

# Quitting smoking and mortality: risk of all-cause mortality decreased sharply in 5-9 years after quitting among Chinese

ZM Mai<sup>1</sup>, SY Ho<sup>1</sup>, MP Wang<sup>2</sup>, CMM Lo<sup>1</sup> and TH Lam<sup>1</sup>

<sup>1</sup>School of Public Health, The University of Hong Kong; <sup>2</sup>School of Nursing, The University of Hong Kong



## Introduction

In Hong Kong, cigarette smoking is the leading cause of death, accounting for about 33% of all deaths. Health benefits have been observed after quitting smoking, but it remains unclear how soon the benefits of smoking cessation on all-cause mortality can be observed locally.

## Objective

To investigate the associations between smoking cessation and all-causes mortality, and how soon the benefits can be observed, in Hong Kong.

## Methods

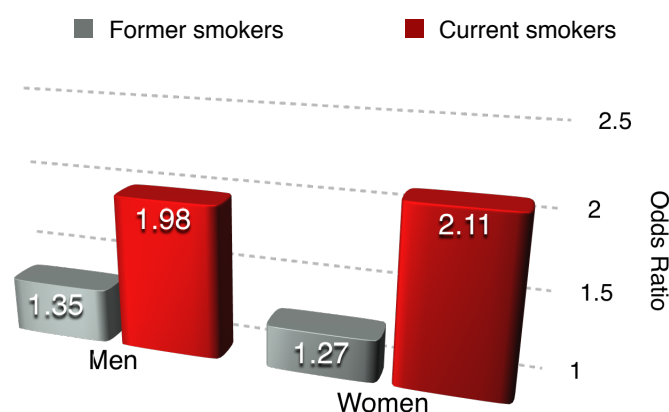
The LIMOR (Lifestyle and MORtality) study, a large population-based case-control study, included 81% of all registered deaths at aged 30+ from all four Hong Kong death registries in 1998. Cases were deaths from diseases expected to be affected by smoking; controls were deaths from other selected diseases. Logistic regression was used to calculate adjusted odds ratios (ORs) for smoking status, and duration of quitting adjusting for age and sex in 19268 cases and 6076 controls.

## Conclusion

In Hong Kong Chinese, smoking increased and quitting smoking reduced the risk of all-cause mortality. The risk decreased sharply after quitting for 5-9 years. The benefits of quitting could be under estimated because some might have quit due to ill health.

## Results

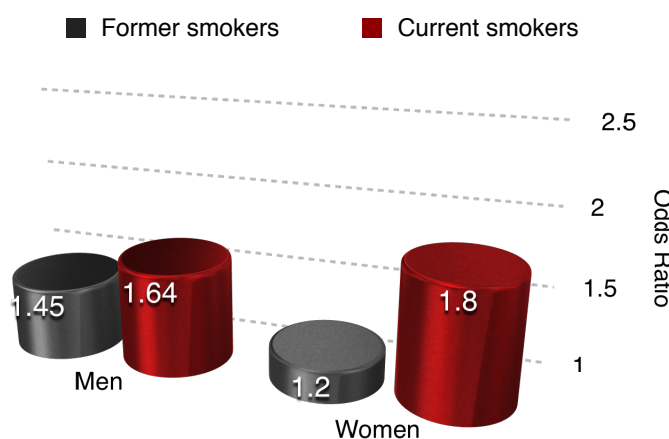
**Figure 1. Odds ratios of all-cause mortality on smoking status in middle age**



Middle age (30-69 years) among men and women

In middle age (30-69 years), the age-adjusted ORs (AORs and 95% CI) for all-cause mortality in former and current smokers, compared with never smokers, were 1.35 (1.08, 1.70) and **1.98 (1.73, 2.28)** in males, and 1.27 (0.73, 2.19) and **2.11 (1.58, 2.80)** in females (Figure 1).

**Figure 2. Odds ratios of all-cause mortality on smoking status in old age**

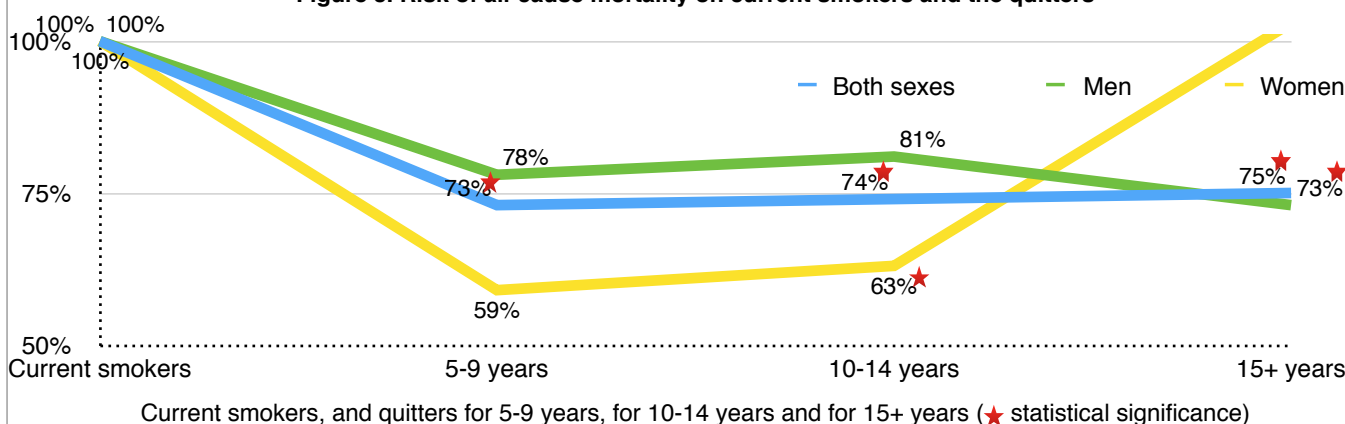


Old age (70+ years) among men and women

In old age (70+ years), the corresponding AOR and 95% CI were 1.45 (1.25, 1.69) and **1.64 (1.45, 1.86)** in males, and 1.20 (1.01, 1.44) and **1.80 (1.54, 2.10)** in females (Figure 2).

Compared with current smokers, quitters for 5-9 years, 10-14 years and 15+ years had **27%\***, **26%\*** and **25%\*** risk reduction in both sexes, **22%**, **19%** and **27%\*** in men and **41%**, **37%\*** and **-3%** in women in all-cause mortality, respectively (Figure 3).

**Figure 3. Risk of all-cause mortality on current smokers and the quitters**



**Funding:** Hong Kong Health Services Research Committee (631012) and Hong Kong Council on Smoking and Health.