Hong Kong Reference Framework for Preventive Care for Older Adults in Primary Care Settings

Module on Dental Health Care for Older Persons Revised Edition 2016

First published: 2015
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Module on Dental Health Care for Older Persons

Introduction

Oral health means more than good teeth. It is part of general health and essential for well-being. Suboptimal oral health may have profound effects beyond the oral cavity. For example, dental caries lead to destruction of tooth structure and periodontal disease affects the tooth-supporting structures. Both conditions may lead to pain and impairment of eating function, and subsequently affect nutrition. In addition, periodontal disease is associated with diabetes mellitus, coronary heart disease and oral cancer. Therefore, it is always beneficial to maintain good oral hygiene, and minimize the level of dental diseases and gingival inflammation.

Older persons suffering from chronic medical conditions are at additional risk to oral health. People with physical and cognitive disabilities, caused by stroke or dementia, may have difficulties in performing oral hygiene practices. Use of medications, especially in situations of polypharmacy, may also be associated with dry mouth which is a risk factor of dental caries. During the clinical encounters with elderly patients, primary care doctors are in a good position to promote patients' oral health by providing lifestyle advice and encouraging them to attend regular dental checkups.

The following is some useful lifestyle advice that can be easily practiced by older persons:
- Perform proper tooth cleaning, including the use of fluoridated toothpaste and interdental cleaning;
- Adopt good dietary habit by reducing the frequency of food or drinks intake; and
- Refrain from smoking.

Epidemiology

The Oral Health Survey conducted by the Department of Health in 2011 found that community-living older persons aged 65 to 74 in Hong Kong had 19.3 teeth on average. This is actually an improving trend as the average number of teeth in this age group was 15.0 in 1991 and 17.0 in 2001. The percentages of elderly with complete tooth loss were also on a decreasing trend, reducing from 12.0% in 1991 to 8.6% in 2001 and 5.6% in 2011. The tooth loss in elderly persons is understandable as many of them would consider extraction of decayed teeth as a practical option and in some cases, the only affordable option.
Older persons in Hong Kong generally has low tendency to use professional dental services. According to the Oral Health Survey 2011, more than three-quarters of elderly subjects in the community did not attend regular dental check-up, majority of them believed that their teeth were good and hence there was no need to visit a dentist. However, their belief might not be correct as it was found that many of them were not aware of the dental problems and treatment needs as identified by dentists. For instance, despite the presence of bleeding gums, older persons may not understand that this may be a sign of periodontal disease and therefore early intervention is not received. They also had high tendency to delay care-seeking from dentists even when they had oral discomforts. Primary care doctors are in a good position to inform the older persons of their oral health risks during their clinical encounters and advice the older persons to seek dental care.

Screening

While all older persons should be encouraged to attend dental check-up on a regular basis to maintain good oral health, primary care doctors may ask screening questions to identify patients who should receive immediate attention. A positive response to any of the following three simple screening questions is an indication to advise the concerned older person to consult a dentist as soon as possible.

- Do you have any oral discomfort and problem in chewing?
- Do you have any difficulty in cleaning your teeth (and/or dentures)?
- Do you have any feeling of dry mouth?

“Do you have any oral discomfort and problem in chewing?”

The presence of oral discomfort or problem in chewing / eating is an indication of urgent need to consult a dentist. Any further delay may lead to deterioration of dental diseases, more discomfort, and treatment that is more complex and more expensive.

“Do you have any difficulty in cleaning your teeth (and/or dentures)?”

This question is especially important for those suffering from conditions that may affect hand movement. In conditions such as arthritis, Parkinson's Disease and stroke, patients would have difficulties in tooth-brushing and inter-dental cleaning as limited by hand mobility and ability in self-care. The question can be modified to “do you have any difficulty in cleaning his/her teeth (dentures)?” to target at caregivers of dependent older persons.
"Do you have any feeling of dry mouth?"

Reduced salivary secretion may result from normal degeneration associated with aging. A number of medications, such as diuretics and antihistamines, also have the side-effect of causing dry mouth. Patients who had received radiotherapy at the head and neck region may also suffer from dry mouth as a result of salivary gland damage. Reduced salivary flow may increase the risk of developing dental caries. Therefore, it is important to ask for the feeling of dry mouth among older persons in the above categories. Sometimes the affected person may not perceive the feeling of dry mouth. Primary care doctors may remind older persons taking multiple medications and those who had received head and neck radiotherapy about their higher risk to develop dental caries. These patients should be encouraged to discuss with their dentist on whether they need to have dental check-up at shorter intervals.

Oral screening protocols to be performed by non-dental professionals are available, such as the Oral Health Assessment Tool (OHAT). This tool is mainly developed for use for assessment of oral health of institutionalized elderly. However, the performance of oral screening using such tools is time consuming and may have little additional benefit in assessing community-living older persons in primary care settings.

Resources

Older persons may seek primary care doctors' advice regarding their oral health concern. Some frequently asked questions and proposed answers are listed in Annex 1 for reference. Educational resources such as pamphlets and DVDs are available from the Oral Health Education Unit of the Department of Health on request. The results of the Oral Health Survey 2011 are available online for reference.

Primary care doctors may also facilitate the proper use of oral health care by providing information on dental services to older persons. A list of relevant services is at Annex 3 for reference.
References

Annex 1  Frequently Asked Questions and Answers

**Government Dental Service**

1. Does the Government provide dental service to the public?
   The Government provides the public with emergency dental service. The aim of the service is to relieve dental pain of the patients. It is a free service. The treatment includes extraction and medication. After the emergency treatment, the patients need to seek follow-up treatment from their dentists.

2. Where can emergency dental service be found?
   Addresses, phone numbers and opening hours of Government clinics that provide emergency dental service can be found in the followings:
   Oral Health Education Unit (OHEU) 24 hr. hot line: 2713 6344
   Website: http://www.dh.gov.hk/english/tele/tele_chc/tele_chc_dcgps.html

**Oral Health Care**

3. How to choose a toothbrush?
   It is essential that the toothbrush can move freely in one’s mouth to clean every tooth surface. The bristles should be soft so that it does not injure the gums. The size of the toothbrush head should be appropriate to the size of the oral cavity. In general, the size of a toothbrush head which is about the diameter of a one dollar coin will be suitable for adults. The bristle pattern and handle design should be determined by personal preference and habit.

4. How often should toothbrush be changed?
   Toothbrush should be changed about every 3 months. It should be replaced sooner if the bristles are splayed or after illness such as upper respiratory tract infection.

5. Is powered toothbrush better than manual toothbrush?
   Both manual and powered toothbrushes clean the teeth effectively as long as they are used correctly. It has been shown that powered toothbrush with a rotation oscillation action reduce plaque and gingivitis more than that of manual toothbrush. However, to clean the teeth thoroughly, the most important is to adopt a proper and effective tooth brushing technique. For people with special needs, such as physically and mentally disabled people, choosing powered toothbrush may enhance the cleaning effect. The technique in using
powered toothbrush is different from that of the manual toothbrush. You should consult your dentist to achieve an optimal cleaning effect if you choose to use powered toothbrush.

6. When should mouthwash be used? How to choose a mouthwash? What is the difference between mouthwash that contains alcohol and the ones that do not?
Depending on the active ingredients they contain, different types of mouthwash can be used to prevent tooth decay, reduce formation of dental plaque and gingivitis or reduce tooth sensitivity. It is advised to consult your dentist whether you need the mouthwash and follow his/her instruction on how to use it.
It has been shown that mouthwash that contains alcohol may irritate oral mucosa, it is advised to choose alcohol-free mouthwash.

7. Is denture adhesive suitable for elderly?
Denture adhesive is used to keep dentures in place during normal daily activity. Usually a well-made denture is retentive enough without the use of any adhesives. However, dentist may recommend using it in special cases. Any trial to use denture adhesives without knowing the cause of loose denture may result in more bone resorption, and make it harder to manufacture another good denture or even repair the old one. It is important to choose a zinc-free denture adhesive because chronic excessive intake of zinc can adversely affect general health.

8. How to clean a removable denture?
Dental plaque forms on the surface of a denture. In order to maintain the hygiene of the mouth and denture, the denture should be taken out for cleaning every night. First, fill the washing basin with some water to prevent accidental drop and fracture of the denture. Then, apply some detergent onto toothbrush and clean every surface of the denture, followed by rinsing with water. Finally, immerse the cleaned denture into a cup of water overnight. Avoid using toothpaste to clean the denture. The coarse particles in the toothpaste may scratch the surfaces of denture and enhance plaque accumulation.

9. How to clean the mouth of elderly without natural teeth?
The mouth of elderly without natural teeth should be swabbed every night. Soak a piece of gauze or clean towel with water and squeeze out excess water. Swab the cheek first, and then swab the other parts of the oral cavity in sequence of gum of upper arch, gum of lower arch, palate, top surface of the tongue, beneath the tongue and lips.
Diet and Healthy Teeth

10. What kind of food can make teeth healthy?
No food can change the structure of teeth but certain dietary habits can contribute to keep teeth healthy. Reducing the frequency of food and drink intake can prevent tooth decay. As soon as we eat, the neutral oral environment will become acidic which will lead to loss of minerals from tooth surfaces. Frequent snacking will result in persistent acidic environment in the mouth and insufficient time for saliva to neutralize the acid. The minerals at the tooth surface will continuously be lost and eventually cause dental caries. To avoid acid erosion of teeth, frequency of taking acidic food or beverages should be reduced. To avoid tooth fracture, one should avoid biting on hard food such as nuts, hard candies, ice cubes, bones, shells etc.

11. How soon should teeth be brushed after a meal?
Every time after intake of food or drink, the oral environment will become acidic and it will take 20-30 minutes for the acid to be neutralized. Brushing at this time will increase the loss of tooth substance. It is advised to brush, if needed, 30 minutes after intake of food or drinks. Thorough brushing of teeth twice every day is sufficient in maintaining healthy teeth.

Common Oral Disease and Treatment

12. What is sensitive teeth?
Sensitive teeth are mainly caused by exposed dentine. If enamel of tooth crown, or gum and cementum on root surface has been worn or lost, then the protective layer is lost and dentine will be exposed. The dentine has many fine dentinal tubules connecting to the pulp. The nerve endings in these fine tubules will be stimulated by eating or drinking hot, cold, sour or sweet food and beverages, or when it is contacted by a toothbrush or dental floss, resulting in the feeling of sharp pain.
Causes of exposed dentine:
- use of toothbrush with bristles that are too hard, or brushing with excessive force
- frequent consumption of highly acidic food or beverages
- habitual grinding of teeth (bruxism)
- gum disease or aging leading to gum recession
- the cementum covering the root is removed after receiving treatment of root planning

13. What is the function of desensitizing toothpaste? Do I need to use it?
Desensitizing toothpaste provide relief from dentine hypersensitivity in 2 ways. They interrupt the neurone response to pain stimuli or they occlude the dentinal tubules of
dentine. There are many different types of desensitizing toothpastes marketed under different brand names, with different active ingredients such as Potassium Nitrate or Arginine. You are advised to consult the dentist and undergo a thorough check-up to explore the cause of tooth sensitivity before using desensitizing toothpaste. You should consult the dentist if the symptoms of tooth sensitivity persist after using desensitizing toothpaste.

14. What are the treatments for tooth decay?
The dentist may apply topical fluoride products with high fluoride concentration such that early tooth decay lesions can be repaired.
A filling can be placed if the tooth decay lesion is relatively small and the structure of the tooth remains strong.
When tooth decay lesion is wide-spread, it may render the remaining tooth structure weak.
A crown may have to be made for protection.
When tooth decay spreads into pulp, the pulp tissues are infected by the bacteria and may become necrotic. It causes severe pain and may lead to inflammation or formation of abscess. Endodontic treatment (pulp treatment) is needed at this stage. If pulp treatment is not applicable, extraction will be necessary.

15. What is teeth grinding (bruxism)? What are the treatments for teeth grinding?
Teeth grinding is generally caused by psychological factors such as emotional stress or nervousness. Long term teeth grinding will damage the enamel and expose dentine causing sensitive teeth.
To reduce teeth grinding, one should maintain a positive attitude, have sufficient sleep and appropriate exercises to relieve stresses from daily life. To stop teeth grinding, the cause must be identified. If teeth grinding is severe, you should go to a dentist as soon as possible. The dentist will give appropriate treatment such as fabricating a “Mouth Guard” to keep the teeth from further attrition.

16. What methods are there to replace missing teeth? Which method is more long lasting?
Dental implant is a biocompatible (titanium) structure embedded in the jawbone which is used to support false teeth such as denture, bridge or crown.
Bridge is a fixed prosthesis that is used to replace one or more missing teeth. Neighboring teeth on both sides of the tooth space is grinded into appropriate shape according to the design of the bridge. The crowns on both ends of the bridge acts as anchors on the neighboring teeth and hold the bridge in place.
Denture is a removable set of false teeth.
Annex 2  Frequently Asked Questions and Answers in Chinese (常見問題及答案)

政府牙科服務

1. 政府有沒有向市民提供牙科服務？

現時政府提供給市民的牙科服務只限於緊急診療的需要，這是一項為符合資格人士所提供的免費服務，目的是為市民在緊急情況下消除由牙患引致的疼痛。服務包括止痛和脫牙。不過，在接受這些服務後，市民須按情況自行往見私家牙科醫生繼續接受治療。

2. 哪裡可找到牙科急症服務？

以下電話熱線及網址列載提供緊急診療服務的政府牙科診所電話、地址及服務時間:

口腔健康教育組 24 小時熱線: 2713 6344

口腔護理

3. 如何選擇牙刷？

選擇牙刷的其中一個要點是刷頭必須能在你的口腔內靈活轉動，以刷到每一個牙面，而刷毛必須柔軟，以免弄傷牙齦。刷頭大小應根據口腔大小而選擇，一般來說，適合成人使用的刷頭是約為港幣一元直徑般大。刷毛的排列及刷柄的設計可隨個人喜好及習慣選擇。

4. 牙刷使用多久需要更換？

一般來說，牙刷應在使用三個月左右更換。但如果牙刷毛已變形開叉，或者在上呼吸道感染之後，都應該提早更換牙刷。

5. 電動牙刷是否比手動牙刷好？

如能正確地使用，普通牙刷和電動牙刷都能有效清潔牙齒。有研究顯示，旋轉振動式電動牙刷刷牙比手動牙刷更能減少牙菌膜及牙齦炎。其實，要把牙齒徹底清潔乾淨，最重要是採用正確有效的方法刷牙。至於有特殊需要的人士，如手部活動有困難或殘障人士，使用電動牙刷可能有助加強清潔效果。如果你選擇用電動牙刷，宜先諮詢牙科醫生，瞭解使用電動牙刷的技巧。
6. 漱口水應在什麼時候使用？如何選擇漱口水？含酒精和不含酒精的漱口水有何分別？

漱口水的作用包括預防蛀牙、減少牙菌膜、減低牙齦發炎、減低牙齒敏感的程度等，視乎其所含成分而定。選購漱口水前，應先徵詢牙科醫生的意見，看看是否有此需要，並遵照牙科醫生的指示使用。由於曾有醫學報告指含酒精的漱口水或會刺激口腔黏膜，應該選不含酒精的漱口水。

7. 假牙黏著劑是否適合長者使用？

假牙黏著劑的功用是固定假牙托在口腔的位置，使假牙托在日常活動中不易鬆脫。一般來說，除非牙科醫生特別建議使用，一副合戴又質素良好的假牙托是不需要使用假牙黏著劑的。如果在未確定假牙托鬆動的原因前自行使用假牙黏著劑，會有機會加劇牙槽骨萎縮，增加重新鑲配假牙托的困難。無論是任何牌子，切記選擇不含鋅(Zinc)成分的假牙黏著劑，長期過量吸收鋅會影響身體健康。

8. 如何清潔活動假牙(牙托)？

牙菌膜會黏附在假牙托表面，要保持口腔及假牙托衛生，必須每晚臨睡前把假牙托除下並加以清洗。首先在洗手盆內注入適量的水，以免假牙托因掉在洗手盆而碎裂；然後用牙刷揩些洗潔精徹底清潔假牙托的每個部分，最後用清水把假牙托清洗乾淨，並把清潔的假牙托放在清水中浸過夜。避免使用牙膏清潔假牙托，因牙膏中的微粒粗瑣，會磨損牙托表面，讓牙菌膜更容易積聚在假牙托上。

9. 沒有牙齒的長者如何清潔口腔？

沒有牙齒的長者每天晚上都需要抹口一次。可以用紗布或乾淨的毛巾蘸上開水，擠出多餘水分，然後放入口中，先抹面頰，然後是上頜牙齦，下頜牙齦，上顎、舌面、舌底，最後到咀唇。

飲食與牙齒健康

10. 什麼食物可保持牙齒健康？

任何食物都不能改變牙齒的結構，但一些飲食習慣的確有助保持牙齒健康。減少吃喝的次數，可以防止蛀牙，因為每次進食後，原本偏中性的口腔環境便會轉為酸性，令牙齒表面的礦物質流失。假若我們頻密進食，口腔環境便會持續處於酸性狀態，口水沒有足夠時間進行修補工作，牙齒表面的礦物質便會不斷流失，最後形成蛀牙。避
免頻密吃喝高酸性的食物和飲料，可預防牙齒被酸蝕。避免咀嚼過硬的食物，如堅果、硬糖、冰粒、骨頭、硬殼類等，可避免牙齒破裂。

11. 飯後需等多久才可刷牙？

飯後 (及進食/飲用含糖分的食物/飲料後) 口腔環境會轉為酸性並維持二十至三十分鐘，這時候刷牙可能會加劇牙齒的磨損。如需刷牙，應在進食/飲用含糖分的食物/飲料三十分鐘後進行。事實上，每日兩次徹底的牙齒清潔已經足夠保持牙齒健康，毋須每餐飯後刷牙。

常見牙齒疾病及治療

12. 什麼是牙齒敏感？

牙齒敏感主要是由於象牙質外露所引致。如果牙冠的琺瑯質或牙根表面的牙齦和牙骨質耗損或失去，牙齒就會失去保護層，內層的象牙質就會外露。象牙質內滿佈微細管道，當牙齒直接受到外來刺激時，比如吃喝冷熱酸甜食物和飲品，或刷牙和用牙線時碰觸到牙齒，都會觸動管道的神經末梢，令患者感到一陣刺痛。

導致象牙質外露的原因:
- 使用刷毛過硬的牙刷或過度用力刷牙，導致琺瑯質被刷蝕。
- 經常吃喝高酸性的食物和飲品，導致琺瑯質受酸蝕。
- 有磨牙的習慣，以致琺瑯質磨蝕。
- 患牙周病或因年齡增長致牙齦萎縮，從而使牙根外露。
- 接受牙根刮治治療後，牙根少了牙骨質覆蓋。

13. 防敏感牙膏有甚麼功效？我需要使用嗎？

有防敏感功效的牙膏主要透過干擾致敏神經的傳導能力及封閉外露象牙質內的微細管道兩種方法減低牙齒敏感的程度。防敏感牙膏的種類繁多，不同品牌所含的主要成分亦會有所不同，例如硝酸鉀 (Potassium Nitrate) 或精胺酸 (Arginine) 等，由於不同主要成分的功效並不一樣，使用前應先請教牙科醫生，並作詳細檢查，以確定牙齒敏感的原因。如使用防敏感牙膏後牙齒敏感的徵狀持續，應向牙科醫生求助。
14. 蛀牙有什麼治療方法？

牙科醫生可以在患有初期蛀牙的部位塗上「高濃度的氟化物」，使初期蛀壞的部分得以修復。
如果蛀壞的範圍不大，牙齒仍很堅固，可進行補牙。
如果蛀壞的範圍大，牙齒可能變得脆弱，這時可進行「鑲製人造牙冠」以保護牙齒。
如果蛀壞的範圍很大，牙髓有機會受細菌感染而壞死，產生劇痛，並可能產生膿腫，這時就需要進行牙髓治療（俗稱杜牙根）。如果牙科醫生認為患者不適合進行牙髓治療，就需要拔牙。

15. 什麼是磨牙？如何處理磨牙？

磨牙多由於心理因素，如心理壓力或精神緊張等所致。如果有磨牙的習慣，琺瑯質就會被磨蝕，導致象牙質外露，造成牙齒敏感。保持心境開朗，充足睡眠及適量運動可紓緩緊張的生活壓力，從而減少磨牙的情況。要根治磨牙就要找出原因。如果磨牙的情況嚴重，應盡快往見牙科醫生，以接受治療，例如配製「護牙膠托」，以免牙齒繼續磨損。

16. 鑲牙有多少種不同的方法？那種方法耐用些？

植牙是把身體能接受的物料如鈦金屬，植入牙槽骨內，作為支撐假牙的部分，然後在植體上鑲嵌人造牙冠、牙橋或放置假牙托，以取代口腔內失去的牙齒。牙橋是鑲配在口腔內的固定假牙，鑲嵌人造牙橋時，兩端用作固定牙橋的牙齒會被磨小成為適合的形狀，然後利用牙橋兩端的牙冠分別套在左右相鄰的牙齒上，以固定牙橋。假牙托是可以隨意戴上或除下的假牙。
### Annex 3  Dental Services for Older Persons

<table>
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<td><strong>Functionally dependent</strong></td>
<td>The Outreach Dental Care Programme for the Elderly (ODCP) is a regular programme administered by the Department of Health. Eleven non-governmental organisations (NGOs) were engaged to provide outreach dental services to the target service users. NGOs will contact all residential care homes and day care centres for arrangement of service. These service users should approach their own residential care home or day care centre to receive dental service.</td>
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<td><strong>Receiving home and community care services</strong></td>
<td>This group of older persons may apply for a dental subsidy under Community Care Fund (CCF) to receive dentures and other dental treatment at designated private or NGO dental clinics. These service users should approach their provider of home and community care services to apply for the subsidy.</td>
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<tr>
<td><strong>Financially in need</strong></td>
<td>Comprehensive Social Security Assistance (CSSA) recipients aged 60 or above may apply for a dental grant to receive dental services at private or NGO dental clinics. These CSSA recipients should approach the social service field units for application.</td>
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<tr>
<td><strong>Old age living allowance (OALA) recipients</strong></td>
<td>It has been announced in the 2015 Policy Address that older persons aged 80 and above may apply for the dental subsidy under CCF in 2015. The Expanded Programme has been launched on 1 September 2015. The eligibility and application procedures of the Expanded Programme as well as a list of district service units are available at the CCF website (<a href="http://www.communitycarefund.hk">www.communitycarefund.hk</a>) and the Hong Kong Dental Association website (<a href="http://www.hkda.org">www.hkda.org</a>).</td>
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<tr>
<td><strong>General public</strong></td>
<td>Free emergency dental services are provided to the general public at some government dental clinics. The list of clinics with such general public session is available at: <a href="http://www.dh.gov.hk/english/tele/tele_chc/tele_chc_dcgps.html">http://www.dh.gov.hk/english/tele/tele_chc/tele_chc_dcgps.html</a> <a href="http://www.dh.gov.hk/tc_chi/tele/tele_chc/tele_chc_dcgps.html">http://www.dh.gov.hk/tc_chi/tele/tele_chc/tele_chc_dcgps.html</a> Older persons not in the above categories may seek dental service from any private or NGO dental clinics.</td>
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