Hong Kong Reference Framework for Diabetes Care in Adults in Primary Care Settings

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Hong Kong Reference Framework for Hypertension Care in Adults in Primary Care Settings

Module on

Smoking Cessation in Primary Care Settings

2017

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PRIMARY CARE

Content

1. Overview of smoking in Hong Kong

Although the daily cigarette smoking population has been decreasing steadily from 23.3% in 1982 to 10.5% in 2015[1], smoking, like many other countries, remains the biggest preventable cause of death in Hong Kong. Particularly, there is no significant drop in smoking prevalence in certain groups of population. For instance, the prevalence of smoking among female remains static at 3 to 4% in the past decade [1]. Meanwhile, there seems to be an increase in smoking prevalence in certain age groups. The daily smoking prevalence among people aged 40-49 increased from 12.7% in 2010, through 13.4% in 2012, to 14.0% in 2015. Segregated by gender, the daily cigarette smoking prevalence for male population aged 40-49 rose from 24.3% in 2010, through 24.6% in 2012, to 25.4% in 2015. The daily cigarette smoking prevalence for female population aged 40-49 also increased from 2.8% in 2010, through 4.2% in 2012, to 4.7% in 2015. Diseases caused by smoking and second-hand smoke impose heavy economic and medical burden on our society. However, many countries have enhanced the efforts in promoting smoking cessation in addition to strengthening their tobacco control measures and legislations.

According to the Thematic Household Survey conducted in 2015, some 237,000 smokers (nearly 40% of the smoking population) in Hong Kong wanted to quit smoking. Apart from dealing with the problem of nicotine dependence, it is also essential to attend to behaviour modification and adjustment of lifestyle during the course of smoking cessation.

2. Role of primary care in smoking cessation

According to the World Health Organization's training package for primary care providers, primary care providers have several roles to play in tobacco control, including preventing non-tobacco users from starting to use, assisting tobacco users in quitting and protecting non-tobacco users from exposure to tobacco smoke[2]. A Cochrane Review shows that a brief advice on smoking cessation by a physician during the consultation increases the chance of successful quitting[3]. Evidence also supports the significant role of healthcare professionals in smoking cessation in Hong Kong[4]. Moreover, a professional and comprehensive smoking cessation service would not only broaden the scope of clinic service, but also help to build up doctor-patient relationship.

Box 1. Benefits of smoking cessation

Primary care doctors may start off to advise patients to quit smoking by explaining the following benefits of smoking cessation.

Quitting smoking can:

- **Reduce the risk** of suffering from fatal diseases caused by smoking
- **Save money** from buying cigarettes
- **Protect your family** against hazards of secondhand smoke
- **Smell fresh** and build up a healthy image

Physical recovery starts shortly after quitting smoking:

- In 20 minutes, blood pressure and heart rate drop to normal
- In 12 hours, the carbon monoxide level in blood drops to normal
- In 2 to 12 weeks, circulation and lung function improve
- In 1 to 9 months, coughing and shortness of breath decrease
- In 1 year, chance of having coronary heart disease is cut in half
- In 5 to 15 years, risk of stroke is reduced to that of a non-smoker
- In 10 years, risk of dying from lung cancer is about half that of a smoker
- In 15 years, risk of coronary heart disease is that of a non-smoker

3. Aims of this Module

The Module on Smoking Cessation in Primary Care Settings provides a practical approach for primary care doctors who want to help their patients to quit smoking. It also aims to provide smokers (through their primary care doctors) with tips and health information to quit smoking and prevent relapse. Given that smoking is an important cardiovascular risk factor, this Module is put up as a special module under the Hong Kong Reference Framework for Diabetes Care in Adults in Primary Care Settings, as well as the Hong Kong Reference Framework for Hypertension Care in Adults in Primary Care Settings. With concerted effort of healthcare professionals, community organisations and the public, it is hoped that a single-digit smoking prevalence could be reached in the near future.

4. Counselling

The crux of the smoking cessation programme lies in the provision of appropriate counselling to the quitters, while pharmacotherapy may also play a role depending on other factors, such as the level of nicotine dependence, which could be assessed by using the Fagerstrom Test of Nicotine Dependence (Annex 1). Primary care doctors should also acknowledge smoker's personal feelings with "empathy".

4.1 "5A's" approach

The "5A's"[2,5] approach may serve as a model for primary care doctors to help prospective quitters to devise or implement their cessation plan. 5A's summarise the activities that a primary care doctor can do to help a tobacco user within 3-5 minutes in a primary care setting. It does not mean that all of these five activities / steps should be done at every visit. In fact, primary care doctor can select some of the activities / steps based on the tobacco user's different stage of quitting. The key is to take a few minutes to support tobacco users to quit by using the 5A's model as a guide.

Box 2. What are the "5A's"?

(1) Ask

- Ask ALL clients at each consultation about the smoking status, daily consumption and years of smoking, and record the information accordingly.

(2) Advise

- Convince the client to quit smoking with a clear, personalized and strong manner.

(3) Assess

- Assess each client's desire or readiness to quit.

(4) Assist

- Work out with the client on the smoking cessation plan.
- Provide appropriate techniques on problem solving.
- Give advice for successful quitting.
- Recommend the use of pharmacotherapy for smoking cessation.
- Assist by making referral.
- Provide relevant smoking cessation information such as pamphlets or quitline card.

(5) Arrange

- Work out with the client on follow-up schedule and approaches such as interviews and telephone calls.

4.2 "5R's" approach

Tobacco users may be unwilling to quit due to misinformation, concern about the effects of quitting, or demoralisation because of previous unsuccessful quit attempts. **5R's intervention will be delivered to those who are not ready to quit tobacco use after the "Assess" stage of the 5A's.**

The 5R's model is patient-centred counselling approach[2] that is based on principles of motivational interviewing.

Box 3. What are the "5R's"?

(1) Relevance

- Get the client to understand why his/her quitting is relevant to him/her personally and to the people around.

(2) Risk

- Guide the client to identify potential negative consequences of tobacco use that are relevant to him/her.

(3) Rewards

- Get the client to understand the personally relevant benefits brought about by smoking cessation.

(4) Roadblocks

- Guide the client to assess various barriers to quitting, e.g. experience of withdrawal symptoms or fear of repeated failure, and provide counselling accordingly.

(5) Repetition

- Make good use of every contact opportunity by repeating motivational intervention.

4.3 Motivational Interviewing

Motivational Interviewing was developed by William Miller and Stephen Rollnick in the 1980s. Motivational Interviewing is defined as a collaborative conversation style for strengthening a person's own motivational and commitment to change[6]. It is a patient-centred style of counselling designed to help people change through exploring and resolving ambivalence about change.

Motivational Interviewing is being adopted in helping people to quit smoking. A large and increasing number of controlled research studies have shown that Motivational Interviewing is significantly more effective than no treatment for substance use including tobacco use [7,8].

(Level of Evidence : 1+
Grade of Evidence : A)

5. Pharmacotherapy

Smokers often have insufficient understanding of the possible **withdrawal symptoms** in the process of quitting. Once a smoker refrains from smoking, the nicotine level inside his/her body will start to drop gradually. The quitter may experience short-term discomfort such as dizziness, headache, fatigue, poor concentration, dry mouth and throat, cough and hunger. All these symptoms increase the chance of failure in quit attempts, but most of these symptoms would subside in 2 or 3 weeks' time.

Studies showed that pharmacotherapies can alleviate withdrawal symptoms and increase the success rate effectively. Besides, the medication can also become an incentive for the quitter to attend follow-up consultation on schedule. Common first-line supplementary medication for smoking cessation nowadays can be broadly divided into two categories: nicotine replacement therapy (NRT) and non-nicotine medications (e.g. varenicline). According to the 2013 Cochrane Review, both NRT and non-nicotine medications have been demonstrated to improve the chance of successful quitting[9]. This review also indicated that: varenicline was more effective than nicotine patch (odds ratios 1.51; 95% credible interval 1.22 to 1.87), varenicline was more effective than nicotine gum (odds ratio 1.72; 95% credible interval 1.38 to 2.13) and varenicline was more effective than "other" NRT (inhaler, spray, tablets, lozenges; odds ratios 1.42; 95% credible interval 1.12 to 1.79). However, combination use of NRT was shown to be as effective as varenicline, and more effective than single types of NRT.

As pharmacotherapy regimen and preparation information may be changed from time to time, the information in this section is provided for primary care doctors' reference. In case of any doubt when providing specific pharmacotherapy to smokers, doctors should also refer to other references such as the product insert of the medicine concerned.

5.1 Nicotine Replacement Therapy

Nicotine replacement therapy (NRT) is an effective and safe aid to smoking cessation. It is available in different types and formulae at dispensaries or pharmacies with registered pharmacists. Healthcare professionals or pharmacist may provide appropriate prescription according to the nicotine dependency level and cigarette consumption.

It is believed that NRT is generally safe for use in patients with stable cardiovascular disease[10]. In an American study in 2012, data of 663 smokers with acute coronary syndrome (ACS) were extracted from a database. The patients were subdivided into 2 groups depending on whether they were given NRT on discharge. At 1 year follow up, cardiovascular outcomes were measured. There were no significant differences in the risks of death (odds ratio 0.80, 95% confidence interval 0.33 to 1.91), myocardial infarction (odds ratio 0.90, 95% confidence interval 0.40 to 2.06), repeat revascularisation (odds ratio 0.77, 95% confidence interval 0.44 to 1.36) or hospitalisation (odds ratio 1.01, 95% confidence interval 0.66 to 1.53) at 1 year follow up. Overall, there was no significant increased risk of adverse cardiovascular events associated with NRT in the first year after ACS[11].

For patients with severe angina and serious cardiac arrhythmias or individuals suffering from recent acute myocardial event, NRT should be used with caution. Although medicinal nicotine is unlikely to be more harmful than nicotine acquired from persistent smoking, it is suggested that patients may try to quit without NRT first due to its possible adverse effects of chest pain and palpitations[10,12]. If failed, the use of low dose and short acting NRT preparations may be appropriate to relief cravings in some cases[13]. However, further medical assessments are advised and the plan of treatment should be individualised.

Pregnant or breastfeeding women should be encouraged to quit with counselling first.

5.1.1 Nicotine Gum

The optimal treatment duration is 12 weeks, and daily dosage should not exceed 24 pieces.

Table 1. Reference Dosage and Regimen of Nicotine Gum[2]

Daily Cigarettes Consumption	Regimen
≤ 20 cigarettes	• 1-2 pieces (2mg) every 1-2 hours (10-12 pieces/day). • Gradually taper the dosage to nil.
> 20 cigarettes	• 1-2 pieces (4 mg) every 1-2 hours (10-12 pieces/day). • Gradually taper the dosage to nil.

Box 4. Advice to patients for use of Nicotine Gum

Instructions for Use:

1. Chew the gum slowly
2. The taste gradually becomes stronger with "peppery" taste
3. Park the gum in the buccal area
4. The taste gradually becomes lighter
5. When the taste is light, chew the gum slowly again and repeat the cycle (ie repeating 1-4 above)

Points to Note:

- Incorrect chewing may affect the absorption of the nicotine
- Nicotine gum may cause side effects such as sore mouth and throat, hiccups, jaw ache and stomachache
- Acidic beverages such as soft drink, coffee and fruit juice will affect the absorption of nicotine. Apart from water, do not eat or drink when chewing nicotine gum and 15 minutes before use

5.1.2 Nicotine Patch

Both 16-hour and 24-hour patches are available to suit different people's needs. For 24-hour patches, preparations often come in 7 mg, 14 mg and 21 mg patches; for 16-hour patches, preparations often come in 5 mg, 10 mg and 15 mg patches[2]. The optimal treatment duration of nicotine patch is 8-12 weeks[2].

Table 2. Reference Dosage and Regimen of Nicotine Patch[2]

Daily Cigarettes Consumption	Starting Dosage (24-hr patch)	Regimen
≥ 40 cigarettes	42 mg	• Adjust based on withdrawal symptoms, urges and comfort. After 4 weeks of abstinence, taper every 2 weeks in 7-14 mg steps as tolerated.
21-39 cigarettes	28-35 mg	
10-20 cigarettes	14-21 mg	
< 10 cigarettes	14 mg	

Box 5. Advice to patients for use of Nicotine Patch

Instructions for Use:

- Apply the patch to clean and dry skin of the chest, back, upper arms, hips, etc.
- Do not apply any lotion, ointment or talcum powder over the patch site
- Change the patch site daily to minimize the chance of skin irritation
- After applying a nicotine patch, wash hands with water but without soap as it will cause excess nicotine to be absorbed into the skin of the palms
- For 16-hour patch, remove the patch before sleep

Points to Note:

- Nicotine patch may cause local skin reactions and insomnia
- Slow onset

5.1.3 Nicotine Lozenge

There are different dosages of nicotine lozenge available. The optimal treatment duration is 12 weeks. No more than 20 lozenges should be used per day[2].

Table 3. Reference Dosage and Regimen of Nicotine Lozenge[2]

Daily Cigarettes Consumption	Dosage	Regimen
≤ 20 cigarettes	2 mg	• 1-2 lozenges every 1-2 hours (minimum of 9/day). • Gradually taper the dosage to nil.
> 20 cigarettes	4 mg	

Box 6. Advice to patients for use of Nicotine Lozenge

Instructions for Use:

Place the lozenge in the mouth and allow it to dissolve; periodically move the lozenge in the mouth, and to avoid chewing or swallowing it.

Points to Note:

- Incorrect use of nicotine lozenge may not only affect the absorption of nicotine but also cause side-effects such as irritation to mouth, hiccups, heartburn and stomachache
- Acidic beverages such as soft drink, coffee and fruit juice will affect the absorption of nicotine. Apart from water, do not eat or drink when using nicotine lozenge or 15 minutes before use

5.2 Non-nicotine Medication - Varenicline

The medication must be prescribed by doctors and taken under medical supervision throughout the regimen.

Varenicline is a non-nicotine smoking cessation medication. It was approved by the U.S. Food and Drug Administration in 2006[2,5,14].

Action: Varenicline is a nicotine receptor partial agonist. It works by relieving the craving and withdrawal symptoms and blocking the reinforcing effects of nicotine at the same time.

Regimen: Take the medication with food. Quitters should start to take Varenicline one week before the quit day (0.5mg once daily for 3 days, then 0.5mg twice daily for 4 days). The standard maintenance dose is 1 mg twice daily. A treatment course usually takes 12 weeks to complete. Maintenance treatment may be used up to 6 months. Varenicline may be stopped abruptly and there is no need to taper.

Side effects: Common side effects include nausea, sleep disturbance, constipation, flatulence, vomiting and headache. There were overseas reports that patients using Varenicline had experienced psychiatric

symptoms including depression and suicidal ideation. Primary care doctors should look out for patients' behavioural and mood changes after prescription.

Box 7. Important points to note for doctors regarding the use of Varenicline

- Varenicline is **not recommended** for individuals who:
  - have end stage renal diseases (dosage adjustment is necessary)
  - are under 18 years old
  - are pregnant or breastfeeding
- **Monitor** the changes in mood, behavioural, psychiatric symptoms, and suicidal thoughts
- **Advise** patients to stop varenicline and seek medical advice immediately if they experience agitation, depressed mood, and any changes in behaviour that are not typical of nicotine withdrawal, or if they have experienced suicidal thoughts or behaviour
- In March 2015, the U.S. Food and Drug Administration announced that patients should **reduce the amount of alcohol** they drink, until they know how Varenicline affects their ability to tolerate alcohol. In addition, patients who have a **seizure** while taking Varenicline should stop the medicine and seek medical attention immediately

6. Outcome Measure

6.1 Quit Rate at 26 Weeks and 52 Weeks

In general, the standard period for measuring success rate in clinical trials and smoking cessation studies is 26 weeks (i.e. 6 months) of follow-up after the quit date. For more stringent assessment, quit rate at 52 weeks (i.e. 12 months) is employed.

The Clinical Practice Guideline issued by the U.S. Department of Health and Human Services suggests to use point prevalence outcome measure (7-day point prevalence is most commonly use)[5]. Point prevalence abstinence is a method of measuring if a smoker has stopped smoking at a given point in time. It is self-reported by the smoker. For 7-day point prevalence, it measures the smoking status of past 7 days before the time of follow-up.

Intention-to-treat data (i.e. the denominator being the total number of subjects who have received cessation services and the numerator being the total number of abstinent subjects contacted at follow-up) is recommended when calculating the quit rate, as it provides the most conservative estimate for all subjects who have received the services.

6.2 Biochemical Validation

The use of biomarkers, such as cotinine, carbon monoxide (CO), can provide more accurate estimates of smoking status. Primary care doctors may consider to use such tests subject to their availability.

6.2.1 Cotinine Level

Cotinine is a metabolite of nicotine which can be measured through different biological specimens such as saliva and urine[15]. It is considered as the best biomarker for exposure of smokers and non-smokers to second-hand smoke because of its high specificity and sensitivity to tobacco use. In addition, cotinine has the relatively long half-life (about 16 hours), which allows the measure of tobacco exposure over the previous two to three days.

6.2.2 Test for Measuring Expired Carbon Monoxide (CO)

Smoking and inhaling second-hand smoke will bring in harmful substances

contained in tobacco. Among them, CO will combine with haemoglobin to reduce its oxygen carrying capacity, thus weakening physical ability and accelerating aging.

The “smokerlyzer” measures the concentration of exhaled CO of smokers and gives them a better understanding of their physical conditions, which in turn, motivate them to quit. In general, the cutoff level of CO used to distinguish between smokers and non-smokers is ranged from 8 parts per million (ppm) to 10 ppm[16]. Healthcare professionals should refer to the specification of smokerlyzer in order to determine the smoking status of smokers.

7. Patient Empowerment

Family doctors have all along been playing a crucial role in the primary care system. Apart from managing illness, family doctors also aim to promote health, modify health risk factors and prevent diseases for the patients. As patients perceive their family doctors as a key, first contact and credible source of clinical information and preventive advice, family doctors are in an advantageous position to deliver health education messages as well as empower their patients. Below are some health advice on smoking cessation:

7.1 Benefits of quitting

Quitting smoking can:

- Reduce the risk of suffering from fatal diseases caused by smoking
- Save money from buying cigarettes
- Protect your family against hazards of secondhand smoke
- Smell fresh and build up a healthy image

Physical recovery starts shortly after quit smoking:

- In 20 minutes, blood pressure and heart rate drop to normal
- In 12 hours, the carbon monoxide level in blood drops to normal
- In 2 to 12 weeks, circulation and lung function improve
- In 1 to 9 months, coughing and shortness of breath decrease
- In 1 year, chance of having coronary heart disease is cut in half
- In 5 to 15 years, risk of stroke is reduced to that of a non-smoker
- In 10 years, risk of dying from lung cancer is about half that of a smoker
- In 15 years, risk of coronary heart disease is that of a non-smoker

7.2 When to quit

Quitting at any age has benefits, with the largest reduction in risk in those who quit the earliest. According to a study conducted in the United Kingdom that lasted for 50 years, it was found that a smoker who quit at the age of 30 may reclaim 10 years of life that might have lost due to smoking[17].

7.3 Dealing with cravings

When smokers start to quit smoking, they will still have urges for a cigarette.

Remember, the craving for cigarette will last for just a few minutes and they will be able to get over it. Family doctors may provide the following tips when their patients have an urge to smoke.

Box 8. Tips for quitters when there is an urge to smoke

- **Delay**
  - Whenever you want a cigarette, wait! Slow down and recall your reasons of quitting. If you are already holding a cigarette in your hand, try not to get it lighted. In a few minutes, you will get over your urge.

- **Distraction**
  - Wash your face, listen to your favorite music or talk to others in order to let yourself "cool down". You may also take a short break or do some stretching exercises for diverting your attention on the urge.

- **Deep Breathing and Drink Water**
  - Do not look down upon simple methods such as deep breathing and drinking water. These methods will help you defeat your urge to smoke.

7.4 Avoiding triggers

Quitters can relieve their stress and regain their concentration by doing breathing exercise slowly. Apart from dealing with cravings, they should also pay attention to avoid trigger. Family doctors may provide the following advice.

Box 9. Tips for quitters to avoid triggers

- Avoid environment that is filled with second-hand smoke and refuse any invitation to smoke.
- Alcohol may lower your vigilance to smoking, so avoid drinking alcohol during the early stage of quitting.
- Avoid caffeine-containing drinks such as coffee, strong tea, cola, etc. These drinks may provoke carvings.
- If you used to smoke when you feel bored, why not do something else such as planting, reading, keeping pet, playing chess, jogging, doing exercise and making use of community resources, such as participating in courses at community centres.

7.5 Preventing relapse

A persistent healthy lifestyle is conducive and important to preventing relapse to smoking again. A healthy lifestyle consists of a balanced diet, regular exercises and a healthy mind. The followings are advice on healthy lifestyle which family doctors may provide for quitters.

Box 10. Tips on healthy lifestyle for quitters

- **Balanced Diet**
  - Quitters may experience weight gain because of increased appetite, a regain of the sense of taste and a reduction in metabolism after quitting smoking.
  - Therefore it is necessary for quitters to keep a balanced diet to prevent a sharp rise in body weight. Eating the right amount of food and a daily intake of at least 2 servings of fruits and 3 servings of vegetables is recommended as part of a balanced diet. Drink more water. You may take some snacks of low calorie if necessary.

- **Adequate Exercise**
  - Exercise can improve your heart and lung functions as well as enhancing the chance of successful quitting and keeping your body weight under control.
  - You may formulate your exercise plan according to your age and interest, such as jogging, swimming, hiking, cycling, tai chi, etc.

At least 30 minutes of physical activity of moderate intensity on most days of the week is already sufficient to provide health benefits.

- **Mental Health**
  - Problems encountered in daily life, from problems minor as traffic jam to problems major as family conflicts, can all induce stress. An appropriate level of stress can heighten awareness, improve learning ability and work performance. However, if stress is too severe or lasts too long, it can interfere with our physical functions. If stress is not handled properly, it may cause a quitter to relapse and smoke again.
  - Have an optimistic and positive attitude, don't dwell on the negative. Know your own strengths and weaknesses, don't force yourself to take on tasks that are beyond your capabilities. Taking part in healthy activities not only helps to enlarge your social circle, it also helps you relax. If a problem arises, discuss it with your loved one or close friends. Remember, sometimes we may encounter emotional disturbances, but smoking will not help to solve the problem.

8. Smoking Cessation Service in Hong Kong

Currently, there are a number of smoking cessation services operated by the Department of Health, Hospital Authority, and non-governmental organisations such as Tung Wah Group of Hospitals and Pok Oi Hospital Smoking Cessation Service. Primary care doctors who are not providing smoking cessation services may consider to deliver brief tobacco interventions and make use of community resources available as appropriate. Patients can be advised to call the Integrated Smoking Cessation Hotline of the Department of Health 1833 183 for further information on smoking cessation services in the community.

Annex 1

Fagerstrom Test of Nicotine Dependence

Question	Option	Score
(a) How soon after you wake up do you smoke your first cigarette?	5 minutes ☐ 6-30 minutes ☐ 31-60 minutes ☐ 60 minutes or more ☐	3 2 1 0
(b) Do you find it difficult to refrain from smoking in places where it is forbidden (e.g. shopping mall, MTR train or lift)?	Yes ☐ No ☐	1 0
(c) Which cigarette would you hate most to give up?	The first one in the morning ☐ Any other ☐	1 0
(d) Do you smoke more frequently during the first hours after waking up than the rest of the day?	Yes ☐ No ☐	1 0
(e) Do you smoke if you are so ill that you are in bed most of the day?	Yes ☐ No ☐	1 0
(f) How many cigarettes do you smoke every day?	31 or more ☐ 21-30 ☐ 11-20 ☐ 10 or less ☐	3 2 1 0
	Total Score	

Fagerstrom Score	Nicotine Dependence	Medication
0-3	Low	Drugs may not be required
4-5	Medium	May use drugs of lower dosage
6-10	High	May use drugs of higher dosage

Sample Flowchart for Smoking Cessation Service (for reference)

The following flowchart is an example of how smoking cessation consultations might be scheduled at a primary care clinic, highlighting the key objectives for each consultation.

Assessment Day

- Doctors assess the client's will, determination and confidence to quit smoking.
- For clients in the preparation/action stage, assess their pattern of smoking, previous experience on quitting smoking and the reasons to quit. Assist the clients to choose appropriate quitting methods such as counseling or pharmacotherapy and set a quit day (best to start quitting within 2 weeks).
- For clients in the contemplation / pre-contemplation stage, apply motivational interviewing and the "5R's" approach to motivate them and arrange a follow-up date.

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Healthcare workers to arrange clients in the preparation/ action stage to join the Smoking Cessation Programme

1st Consultation

Also known as the "Quit Day" which should be set within two weeks after the Assessment Day

(note: "Quit Day" and Assessment Day can be on the same day)

- This is the starting day of the smoking cessation plan. Advise the clients to announce the plan to family members and discard all cigarettes, ashtrays and lighters.
- To prepare for the quitting days and point out possible challenges at different stages. Advise the clients on relevant counteractions like methods to relieve cravings and refusal skills towards other smokers' offers.
- Explain the possible withdrawal symptoms and relief measures.
- When indicated, recommend pharmacotherapy in addition to counseling. Help the clients make appropriate choice on the type and dosage of pharmacotherapy and provide detailed information on the treatment plan, usages and points to note for various medications.

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2nd, 3rd, 4th Consultation

1 week, 4 weeks and any time between 4 weeks to 24 weeks respectively after the "Quit Day"

- Assess the clients' progress; assist them to handle difficulties encountered accordingly.
- Assess the mode, dosage and effectiveness of pharmacotherapy; may change pharmacotherapy if indicated.
- Coach and strengthen clients' confidence and skills to overcome difficulties and barriers.
- Discuss the importance of balanced diet and healthy lifestyles. Encourage regular exercise and decent hobbies.
- Discuss relapse prevention such as avoiding alcohol and caffeinated beverages, stress management and the importance of weight control.
- Sharing of refusal skills and encourage the client to urge family members, friends or colleagues to quit smoking.

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5th Consultation

26 weeks after the "Quit Day"

- Follow up the clients' progress and recent smoking status.
- Give encouragement to successful quitters.
- Offer necessary counseling and arrangements to unsuccessful quitters, and point out that many smokers need several attempts to succeed.
- Encourage the client to call the Department of Health Smoking Cessation Hotline 1833 183 when necessary.
- Encourage successful quitters to urge family members, friends or colleagues to quit smoking as well.

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6th Follow-up

1 year after the "Quit Day"

- Follow up clients' progress and recent smoking status, preferable with family member to confirm status.
- Offer encouragement to successful quitters.

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References

1. Census and Statistics Department, Hong Kong Special Administrative Region. Thematic Household Survey Report No. 59, February 2016.
2. World Health Organisation. Strengthening health systems for treating tobacco dependence in primary care – Part III: Training for primary care providers: brief tobacco interventions. Geneva, Switzerland: World Health Organization, 2013.
3. Stead LF, Buitrago D, Preciado N, Sanchez G, Hartmann-Boyce J, Lancaster T. Physician advice for smoking cessation. *Cochrane Database of Systematic Reviews* 2013, Issue 5. Art. No.: CD000165. DOI:10.1002/14651858.CD000165.pub4.
4. Abdullah ASM, Hedley AJ, Chan SSC, et al. Establishment and evaluation of a smoking cessation clinic in Hong Kong: a model for the future service provider. *J Public Health* 2004; 26: 239-244.
5. Fiore MC, Jaen CR, Baker TB, et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service, May 2008.
6. Miller WR, Rollnick S. Motivational interviewing: helping people change, 3rd Edition. New York: Guilford Press, 2013.
7. Lundahl B, Burke BL. The effectiveness and applicability of motivational interviewing: a practice-friendly review of four meta-analyses. *J Clin Psychol* 2009; 65:1232-1245.
8. Lundahl B, Moleni T, Burke BL, et al. Motivational interviewing in medical care settings: a systematic review and meta-analysis of randomized controlled trials. *Patient Educ Couns* 2013; 93:157-168.
9. Cahill K, Stevens S, Perera R, Lancaster T. Pharmacological interventions for smoking cessation: an overview and network meta-analysis. *Cochrane Database of Systematic Reviews* 2013, Issue 5. Art. No.: CD009329.DOI: 10.1002/14651858.CD009329.pub2.
10. Hartmann-Boyce J, Aveyard P. Drugs for smoking cessation. *BMJ* 2016; 352:i571.
11. Woolf K, Zabad M, Post J, McNitt S, Williams G, Bisognano J. Effect of nicotine replacement therapy on cardiovascular outcomes after acute coronary syndromes. *Am J Cardiol* 2012; 110:968-970.
12. Molyneux A. Nicotine replacement therapy. *BMJ* 2004; 328:454.
13. Srivastava P, Currie GP, Britton J. Smoking cessation. *BMJ* 2006; 332:1324.
14. Zwar N, Richmond R, Borland R, Peters M, Litt J, Bell J, Caldwell B, Ferretter I.

Supporting smoking cessation: a guide for health professionals. Melbourne: The Royal Australian College of General Practitioners, 2011.

15. SRNT Subcommittee on Biochemical Verification. Biochemical verification of tobacco use and cessation. *Nicotine Tob Res* 2002; 4: 149-159.
16. Cropsey KL, Eldridge GD, Weaver MF, et al. Expired carbon monoxide levels in self-reported smokers and nonsmokers in prison. *Nicotine Tob Res* 2006; 8: 635-659.
17. R Doll, R Peto, J Boreham, I Sutherland. Mortality in relation to smoking: 50 years' observations on male British doctors. *BMJ* 2004;328:1519.