.5	P.6			
1980-81	26988	-	-	-	-	-	26988	91796	29.4
1981-82	38485	37000	-	-	-	-	75485	180586	41.8
1982-83	46158	44298	44177	-	-	-	134633	255956	52.6
1983-84	55888	52124	51646	45119	-	-	204777	360523	56.8
1984-85	64046	61812	59324	48559	-	-	233741	354482	65.9
1985-86	67563	63728	62829	48834	42898	-	285852	444004	64.4
1986-87	69375	66533	65314	52347	45123	-	298692	443494	67.3
1987-88	74368	68814	68316	54122	48120	39643	352483	538776	65.4
1988-89	75008	72958	71101	57474	50854	46213	373608	539321	69.3
1989-90	74316	73334	72827	67046	54504	49002	391029	539075	72.5
1990-91	69587	72973	73523	72154	59369	53315	400921	532918	75.2
1991-92	69398	69107	73235	73144	63911	55775	404570	515938	78.4