

# HKU study reveals smoking kills half of all elderly smokers: Government should strengthen tobacco control policies

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# **Speakers**

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Chairman
Hong Kong Council on Smoking and Health (COSH)



World Health Organisation (WHO) in 2008

stated:

Up to ½ of smokers will be killed by smoking:



Smokers lose an average of 10 YEARS in terms of

life expectancy

Source: Jha et al. 2013



# Tobacco Kills around 6 Million Globally in a Year

Cancer 33%

Respiratory diseases 29%

Circulatory diseases 29%

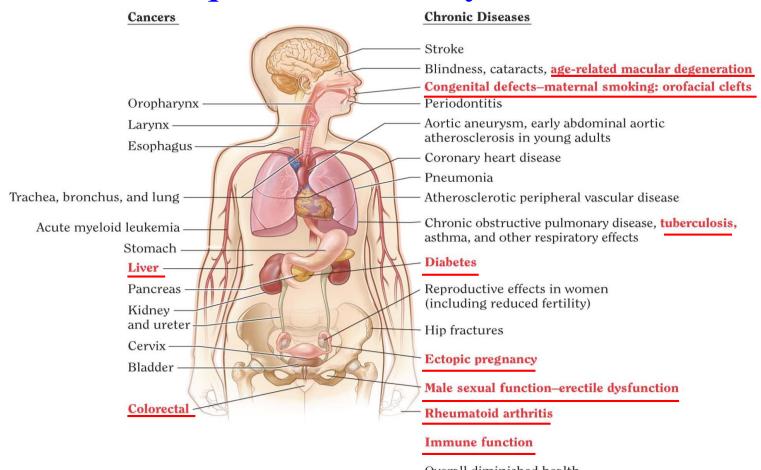
Other diseases 9%



WHO estimates there will be one billion deaths attributable to smoking in the 21<sup>st</sup> century.



# The health consequences causally linked to smoking



Source: USDHHS 2004, 2006, 2012.

Overall diminished health





The Health Consequences of Smoking—50 Years of Progress **Executive Summary** 

# The latest 2014 US Surgeon Report states:

"the relative risk of dying from smoking has increased over the last 50 years", suggesting the ½ risk could be underestimated.



# Study has been published in International Journal





### Smoking and mortality in a prospective cohort study of elderly Chinese in Hong Kong

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#### ABSTRACT

Background and Aims Large cohort studies on smoking and mortality in elderly people are scarce, and few studies examined smokers aged 85+ years separately. We estimated the risks of all-cause and cause-specific mortality due to smoking in an elderly Chinese cohort in Hong Kong, Design A population-based prospective cohort of 65 510 Chinese enrolled from 1998 to 2001 and followed until May 2012. Setting All 18 Elderly Health Service centres in Hong Kong, China. Participants Elderly people aged 65+ years. Measurements Self-reported smoking status was assessed at baseline interview and categorized as never, former and current smokers. Findings Compared with never smokers, after adjustment for sex, age, education, social security assistance, housing type, monthly expenditure, alcohol use, depressive symptoms and health status, the hazard ratio (HR) for current smokers was 1.89 [95% confidence interval (CI) = 1.81–1.98] for all participants aged 65+ years at baseline, corresponding to an attributable fraction (AF) of about 50%, which is based on AF = (HR-1)/HR. As the effect of smoking varied with age (P for age interaction <0.001), subgroup analysis by age group showed that the adjusted HR for current smokers aged 65–84 years was 1.93 (95% CI = 1.84–2.03), and for 85+ years was 1.29 (95% CI = 1.05–1.58). All the risk estimates did not vary by sex (P for sex interaction ranged 0.74–0.89). Conclusions In Hong Kong, the risk of death from smoking appears to be the same for Chinese women as it is for men. Half of all deaths in Chinese smokers aged 65 years and older and a quarter of all deaths in Chinese smokers aged 85 years and older are caused by smoking-attributable diseases.

Keywords All-cause, attributable risk, China, eldest, mortality, smoking.

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# **About the Research Team**

# School of Public Health, HKU

- Professor Lam Tai-hing
- Dr Xu Lin
- Dr CM Schooling
- Professor Gabriel M Leung

# Elderly Health Service, Department of Health, HK

- Dr WM Chan
- Dr SY Lee



# **About the Study**

Largest follow-up study in HK jointly conducted by the School of Public Health, Li Ka Shing Faculty of Medicine, HKU and Elderly Health Service of Department of Health.

- **Aim**: Examine the association between smoking and mortality in elderly in HK.
- **Study Period**: From 1998-2001 and followed up until May 2012 (about 11 years on average).
- **Methodology**: Data analysis based on data from 18 Elderly Health Centres (EHCs) of Department of Health and the Deaths Registries.



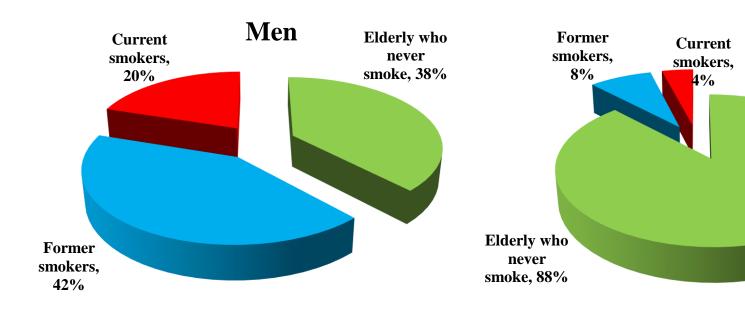
# **About the Study**

- **Subjects**: 65,510 elderly aged 65 or above, who first enrolled in the EHCs during 1998-2001 (Women 42,917; Men 22,593) were included with long-term follow-up.
- Up to May 31, 2012, the mean follow-up was 11 years, and 19,520 deaths (30%) were observed.



Distribution of subjects of three categories by sex:

- 1) Current smokers;
- 2) Former smokers;
- 3) Non-smokers.

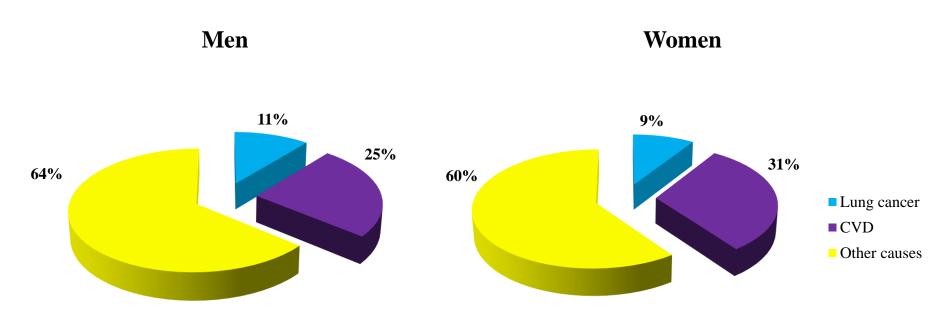


Women



Distribution of the three categories of death causes by sex:

- 1) Lung cancer;
- 2) Cardiovascular disease (CVD);
- 3) Other causes



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# **Results:**

# Mortality by different smoking status

Age, years	65-69	70-74	75-79	80-84	85+	Total (65+)
Non- smokers	11	20	35	59	96	22
Former smokers	21	35	55	83	126	41
Smokers	26	43	66	104	122	44

Unit: Per 1000 persons per year

Among <u>all</u> elderly smokers, there were 44 deaths per year per 1000 persons, 2 times that in non-smokers (22 deaths per year per 1000 persons).



# Mortality by different smoking status in men

Age, years	65-69	70-74	75-79	80-84	85+	Total (65+)
Non- smokers	14	26	46	70	119	27
Former smokers	22	38	59	91	134	42
Smokers	28	48	71	116	138	47

Unit: Per 1000 persons per year

Among elderly <u>male</u> smokers, there were 47 deaths per year per 1000 persons, nearly 2 times that in non-smokers (27 deaths per year per 1000 persons).



### Mortality by different smoking status in women

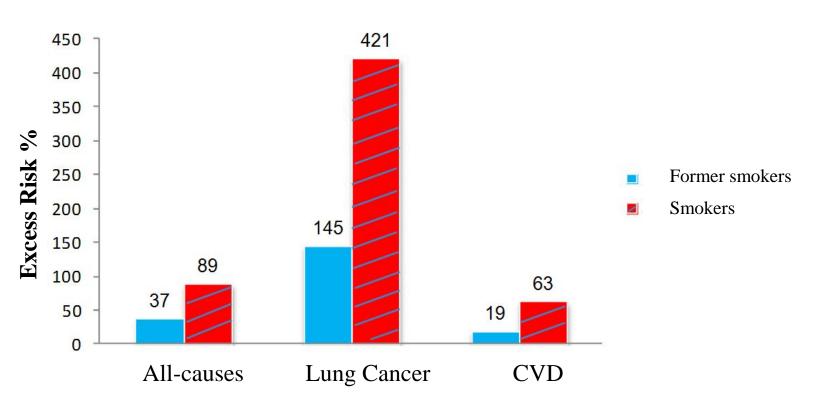
Age, years	65-69	70-74	75-79	80-84	85+	Total (65+)
Non- smokers	10	18	33	57	93	21
Former Smokers	16	27	47	70	118	38
Smokers	19	29	56	86	105	37

Unit: Per 1000 persons per year

Among elderly **female** smokers, there were **37** deaths per year per 1000 persons, nearly 2 times that in non-smokers (21 deaths per year per 1000 persons).



Smoking increased risk for all-causes, lung cancer & CVD mortality\* in people aged 65 or above

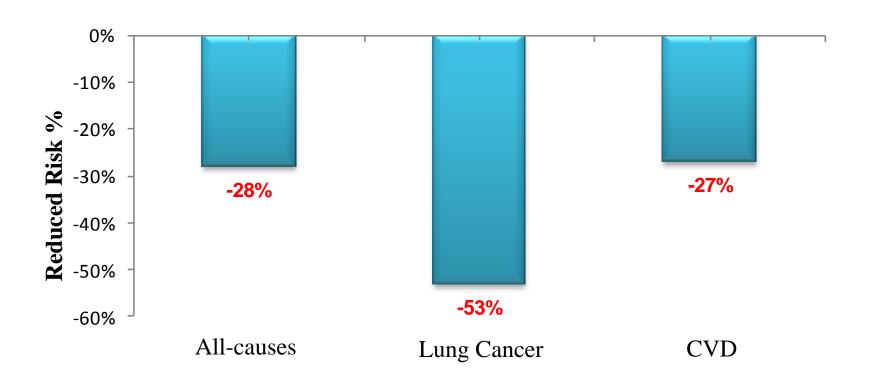


Compared to non-smokers, the risk of all-causes, lung cancer and cardiovascular disease (CVD) mortality increased by 89%, 421% and 63%, respectively.

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# **Results:**

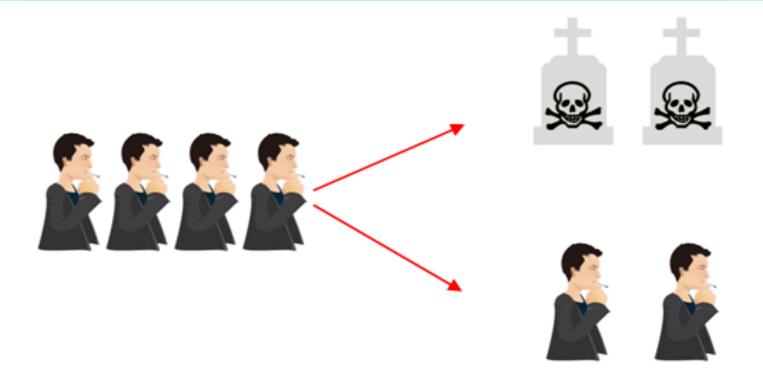
Smoking cessation reduced risk of all-causes, lung cancer and CVD mortality in people aged 65 or above



Relative to current smokers, the risk of all-causes, lung cancer and CVD mortality in former smokers reduced by 28%, 53% and 27% respectively.

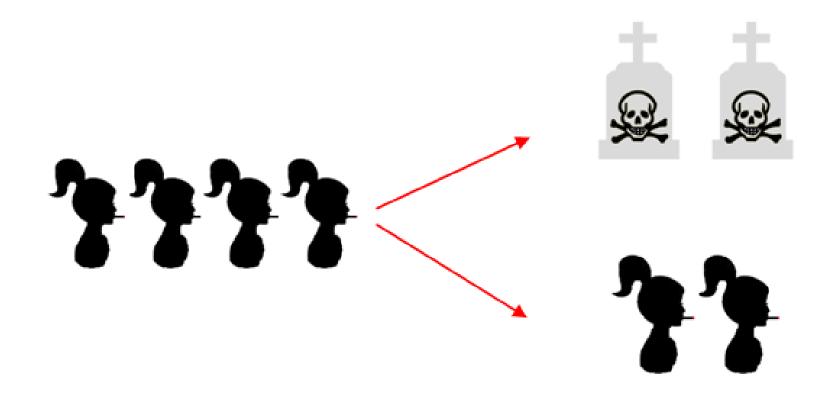


Effect of smoking on mortality in elderly men



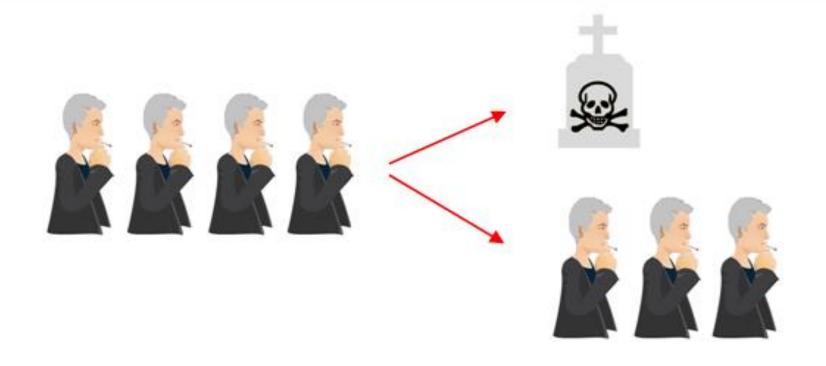
In elderly aged 65 or above, at least ONE OUT OF TWO smokers will be killed by smoking!

Effect of smoking on mortality in elderly women



Women who smoke like men, die like men.

Effect of smoking on mortality in oldest smokers (85+)



In elderly aged 85 or above, ONE OUT OF FOUR smokers will be killed by smoking-related diseases. Compared to non-smokers, the risk of all-causes increased by 29%.

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# Study implications & Suggestions

- Smoking cessation can significantly reduce risk of all-causes, lung cancer and CVD mortality, suggest quitting smoking at old age still benefits elderly's health.
- Elderly should quit smoking immediately to reduce mortality risk.
- Increase in tobacco tax can encourage smoking cessation in senior citizens, as a result improving health and prolonging life.



# Suggestion by WHO

World Health Organisation (WHO):

"Increasing the price of tobacco products through significant tax increases is the single most effective way to decrease tobacco use and to encourage current users to quit." (WHO, 2009)



# **Smoking Cessation: Health benefits**

- The risk to have coronary heart diseases (CHD) is reduced by half after stopping smoking for 1 year, similar to those who never smoke after 15 years.
- Lung cancer risk of continuing smokers is reduced to 30-50% after stopping smoking for 10 years.
- Quitting before the age of 50 reduces risk of dying in the next 15 years by a half, compared with continuing smokers.
- Reduces risks of other cancers and diseases.

Source: (US DHHS 1990)



# **Smoking Cessation: Instant Benefits**

- •20 min Lower blood pressure & improvement in circulation
- •8 hour Normal blood oxygen
- •24 hour Removal of nitric oxide
- •48 hour Clearance of nicotine
- •72 hour Improvement in respiration & physical function



# **Smoking Cessation: Other Benefits**

- Improving sense of taste & smell
- Fresh breath
- Improving image
- Senses of success and freedom
- Role model for children
- Improving social relationship: family, work
- Saving money



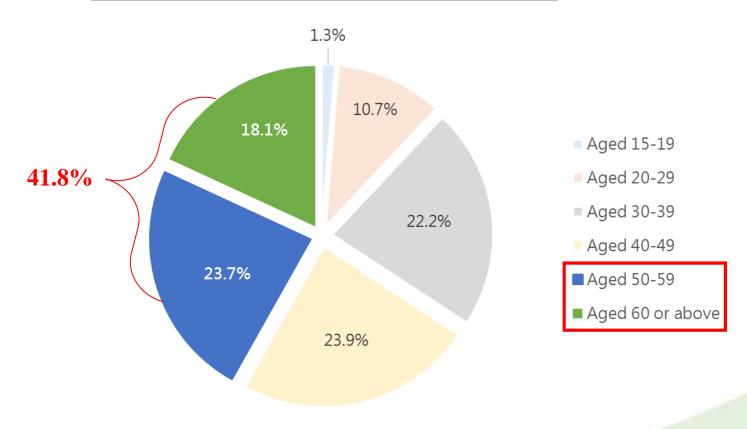
# Acknowledgements

# The surveys were supported by

Health Care & Promotion Fund Committee

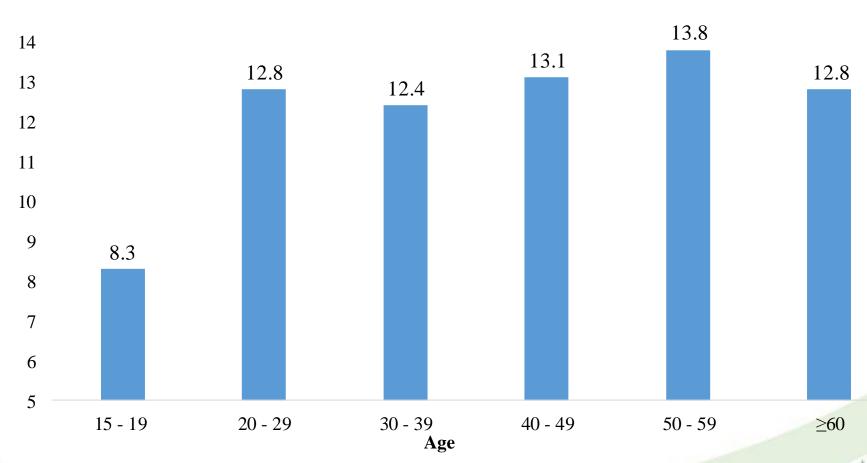
# **Elderly Smoking in Hong Kong**

#### **Daily Smoking Population (645,000 smokers)**



# **Elderly Smoking in Hong Kong**

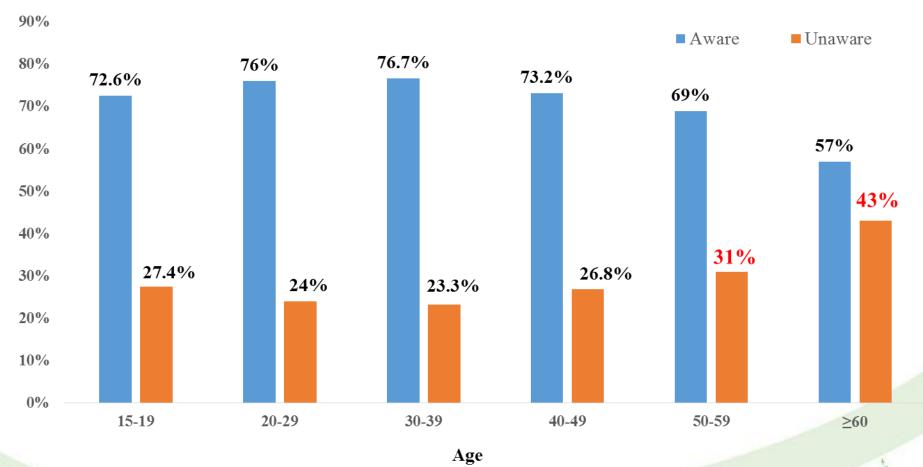
#### Average daily consumption of cigarettes among smokers (sticks) by age



Source: Thematic Household Survey Report No.53, Census and Statistics Department, 2013

# **Elderly Smoking in Hong Kong**

#### Awareness of the smoking cessation services among smokers by age



Source: Thematic Household Survey Report No.53, Census and Statistics Department, 2013

- COSH has organized the "Smoking Cessation Promotion Project" since 2012.
- Target at early retired people and elderly at age 50 or above. The project is composed of Health Talks, Media Advocacy and Community Promotion with following objectives:
  - Enhance elderly's understanding on smoking hazards and benefits of smoking cessation;
  - > Clarify the misconceptions and encourage smoking cessation; and
  - Motivate the public, especially the elderly to support smoke-free Hong Kong



#### 1. Health Talk

- Conducted by the educators in an interesting and interactive way at the elderly centres across the territory
- Nearly 90% of participating centres gave positive comments (2013-2014)





#### 2. Media Promotion and Publicity

Radio programme and promotion





• "Smoking Cessation Pledge Ceremony" (2013-2014)



Launch Ceremony of "Elderly Smoking Cessation Promotion Project 2014-2015"



#### **Community Smoke-free Promotion**

- ➤ Strengthen the cooperation with elderly centres and recruit elderly volunteers to encourage elderly smokers to quit smoking
- ➤ Elderly volunteers attended the smoking cessation training and delivered smoke-free messages to public







#### **Health Talk (2012-15)**

Participating elderly centres	95
Number of participants	~6,300

#### **Community Smoke-free Promotion (2014-15)**

Elderly Smoke-free Ambassador	50
Community Smoke-free Promotion	8 times
Smokers attempted to quit	60
Members of public reached	~3,000

# **Advocacy – Raise Awareness on Elderly Smoking and Encourage Smoking Cessation**

#### Promote smoke-free messages among the elderly

- Educate the elderly on health hazards of smoking
- Highlight the benefits of smoking cessation and clarify the common misconceptions
- Tailor-made marketing strategies for the elderly to raise their awareness on smoking cessation

# **Advocacy – Raise Awareness on Elderly Smoking and Encourage Smoking Cessation**

#### Raise the public awareness toward elderly smoking

• Raise public awareness on elderly smoking in communities

- Strengthen the support and involvement of the community to spread the smoke-free messages
- Encourage family members to motivate and assist elderly to quit

#### Thank You!

#### Visit www.smokefree.hk for more information





# Q & A Session