SECTION 7

65-year old and above institutionalized older persons (IOP)

Introduction

The Oral Health Survey on institutionalized older persons (IOP) covered all older persons living in licensed residential care homes. There are two categories of residential care homes for older persons in Hong Kong. Homes managed by subvented and self-financing non-profit making organizations under the purview of the Social Welfare Department, and there is an established mechanism in assessing the needs of the older persons and matching the needs with the most appropriate care. The other category is private homes. 65 is the minimum eligible age for admission to residential homes under the purview of the Social Welfare Department. Older persons aged 60 to 64 can also apply if there is a proven need. Effectively, the survey on the IOP covered residents aged 60 or above, but the proportion of IOP aged 60 to 64 was very small.

Survey objectives

The objectives of the survey of the 65-year old and above IOP were :

1. to assess the oral health status (mainly tooth decay and gum disease status);
2. to collect information on the oral health care behaviour;
3. to collect information on the knowledge on dental diseases;
4. to collect information on attitudes towards oral health; and
5. to collect information on attitudes towards oral health care service.

A brief description on the survey methods employed is presented in the following paragraphs. Details on data collection, methodology and statistical methods in sampling and computation of results, can be referred to in a separate Technical Report of the Oral Health Survey 2001. Readers who wish to go direct to survey findings can proceed to quick reference sections found in green text boxes.

Sample design

The sample size was determined by taking into consideration the precision level, prevalence of gum pocket, sample design effect, anticipated response rate and resources availability.

In Hong Kong, all residential care homes for older persons are licensed by the Social Welfare Department. It maintains two separate lists for the two categories of residential care homes for older persons. The sample of IOP was drawn in clusters with residential care home as a unit from the two lists, using a scientific sampling method.

Data collection method

Data on oral health status was collected by clinical examination performed by a team of dental officers (examiners). The examination procedure and recording criteria were based on the recommendation of the World Health Organization[1]. Clinical examination was performed at the selected residential care homes using portable equipments.

Data on personal behaviour, knowledge and attitudes related to oral health and oral health service were collected through structured interview conducted by a team of trained dental surgery assistants.

Training sessions were arranged for both the dental officers and dental surgery assistants to familiarize them with the data collection methods and to calibrate them to ensure consistency.

Enumeration results

A total of 20 homes were selected and invited to participate in the survey. 17 out of the 20 selected homes agreed to participate. Due to difficulties in conducting the survey on all residents in very large homes, a sub-sample of residents was drawn from each of the three homes with more than 80 residents. The selected residents from the three larger homes and all residents of the other 14 smaller homes were invited to participate in the survey. A total of 844 invitations were sent out, with 617 consents received.

At the end of the survey, a total of 530 IOP were clinically examined and 363 of them were interviewed. Those who could not be interviewed had problems either in understanding the questions or in giving responses. It was expected for this group as impairment in physical and cognitive ability was one of the criteria for admission into publicly funded homes. With statistical adjustment and weighting, the final results could be inferred to some 46 600 older persons living in residential care homes, while information collected through the structured interview were estimated to 32 400 of this group.

Limitations

The findings were reported at the aggregate level. For Tables presented in the report, figures may not add up to the totals due to rounding off.

Results of the Oral Health Survey may be subject to errors. The estimates contained in this report were based on information obtained from a particular sample, which was one of a large number of possible samples that could be selected using the same sample design. By chance, estimates derived from different samples would differ from each other. Due to this possible variation of results, a zero figure may mean a non-zero figure of small magnitude. These estimates should be interpreted with caution. Some results were derived from small sub-group of the sample and the limitation should be noted in its interpretations.

What was the oral health status of the 65-year old and above IOP in Hong Kong?

Teeth status - how many teeth were there?

Only 0.5% (200) of the IOP had the full complement of 32 permanent teeth. However, it is not the goal of the dental profession for every individual to possess 32 teeth. There is also no optimal number nor minimum acceptable number of teeth agreed by the dental profession. For comparison purpose, 20 teeth has been used as the arbitrary minimum number of teeth for minimum level of function. From this survey, it was found that 24.1% (11 200) IOP had ≥ 20 teeth. 27.2% (12 700) IOP had no teeth at all (edentulous). Retained roots, i.e. severely broken down teeth with only the roots left behind, were found in 46% (21 400) IOP. The results are summarized in Table 7.1. The mean number of teeth present was 10.3. Among the teeth present, a mean of 1.9 teeth were retained roots.

Table 7.1
Number and percentage of IOP according to various indicators related to teeth present

Teeth status	Number	Percentage
No teeth left (edentulous)	12 700	27.2
With ≥ 20 teeth left	11 200	24.1
With 32 teeth left	200	0.5
With roots left	21 400	46.0

Teeth status - replacement of missing teeth

Less than half of the IOP had dental prostheses. The proportion of IOP with various types of dental prostheses are shown in Table 7.2.

Table 7.2
Number and percentage of IOP with dental prostheses

Type of dental prostheses	Number	Percentage
With any type of prostheses	22 500	48.2
With dental bridges	6 500	14.0
With partial dentures	7 000	14.9
With full dentures	13 100	28.2

Teeth status - what was the level of tooth decay?

The level of tooth decay among the IOP population are shown in Table 7.3. The level of root surface decay is shown in Table 7.4. Virtually all IOP had tooth decay experience. Majority of this experience was manifested as tooth loss (MT). Untreated decay (DT) was found in more than half of the IOP. Decay on root surfaces (DF-root) was found in almost a quarter of the IOP, and almost all of the decay on root surfaces were untreated (D-root).

The proportion of IOP with root surface decay (Table 7.4) was already included in the proportion of IOP with tooth decay (Table 7.3). Hence, it can be said that 41.1% of the IOP with untreated tooth decay in fact had root surface decay (22.7% out of 55.2%).

Table 7.3
Level of tooth decay as measured by the DMFT index among IOP

	DMFT	**DT** (decayed)	**MT** (missing)	**FT** (filled)
Mean value	24.5	2.6	21.6	0.3
% Among population	99.8	55.2	99.5	17.0

Table 7.4
Level of root surface decay among IOP

	DF-root	**D-root** (decayed)	**F-root** (filled)
Mean value	0.4	0.4	<0.05
% Among population	23.6	22.7	1.0

Gum condition as measured by the loss of gum attachment (LOA)

The level of loss of gum attachment among the IOP population is shown in Table 7.5. Loss of gum attachment was almost universal among the IOP and moderate to severe loss (≥ 6 mm) was also common.

Table 7.5
Loss of gum attachment (LOA) among IOP

	≥ 4 mm	≥ 6 mm	≥ 9 mm	≥ 12 mm
Mean number of sextants affected	2.1	0.6	0.1	<0.05
% Among population	84.7	37.3	7.4	2.8

50.4% (23 500) IOP, and 2.6 sextants were excluded due to insufficient number of teeth present or unable to be examined according to the criteria.

Gum condition as measured by the Community Periodontal Index (CPI)

The gum condition as measured by the CPI can be found in Table 7.6. Gum pockets were present in half of the IOP population. Though there were no gum pockets in the other half of the IOP population, almost all of them had calculus. Only 0.3% of the IOP had healthy gum condition in all the sextants examined.

Table 7.6
Gum condition as measured by the highest CPI score among IOP

	Healthy	Bleeding	Calculus	Shallow pocket	Deep pocket
Mean number of sextants affected	<.05	<.05	2.4	0.9	0.2
% Among population	0.3	0	49.8	36.7	13.2

50.4% (23 500) IOP, and 2.6 sextants were excluded due to insufficient number of teeth present or unable to be examined according to the criteria.

As seen from Table 7.5, 84.7% (19 600) had loss of gum attachment of ≥ 4mm. Table 7.6 showed that 49.9% (11 500) had gum pockets (i.e. loss of gum attachment ≥ 4 mm). At least 34.8% (8 100, by subtracting 49.9% from 84.7%) had loss of gum attachment not in the form of gum pocket, but in the form of gum recession, as assessed by examining one tooth in each of the six sextants in the mouth.

Was there any difference in oral health status between the group of IOP who could complete the interview and the group who could not?

Key oral health indicators of the two sub-groups of IOP are listed in Table 7.7. Significantly more IOP who were unable to complete the interview had untreated tooth decay. Otherwise, both groups were similar.

Table 7.7
Key variables on oral health status between IOP who could complete the interview and those who could not

Oral health indicators	IOP who could complete interview	IOP who could not complete interview
% With loss of tooth supporting tissue (≥ 6 mm)	35.6	43.5
% With loss of tooth supporting tissue (≥ 4mm)	83.4	89.4
% With gum pockets	47.8	58.2
% With DT	51.8	62.9
% With DMFT	99.8	100.0
% Edentulous	28.2	24.9
% With ≥ 20 teeth left	23.7	24.8

More than half of the IOP had untreated tooth decay. Most decayed teeth were found to be beyond restoration. With only an average of 10.3 teeth remaining among the IOP, 2.6 teeth were affected by untreated tooth decay, and of these, 1.9 teeth were severely broken down with only the roots left behind.

Among the dentate IOP, more than 80% had some loss of gum attachment. Both gum pockets and gum recession were common. Gum pockets were found in half of the dentate IOP.

Tooth loss was extensive among the IOP. On average, each IOP had only 10.3 teeth left. Total tooth loss was found in 27.2% of IOP.

Less than half of the IOP had dental prostheses. Most of the dental prostheses were removable prostheses (dentures). As the use of dental prostheses can lead to dental plaque rentention, its use justifies special attention on teeth cleaning practices.

More IOP who could not complete the interview than those who could were found to have untreated tooth decay. Otherwise there was no significant difference between the two sub-groups of IOP.

What was the experience in oral health problems among the IOP population?

Aside from assessing the level of tooth decay and gum disease in IOP, it was also the objective of the Oral Health Survey to have a better understanding of oral health in terms of their perception of well being and the perceived oral functions. Part of the structured interview was designed to investigate their experience of oral health and functional problems, and the care seeking behaviour when such problems had been perceived.

[Note : The following sections provide information on the experience, behaviour, knowledge and attitude among the 69.6% (32 400) IOP who could complete the interview, and therefore represented only the findings of this sub-group of IOP.]

How many IOP had experienced oral health problems, and what did they do to deal with the problems ?

The proportion of IOP who had perceived oral health problems in the previous 12 months are shown in Table 7.8. The most commonly perceived problem was *dryness of mouth on eating*, which is a problem associated with degeneration of the salivary glands and not directly related to teeth. *Bleeding gums, mobile teeth* and *tooth sensitivity to hot and cold* are problems directly related to teeth. *Abscess* was the least perceived problem.

Table 7.8
Perceived oral health problems by IOP and the actions taken

Condition	Percentage	Actions taken by the affected IOP		
		No action	Self manage	Dentist
Dryness of mouth on eating	29.3	33.8%	64.2%	2.0%
Bleeding gums *	15.2	54.6%	34.9%	10.5%
Mobile teeth *	14.4	72.2%	16.7%	11.1%
Bad breath	13.6	36.0%	61.0%	2.9%
Sensitivity to hot or cold *	11.7	44.4%	44.4%	11.1%
Abscess	3.8	12.8%	43.6%	43.6%

* Conditions affecting remaining teeth

The actions taken by the affected IOP for the problems perceived are also shown in Table 7.8. It should be noted that majority of the affected IOP did not take any action for *mobile teeth* and *bleeding gums*. These two conditions would only have occurred among IOP with teeth remaining. It appeared that the affected IOP were not keen to treat problems on their remaining teeth.

More IOP took action for *dryness of mouth* and *bad breath*, but action was limited to self management. It was only in one condition, i.e. *abscess*, where 87.2% of the affected IOP took action and half of them sought professional care. Generally speaking, the seeking of oral health care services upon perception of oral health problems was very low.

Did the IOP perceive any problem in oral functions, and what were their actions to deal with the perceived problems?

The proportion of IOP who perceived functional problems related to the mouth and teeth are shown in Table 7.9. It was found that *dissatisfaction with appearance* of teeth was the most reported, followed by *problems in eating*. The *appearance of teeth* was an important functional concern among the IOP and many of them still perceived it as a problem. This was an indication that the psychological discomfort on the IOP should not be overlooked.

Table 7.9
Perceived oral functional problems by IOP

Functional Problems	Condition	Prevalence
Pain	Pain, only when touched	16.7%
	Pain, spontaneous	10.6%
	Severe pain that disturbed sleep	3.4%
Problems in eating	Discomfort on eating	19.2%
	Denture causing problem on eating	8.3%
	Chewing not efficient	19.2%
Difficulty in speech	Difficulty in speech	12.0%
Dissatisfaction with appearance	Feeling that teeth do not look good	21.6%

The action taken by the affected IOP for various perceived functional problems are also shown in Table 7.10. Pain was the functional problem that drove more of the affected IOP to see a dentist. Even then, only 26.3% afflicted by pain had sought care from the dentist. On the whole, the seeking of oral health care services upon perception of functional problems was very low.

Table 7.10
Proportion of IOP who sought care upon perceived oral functional problems

Functional Problems	Proportion of affected IOP who saw dentist
Pain	26.3%
Problems in eating	16.0%
Difficulty in speech	8.2%
Dissatisfaction with appearance	15.3%

Oral health and functional problems were reported by less than 30% of the IOP. *Dryness of mouth* was the mostly reported oral health problem, which was more likely to be the result of degeneration of the salivary glands associated with aging. Apart from that, *dissatisfaction with appearance*, and *discomfort on eating* were the most perceived oral functional problems. *Dissatisfaction with appearance* may be the direct result of tooth loss, especially the front teeth. Dental problems which were not reported as much included *abscess, bleeding gums* and *mobile teeth*. The relatively low prevalence of oral health problems among the IOP was not surprising in view of the extensive tooth loss, and with fewer susceptible teeth remaining.

The demand for curative care was very low. For more severe problems like *abscess* and *pain*, only less than half of the affected IOP sought professional care. For most of the other oral health problems perceived, the affected IOP either took no action, or managed the problems by themselves. In particular, the tendency of not taking action at all was more common in problems affecting the teeth itself, i.e. *bleeding gums, mobile teeth* and *tooth sensitivity*.

What was the impact of the conditions of the teeth, mouth and dental prostheses on the daily life of the IOP population?

The impact of oral conditions on NOP's various aspects of daily life was measured by a locally validated set of questions, i.e. Oral Health Impact Profile (OHIP-14).

The proportions of IOP who expressed negative impact on various aspects of daily life are shown in Table 7.11. Among various aspects of daily life, oral condition had more negative impact on chewing food and psychological aspects (i.e. worrying), reported by 11.5% and 10.7% IOP, respectively. Negative impact on other aspects of daily life of OHIP-14 was even lower.

Table 7.11
Percentage of IOP expressing negative impact on aspects of daily life in OHIP-14

Impact on daily life	Percentage
Have had difficulty chewing any food	11.5
Have been worried	10.7
Have found it uncomfortable to eat any food	8.9
Have had trouble pronouncing any words	7.3
Have been totally unable to function	6.6
Have had sore spots in mouth	5.9
Have been miserable	5.6
Have been a bit embarrassed	5.3
Have felt that there has been less flavour in food	4.4
Have had to interrupt meals	4.2
Have avoided going out	2.2
Have been upset	1.9
Have had troubles getting along with other people	1.7
Have been unable to work to full capacity	1.5

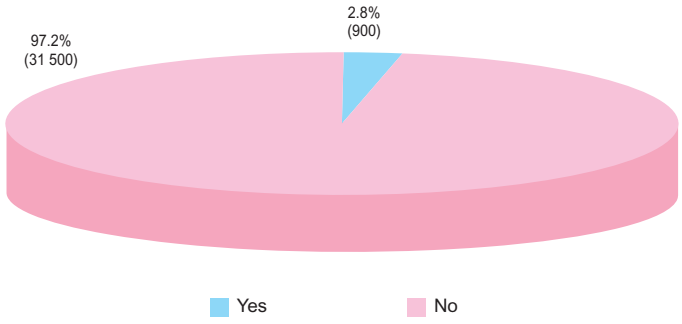
Around 11% of IOP expressed negative impact on chewing function and psychological discomfort arising from oral health conditions. Negative impact on other aspects of daily life was even lower. This may have been due to either a true low impact (IOP did not perceive functional difficulty arising from their oral health conditions) or the inability to express the negative impact (functional difficulty arising from oral health conditions was perceived but the IOP were not used to expressing such difficulty).

What was the pattern of usage of oral health care services like among the 65-year old and above IOP?

How many IOP had the habit of seeking regular dental checkup?

The behaviour of seeking regular dental checkup is shown in Figure 7.1. Only 2.8% (900) IOP had the habit of regular dental checkup.

Figure 7.1
Distribution of IOP according to habit of regular dental checkup



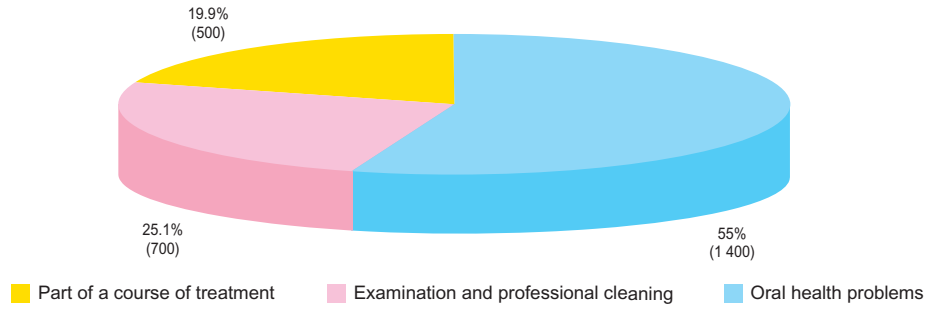
When was the last dental visit made by the IOP?

The distribution of IOP according to the time when they made their last visit to the dentist is shown in Table 7.12. Only 15% (4 800) of the IOP had visited a dentist in the past 3 years. Among the 8.1% (2 600) NOP who had visited a dentist in the previous 12 months, 55% (1 400) did so because of oral health problems (Figure 7.2).

Table 7.12
Distribution of IOP according to time of last dental visit

Time of last dental visit	Number	Proportion
1 year or less	2 600	8.1
1 to 3 years	2 200	6.9
More than 3 years	10 400	32.1
Never visited dentist	7 900	24.4
Could not remember	9 300	28.5

Figure 7.2
Distribution of IOP who had visited dentist in the previous year according to the reported reason of visit



Only 2.8% of the IOP reported the habit of regular dental checkup, and only 8.1% of the IOP had visited the dentist in the previous year. 28.5% could not remember when was the last dental visit made. One-quarter of the IOP reported that they had never visited a dentist. Of the dental visits made in the previous year, more than half were due to oral health problems.

How did the 65-year old and above IOP practise oral self-care?

The following description on toothbrushing and flossing will be further limited to those IOP with teeth remaining among those who could complete the interview. They are referred to as **dentate IOP**.

Toothbrushing - how often did the dentate IOP brush?

Information on toothbrushing habit was sought from dentate IOP. 84.1% (18 300) of the dentate IOP reported the habit of daily toothbrushing. (Table 7.13)

Table 7.13
Distribution of dentate IOP according to toothbrushing habit

Toothbrushing habit	Number	Percentage
Brushed everyday	18 300	84.1
Brushed occasionally	600	2.8
Never brushed	2 800	13.0

How many dentate IOP flossed as part of interdental cleaning?

Only 1% (200) did so occasionally. (Table 7.14)

Table 7.14
Distribution of dentate IOP according to flossing habit

Flossing habit	Number	Percentage
Flossed everyday	0	0
Flossed occasionally	200	1
Never flossed	21 600	99

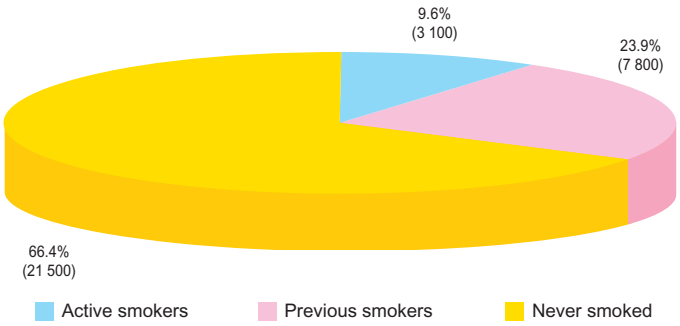
More than 80% of the dentate IOP reported the habit of daily toothbrushing. Flossing was virtually not practised.

What was the smoking habit among 65-year old and above IOP?

Smoking

9.6% (3 100) IOP were found to be active smokers. (Figure 7.3)

Figure 7.3
Distribution of IOP according to smoking habit



9.6% IOP had the smoking habit.

Summary on oral health status and oral health behaviour

A closer look at the tooth decay data revealed that majority of the tooth decay had already reached a stage beyond restoration. The gum condition was also poor as deep gum pockets were found in 13.2%, and moderate to severe loss of gum attachment was found in 37.3% of dentate IOP. Tooth loss was common, as three-quarters of the IOP had lost their teeth to the extent of having less than 20 teeth remaining.

Among the various oral health problems experienced by the IOP, bleeding gums and mobile teeth ranked second and third in terms of the proportion of IOP reporting such experiences. Functional problems, mainly in eating function and dissatisfaction with appearance, and negative impact on psychological comfort were also reported.

Their use of professional oral health care services, both for regular dental checkup and for resolving oral health problems, was low. The demand for curative care was very low. In other words, despite the presence of existent oral health problems, professional services were not sought.

What were the possible explanations to the inadequacies in oral health related behaviour?

What did the IOP know about the factors leading to tooth decay?

The factors leading to tooth decay as perceived by the IOP are shown in Table 7.15. More than half of the IOP replied *don't know*, and very few could mention the relevant factors on tooth decay.

Table 7.15
Number and percentage of IOP
according to perceived factors leading to tooth decay

Perceived factors	Number	Percentage
Improper cleaning of teeth *	7 900	24.3
Eating too much candies / sweet food *	6 900	21.2
Too frequent food / drink intake *	1 000	3.0
No avoidance of certain food	700	2.2
Sour food / drink	500	1.5
Lack of calcium / nutrition	300	1.0
Dental plaque / bacteria *	200	0.6
No regular dental checkup *	200	0.5
Don't know	18 800	57.9

Respondents allowed to choose multiple answers
* Relevant factors

What did the IOP know about the factors leading to gum disease?

The factors leading to gum disease as perceived by IOP are shown in Table 7.16. More than three-quarter of IOP replied *don't know. Improper cleaning of teeth* and the *traditional Chinese medicine beliefs* - mainly "reqi" (internal heat 熱氣) were reported as important explanations for gum disease by the IOP. Very few could mention the factors that the dental profession considered as important.

Table 7.16
Number and percentage of IOP
according to perceived factors leading to gum disease

Perceived factors	Number	Percentage
Improper cleaning of teeth *	4 800	14.7
"reqi" / traditional Chinese medicine beliefs	4 200	13.0
No avoidance of certain food	400	1.2
Dental plaque / bacteria *	200	0.5
No regular dental checkup *	100	0.3
Not flossing *	100	0.3
Smoking *	0	0
Don't know	24 900	76.7

Respondents allowed to choose multiple answers
* Relevant factors

What did the IOP know about the prevention of tooth decay?

The IOP were asked to report on any method that they could think of in the prevention of tooth decay. The results are shown in Table 7.17. Majority of the IOP had no idea about the prevention of tooth decay, as 69.4% (22 500) IOP replied *don't know*. The most commonly reported preventive methods were *proper cleaning of teeth* and *reduce consumption of candies and sweet food*. Professionally recommended behaviour such as *reduce frequency of food or drink intake* and *seek regular checkup* were rarely mentioned.

Table 7.17
Number and percentage of IOP
according to perceived methods to prevent tooth decay

Perceived methods	Number	Percentage
Proper cleaning of teeth *	8 000	24.5
Reduce consumption of candies / sweet food *	4 400	13.4
Rinse with water / salt water	1 500	4.7
Avoid certain food	700	2.2
Use commercial mouth wash	400	1.2
Seek regular dental checkup*	300	1.0
Reduce frequency of food / drink intake*	200	0.6
Don't know	22 500	69.4

Respondents allowed to choose multiple answers
* Relevant factors

What did the IOP know about the prevention of gum disease?

The perceived methods to prevent gum disease as reported by IOP are shown in Table 7.18. Majority of the IOP did not know about the prevention of gum disease. *Seek regular checkup* and *avoid smoking* were rarely mentioned.

Table 7.18
Number and percentage of IOP
according to perceived methods to prevent gum disease

Perceived methods	Number	Percentage
Proper cleaning of teeth *	4 900	15.2
Taking Chinese medicine / herbal tea	2 200	6.8
Rinsing with water / salt water	800	2.4
Seek regular dental checkup *	500	1.5
Avoid certain food	400	1.2
Avoid smoking *	300	0.8
Don't know	26 000	80.1

Respondents allowed to choose multiple answers
* Relevant factors

More than half of the IOP did not know the factors leading to and methods to prevent tooth decay and gum disease. Factors considered as relevant by the dental profession, such as dental plaque, flossing, snacking, smoking and regular dental checkup, were rarely mentioned.

What were the reasons for not seeking regular dental checkup?

Majority of the IOP did not report the habit of regular dental checkup. The reasons given for not having regular checkup are listed in Table 7.19. Almost half of the IOP perceived good oral health, no pain and no need. Some had never thought about dental checkup or did not know about it. Besides these, the *uncertainty of cost* / *worry of high cost* was also mentioned as an important reason.

Table 7.19
Number and percentage of IOP who did not seek regular dental checkup according to the reported reasons for not doing so

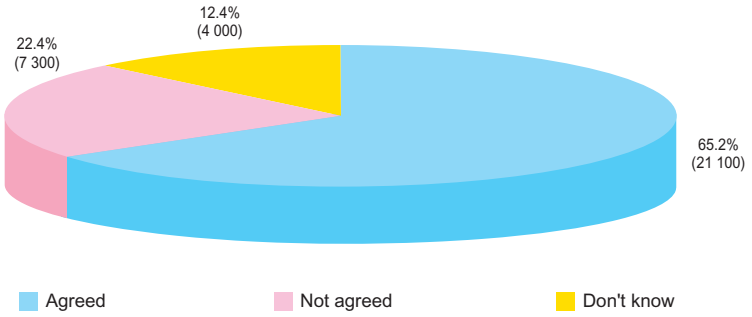
Reasons	Number	Percentage
Teeth were good / no pain / no need	14 200	45.2
Did not know checkup / never thought about checkup	7 300	23.1
Uncertainty of cost / worry of high cost	3 600	11.5
Poor general health, could not go to checkup	2 500	7.9
Did not know how to find dentist	1 700	5.5

Respondents allowed to choose multiple answers

Perceived benefit and worthiness of regular dental checkup

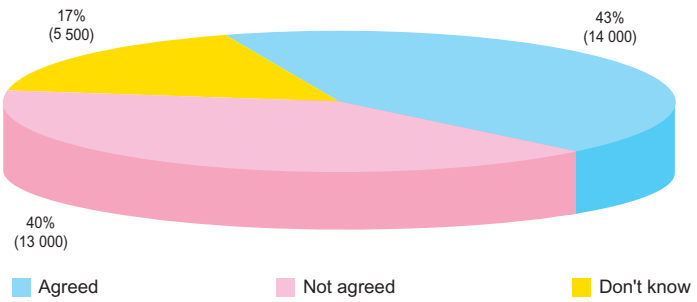
The perceived benefit of regular dental checkup was inferred by the agreement to the statement *teeth will be fine even without regular checkup*, and the results are shown in Figure 7.4. Majority of the IOP did not perceive any benefit in having regular dental checkup.

Figure 7.4
Distribution of IOP according to agreement that *teeth will be fine even without regular checkup*



As shown in Figure 7.5, less than half of the IOP agreed that *it is worthy to spend on regular dental checkup*, but then again, there were 40% (13 000) who disagreed to the same statement.

Figure 7.5
Distribution of IOP according to agreement that *it is worthy to spend on regular dental checkup*



Almost two-thirds of the IOP did not consider regular dental checkup as beneficial and 40% did not perceive it as worthy. No perceived need was the mostly reported reason for not seeking regular dental checkup. No need had been perceived because of the self-perceived good oral health and the absence of pain. Some simply had no idea about dental checkup.

The inability to seek care due to poor general health was also mentioned. This factor was worth noting although it was mentioned by only a small percentage of IOP.

How was the IOP's perceived need for dental treatment as compared to the need assessed by the survey method ?

The treatment need perceived by the IOP was compared to the assessed need based on the survey method in Table 7.20. Generally speaking, the perceived need in almost all aspects were much lower than the assessed needs.

Table 7.20
Dental treatment need perceived by the IOP
compared with the assessed need based on the survey method

Dental treatment need	Perceived	Assessed
Dental prostheses	11.9%	59.0%
Oral hygiene instruction	0%	49.9%
Scaling	0.6%	49.9%
Tooth extraction	2.3%	47.6%
Tooth filling	1.8%	29.2%
Advanced periodontal treatment	0.3%	6.6%
Dental pulp care	0%	1.9%
Crown fabrication	0.3%	0.2%

The treatment need perceived by the IOP was found to be much lower than the assessed need. No perceived need was the most commonly reported reason for not seeking regular dental checkup. Treatment need assessment based on the survey methods had not been perceived by the IOP, especially the need for preventive treatment.

In the structured interview, a set of hypothetical tooth decay situations were presented to the dentate IOP, and they were asked to propose their course of action when confronted with such situations. The purpose was to study the considerations in dentate IOP's proposed actions under different tooth decay problems, and to investigate if there were any difference in the management of problems of front teeth or back teeth, and when the problems were associated with pain or not .

What would the dentate IOP do in case of tooth decay problems?

The proposed actions of the dentate IOP under the various tooth decay situations are summarized in Table 7.21.

Table 7.21
Proposed actions of the dentate IOP under various tooth decay situations

	Front teeth	Back teeth
Decayed with no pain	58.2% no action	59.0% no action
	1.0% self manage	2.1% self manage
	9.0% seek removal of tooth	10.1% seek removal of tooth
	18.0% see dentist	16.5% see dentist
	0.9% see medical doctor	0.9% see medical doctor
	12.9% could not decide	11.4% could not decide
Decayed with pain	9.1% no action	9.1% no action
	3.6% self manage	4.1% self manage
	34.0% seek removal of tooth	35.8% seek removal of tooth
	35.9% see dentist	35.0% see dentist
	2.2% see medical doctor	1.5% see medical doctor
	15.3% could not decide	14.5% could not decide

Pain was an important determining factor in taking action. More than half of the dentate IOP would not take any action if there was no pain, even if decay was apparent.

The removal of the offending tooth was an expedient solution to problem. Around 10% would ask for tooth removal if there was decay even without pain. The proportion increased to over 30% if there was associated pain.

Some would not take any action even in pain. Around 9% would not take any action even if there was associated pain.

There was no significant difference in the proposed actions for front teeth and back teeth.

What were the reasons for not seeking oral health care services when oral health problems had been perceived?

The low demand for care when there were perceived oral functional problems was already reported in Table 7.10. The reported reasons for not seeking oral health care services in those situations are shown in Table 7.22. The two main reasons reported were the same in all functional problems studied. The mostly reported reason was the perception that *it was only a small problem*. The next reason was *uncertainty of cost / worry of high cost*.

Table 7.22
Distribution of IOP according to reasons for not seeking care when there was perceived functional problem

Functional Problems	Main reason (prevalence)	Other reason (prevalence)
Pain	small problem (54.8%)	uncertainty of cost / worry of high cost (19.5%)
Problems in eating	small problem (45.7%)	uncertainty of cost / worry of high cost (15.2%)
Difficulty in speech	small problem (44.0%)	uncertainty of cost / worry of high cost (20.7%)
Dissatisfaction with appearance	small problem (39.6%)	uncertainty of cost / worry of high cost (25.6%)

What were the reasons for not proposing to seek oral health care services in hypothetical tooth decay situations?

The reasons given by the IOP for not seeking care in hypothetical tooth decay situations are listed in Table 7.23. Again the main reason given was the perception that *the problem was minor*, and the next main reason was the *uncertainty of cost* / *worry of high cos*t.

Table 7.23
Percentage of IOP who did not propose to seek care in hypothetical tooth decay situation according to reasons for not proposing so

Reasons	No pain	Pain
Problem is minor	55.2%	49.1%
Uncertainty of cost / worry of high cost	23.6%	20.4%
Don't know how to find dentist	6.1%	9.4%
Could not go due to physical problems	4.8%	10.6%
Fear	0.7%	2.4%

Why was there the perception that the oral health problems was only a small problem?

It might help to look into some of the verbatim responses.

- *"老人院冇牙醫提供 (the home did not provide dentist's service)"*
- *"食嘢時間唔多，可以得咪唔駛睇牙醫 (not spending much time on eating, no need to see a dentist if it can be tolerated)"*
- *"唔想麻煩姑娘 (did not want to cause troubles to the nurses)"*
- *"年紀大，唔想睇 / 麻煩人 (so old already, did not want to check / cause troubles to others)"*

It was apparent that the IOP were more concerned about the troubles that they might cause to the people around them. They would rather tolerate the discomfort than bother people. IOP would only ask for assistance to seek oral health care services when the discomfort developed to an intolerable stage.

The perception of tooth decay problems as minor problems indicated that there were issues of greater importance relative to the oral health problems. The immediate reason given by most of the IOP with perceived functional problems for not seeking care was the notion that *it was a small problem* that did not warrant any trouble in seeking care. In other words, seeking oral health care was deemed as troublesome. Physical impairment was one of the admission criteria to residential care services, and this would obviously be a significant barrier to the use of oral health care services. The *inability to go to dental clinic due to poor general health* has been mentioned in Table 7.19. The need for assistance or escort by caregivers to go to the dental clinic, and the inconvenience to other IOP when the caregiver was away on such tasks, were perceived as troubles caused to the caregivers and other residents. Relative to the troubles caused, the IOP perceived their own oral health problems as minor.

The other possible barrier was the uncertainty of cost / worry of high cost. It was not clear from this study whether the barrier was the actual cost, or the lack of price information.

What were the attitudes of the IOP population towards oral health care services?

The attitudes of the IOP towards oral health care services was evaluated by their agreement to a series of statements / questions related to the oral health care services. The results are shown in Table 7.24. Quite a substantial number of IOP replied *don't know* to some of the questions. The number and percentage of IOP who answered *don't know* ranged from 16% to 32.4% (4 900 to 10 500) among all IOP. The IOP might have replied *don't know* simply because they did not understand the question, or they had no knowledge whatsoever.

Generally speaking, the IOP population had confidence on the dentists' ability to solve their oral health problems. There were some who worried about the possible pain and discomfort. The uncertainty on cost of dental care had been mentioned earlier. The IOP were also uncertain about the role of dentists in teaching people on ways to prevent oral disease. This could be explained by their lack of experience and exposure to dental visits.

Table 7.24
Attitudes of IOP towards oral health care services

Statements / questions	Responses	Number of IOP	Percentage
Do you agree that dentists can solve your oral health problems ?	Yes	21 300	83.2
	No	4 300	16.8
	6 800 replied don't know		
Dentists are more concerned on treatment than to teach people how to prevent dental diseases.	Agree	9 300	42.3
	Disagree	12 700	57.7
	10 500 replied don't known		
Do you think dentists will perform treatment for you that is unnecessary?	Yes	3 000	12.1
	No	21 900	87.9
	7 500 replied don't know		
Visiting a dentist must be painful and uncomfortable?	Agree	8 500	30.8
	Disagree	19 000	69.2
	4 900 replied don't know		
Are you worried about contracting contagious diseases from dentists' equipment?	Yes	4 800	17.6
	No	22 600	82.4
	5 100 replied don't know		
The dentists' fees are worthy of the value.	Agree	16 600	69.9
	Disagree	7 200	30.1
	8 600 replied don't know		

Generally speaking, the IOP population had confidence in the dental profession. The IOP population had confidence on the *dentists' technical ability to solve their oral health problems*. Most of them also believed that *dentists would not perform unnecessary treatment*, and most of them did not *worry about contracting contagious disease* at the dental clinic.

The dental profession should take note of the views from the minority of this group. Around one-third of the IOP expressed doubts on aspects such as the association of *pain and discomfort with dental visit* and *the worthiness of dentists' fees*. Even more were in doubt about *dentists' concern on teaching people how to prevent diseases*.

What were the attitudes of 65-year old and above IOP towards tooth loss?

The IOP were asked whether they agreed to the statement *tooth loss is a part of aging*. The results are shown in Table 7.25. As many as 70% of the IOP agreed that tooth loss was just part of aging. As observed from the findings of their oral health status, the life experience of this group actually supported this attitude.

Table 7.25
Distribution of IOP according to agreement that *tooth loss is a part of aging*

Agreement to the statement	Number	Percentage
Agree	22 700	70.0
Disagree	7 800	24.0
Don't know	2 000	6.0

SECTION 7 - SUMMARY

Tooth loss had been experienced by almost all IOP.

There were existing tooth decay and gum disease and there were also risk factors. The observed oral health behaviour, both in terms of self-care and the use of professional oral health care, was not at all favourable to maintaining a healthier level of oral health.

Tooth loss was considered by 70% of the IOP population as part of aging.

The circumstances of being confined to residential care homes might have played a part in their oral health related behaviour.

The possible impact of being in residential care homes coupled with the inability to seek care due to poor general health had been mentioned as reasons for not seeking care. The perceived inconvenience on the need for assistance or escort by caregivers, may have accounted for the perception that their own oral health problems were minor issues.

An important consideration in planning care for IOP would be their ability for self-care.

Physical and cognitive disabilities are the main considerations in the assessment mechanism of the Social Welfare Department in admitting older persons into residential care homes. The fact that 30.4% of the IOP were unable to complete the interview was an indication that a significant proportion of the IOP might be lacking in self-care ability. Even among those who could complete the interview, there might be some IOP who lacked the physical ability in performing self-care.

Data on dental treatment need should be carefully interpreted.

The survey criteria in assessing the IOP dental treatment need were the same as the criteria used for the adults and NOP. This enabled comparison among these population groups. While such criteria would be considered acceptable on individuals who are relatively fit and healthy, the same criteria may not be realistic for the IOP. For instance, the use of dental prostheses require attention in self-care and cleaning, which may not be user-friendly for IOP who are incapable of taking care of themselves. The general health condition of the IOP had not been taken into account in the survey's assessment of treatment need. Hence, the course of treatment itself, such as the removal of teeth or the filling of decayed teeth, may possibly lead to distress for some IOP.

The dental profession is still working on the definition of assessment criteria in determining the realistic dental treatment need for special needs groups like the IOP. Before a set of internationally acceptable criteria is available, the current assessment should be interpreted with caution.

To partly address the oral health care needs among the IOP, some peripheral factors, i.e. the residential care homes, caregivers and family members, should also be considered.

It was apparent that any desirable change in life-style among the IOP would have to be facilitated at the residential care homes, and through the co-operation of caregivers and family members. For IOP capable of self-care, reinforcing their oral health knowledge and attitudes are still important in the motivation of behavioural change. Efforts in oral health promotion directed to caregivers and family members, to assist in improving the oral health of those IOP who could not take care of themselves, would certainly be useful. Preventive and curative treatment have to be delivered according to the realistic needs of the IOP, and according to other specific needs, e.g. administrative and financial need, of the residential care homes.