

Very Brief Advice on Smoking Cessation – Online Training

Module 1: Importance of Brief Smoking Cessation Advice

Handout

1. Situation of Hong Kong

- Some 650 000 people in Hong Kong still smoke every day. Although the prevalence of daily smokers in Hong Kong has continued to drop to around 10% lately, but in recent years, the downward trend has slowed down.¹
- Smoking is the leading preventable cause of mortality in our population.
 - Lung cancer caused the highest mortalities from 2009 to 2017 among all cancers;²
 - Heart and cerebrovascular diseases ranked the third and the fourth in the number of deaths from all causes in 2019, respectively.³
 - Every year over 6 100 and 600 people are killed by active smoking and secondhand smoke respectively.⁴
- In spite of the substantial risks, more than 60% of daily smokers in Hong Kong have neither attempted nor wanted to quit. Only 3% of current smokers have ever used smoking cessation services.¹

2. Health hazards of smoking

- At least half of the smokers were killed by their tobacco use.⁵
- Smoking causes at least 12 cancers: lung, liver, oropharynx, larynx, oesophagus, acute myeloid leukaemia, stomach, pancreas, kidney and ureter, cervix, bladder and colorectal.⁶
- Smoking causes chronic diseases in nearly every organ and system of the body.⁶

Table 1. Examples of Organs and Systems Affected by Smoking⁶

Heart Coronary heart disease	Vascular Peripheral vascular disease, aortic aneurysm
Eye Cataracts, age-related macular degeneration	Brain Stroke
Head and neck Cancer of oropharynx, larynx, periodontitis	Lungs Lung cancer, COPD, tuberculosis, asthma
Alimentary tract Cancer of oesophagus, stomach, liver, pancreas and colorectal	Reproductive Reduced fertility, erectile dysfunction in men, ectopic pregnancy in women, orofacial clefts
Reproductive and Urinary Cancer of kidney, ureter and bladder	Blood Acute myeloid leukaemia
Endocrine Diabetes	Autoimmune Rheumatoid arthritis

- Smoking increases the risk of infections
 - Tobacco smoke produces structural changes in the airway, including increased mucosal permeability, impaired mucociliary clearance, change in pathogen adherence, disruption of the respiratory epithelium and peribronchial inflammation and fibrosis.⁷
 - Smoking weakens the immune system and production of antibodies.^{8,9,10}
 - Compared with non-smokers, smoking incurs a 2- to 4-fold increased risk of invasive pneumococcal lung disease, several fold higher and more severe case of influenza and a twofold increased risk of contracting Tuberculosis infection and a 4-fold increased mortality.¹¹
 - Smoking associates with increased risk of progression to severe diseases (i.e. requiring mechanical ventilation or intensive care) and deaths in hospitalised COVID-19 patients.¹²
 - Patients with certain medical conditions that have strong association with smoking, such as COPD and cardiovascular diseases, are also found to be at higher risk of severe COVID-19.^{13,14}

3. The benefits of quitting

- Quitting is beneficial to smokers of all ages and brings immediate and long term health benefits.¹⁵ It significantly reduces risk of smoking related illnesses, and prevents disease progression and mortality in persons with chronic illness.

Table 2. Immediate and Long Term Benefits of Quitting	
Time smoke free	Health improvements
Within 12 hours	<ul style="list-style-type: none"> • Carbon monoxide level in blood drops to normal¹⁶
Within 2 to 12 weeks	<ul style="list-style-type: none"> • Circulation and lung function improves¹⁶
After 1 to 9 months	<ul style="list-style-type: none"> • Coughing and shortness of breath decrease¹⁶
After 1 to 5 years	<ul style="list-style-type: none"> • The risk of coronary heart disease is reduced by 50%¹⁷ • The risk of stroke is reduced to the level of never smokers¹⁸
After 5 to 10 years	<ul style="list-style-type: none"> • The risk of lung cancer is reduced by 50%, and will be further reduced with continued cessation¹⁷ • The risk of acute myeloid leukaemia, cancer in stomach, pancreas, cervix, colon/rectum, liver, and kidney is reduced by various degree¹⁷ • The risk of developing diabetes is reduced to that of never smokers¹⁹
After 10 to 15 years	<ul style="list-style-type: none"> • The risk of coronary heart disease and mortality is reduced to a level similar to never smokers in persons with diabetes^{20,21}
Other benefits of quitting	<ul style="list-style-type: none"> • Smoking cessation is the only proven strategy to reduce the risk of developing COPD and the only intervention that reduce lung function decline in people with COPD¹⁷ • The risk of recurrent infarction and premature death is reduced by more than 50%¹⁸

4. Role of health professionals in smoking cessation

- Health professions are at a unique position in helping smokers. More than 80% of tobacco users can potentially be reached each year if health professions routinely ask about tobacco use and advise smokers to quit.²²
- By applying WHO 5A's and 5R's model, helping smokers to quit as a routine practice takes only three to five minutes.²² While offering brief advice as little as three minutes or less has also been shown to be beneficial.²³ Even a very brief advice (“VBA”) lasting for 1 minute or less can improve abstinence (Table 3).^{24,25,26}
- Brief advices delivered by all types of healthcare workers effectively increase quit rate (Table 4).
- It is utmost important to address the issue of smoking in every visit. Abstinence improves with the number of contacts, with a strong dose-response relationship (Table 5).
- Further, VBA followed by active referral further increases abstinence by about 80%, compared to giving advice alone.²⁷

Table 3. Effectiveness of Total Amount of Contact Time²³

Total amount of contact time	Number of arms	Estimated odds ratio (95% C.I.)	Estimated abstinence rate (95% C.I.)
No min	16	1.0	11.0
1–3 mins	12	1.4 (1.1–1.8)	14.4 (11.3–17.5)
4–30 mins	20	1.9 (1.5–2.3)	18.8 (15.6–22.0)
31–90 mins	16	3.0 (2.3–3.8)	26.5 (21.5–31.4)
91–300 mins	16	3.2 (2.3–4.6)	28.4 (21.3–35.5)
> 300 minutes	15	2.8 (2.0–3.9)	25.5 (19.2–31.7)

Table 4. Effectiveness of Brief Advice Provided by Various Healthcare Professionals

Providers	Change in tobacco abstinence rate at 6-month follow-up	
Physicians	Increases by 66%	(RR=1.66, 95% CI 1.42-1.94) ²⁸
Nurses	Increases by 27%	(RR=1.27 95% CI 0.99-1.62) ²⁹
Oral health professionals (Including dentists)	Increases by 71%	(OR=1.71, 95% CI 1.44-2.03) ³⁰
Community pharmacists	Increases by about 2-fold	(RR=2.30, 95% 1.33-3.97) ³¹

Table 5. Effectiveness of Number of Person-to-person Treatment Sessions²³

Number of contact sessions	Number of arms	Estimated odds ratio (95% C.I.)	Estimated abstinence rate (95% C.I.)
0–1 session	43	1.0	12.4
2–3 sessions	17	1.4 (1.1–1.7)	16.3 (13.7–19.0)
4–8 sessions	23	1.9 (1.6–2.2)	20.9 (18.1–23.6)
> 8 sessions	51	2.3 (2.1–3.0)	24.7 (21.0–28.4)

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