



## Press Release

### HKU Study Shows High Health Risks for Catering Workers in Venues Exempted from the Smoking Ban

#### Secondhand smoke

Secondhand smoke (SHS) is a dangerous poison. Major studies in Hong Kong have shown how breathing SHS causes a serious injury to the heart, other blood vessels and lungs. SHS kills over 1,300 people a year in Hong Kong. However, in 2006, the Government and legislators supported exemptions from the Smoking (Public Health) (Amendment) Ordinance for “qualified premises” selling alcohol and food, until June 2009.

#### The Study

A new survey conducted by a team from the Department of Community Medicine, School of Public Health, The University of Hong Kong; a biophysicist from Repace Associates, a secondhand smoke consultancy in Maryland USA, and Professor Neil Benowitz's laboratory in the University of California, has examined the exposure to tobacco smoke and the health of catering workers in both *smoke-free* and *exempted* premises.

157 non-smoking workers in smoke-free Chinese restaurants and Char Charn Ting (Hong Kong style café) and 47 non-smokers who worked in exempted bar/restaurants were examined by interviews, lung function tests and analysis of urine samples for tobacco chemicals.

#### Results of the study

##### 1. *Air pollution level*

- The level of fine particulate pollution (PM<sub>2.5</sub>) in exempted venues was four times as high as (300% higher than) the level in the smoke-free premises.
- The indoor pollution was
  - slightly lower than outdoor pollution for smoke-free venues
  - over 100% higher than outdoor pollution for exempted venues

##### 2. *Toxic substances in urine of workers*

*Cotinine* is a breakdown product of nicotine which can be measured in urine. It is a marker in the human body for other toxic substances from tobacco smoke which cause heart disease, stroke, cancers and other health problems.

- The research team found that cotinine in the urine of workers was
  - highest in those working in exempted hospitality venues
  - also raised in workers serving smokers on patios and terraces
  - raised in many non-smoking workers who we found were exposed to tobacco smoke at work from their co-workers during break periods
- Catering workers who served smokers had higher levels of tobacco chemicals in their urine than those in other jobs.

### 3. *Lung function in catering workers*

The level of indoor air pollution, as measured by fine particulates, was strongly associated with reduced lung function in catering workers:

- In the group of workers in exempted venues who successfully completed a lung function test, the average level of PM<sub>2.5</sub> was 261 microgrammes per cubic metre (µg/m<sup>3</sup>), and in smoke-free venues was 61 µg/m<sup>3</sup>. All workers show declining lung function with increasing PM<sub>2.5</sub> levels. The research team estimates that the average *difference* in lung function between workers in exempted and smoke-free venues on the day of the survey is 6.3% for ages 18-65 years; *for older workers (aged 30-65) the estimated average difference is much higher at 10.9%*. At the average level of PM<sub>2.5</sub> in exempted venues the estimated *overall reduction* in lung function is 14% for ages 18-65 and up to 22% for ages 30-65.
- We regard these reductions in lung function as very important indicators of harm to current and future health. Other scientific studies have shown that damage to the lungs carries a serious risk of both acute and chronic disease including bronchitis, pneumonia and chronic obstructive pulmonary disease (COPD). Reduced lung function is a strong predictor of reduced life expectancy.

### 4. *Health risks:*

- More workers in exempted venues than in smoke-free venues perceived that the poor indoor air quality increased their health risks:

Workers who said they were *always bothered* by smokers near them had lower urine cotinine levels than those who were *seldom bothered*. This apparent reduction in exposure, from action to protect themselves from smoke, was much greater in workers in non-smoking venues compared with those in exempted venues.

- In 2001, we estimated the average increased risk of fatal heart disease and lung cancer in Hong Kong catering workers was 1 in 33 (3%) and up to 1 in 10 (10%) for the highest (top 10%) exposures. For those workers in catering venues which were exempted under the 2006 Amended Ordinance, this increased risk will remain unchanged for 2.5 years (from 1.1.2007 to 30.6.2009). The result of this unchanged risk will cause serious life-long harm to the health of many of them.

- This study clearly shows that indoor air quality in Hong Kong is generally extremely poor and very much worse when smoking is permitted.
  - In non-smoking venues the average levels of fine particulates (PM<sub>2.5</sub>) in our spot tests (61 µg/m<sup>3</sup>) were 240% above the World Health Organization (WHO) 24 hour guideline of 25 µg/m<sup>3</sup> and 610% above the annual WHO guideline of 10 µg/m<sup>3</sup>.
  - In exempted catering premises, the extremely high levels of particulates and other tobacco chemicals we measured will cause serious harm to the health of workers, both smokers and non-smokers.

### **Recommendations:**

- All exemptions of premises from the smoke-free workplace policy creates a serious health risk for workers and should be rescinded as a matter of urgency. *While the HKSAR government used the research evidence on the serious harm caused by SHS to promote public acceptance of smoke-free policies it should not have introduced legislation which perpetuates and increases catering workers exposure to SHS.*
- The introduction of “smoking-rooms” currently being argued for by the catering and tobacco industries should not be permitted for the following reasons:
  - Smokers suffer additional health problems when subjected to intensive exposures to SHS.
  - We have previously shown in Hong Kong that smokers who inhale SHS from other smokers experience higher risks of lung disease.
  - Smoking rooms in catering and licensed facilities will create an intense source of pollution which will contaminate surrounding air. Existing smoking rooms in Hong Kong, such as those in the Airport Authority, are poorly managed and create health risks for those who use them or have to clean them.
- These facts on the harm caused by SHS should not be ignored by the Hong Kong health authorities (the Food and Health Bureau and the Department of Health) in formulating future policy.
- The government should focus on improving its compliance with the WHO Framework Convention on Tobacco Control rather than spending public money on smoking rooms.

Professor Sarah McGhee, a leading member of the research team said, “The study shows that the occupational health impacts of smoking in catering facilities must outweigh any other argument for the continuation of exemptions or the introduction of smoking rooms. There was no evidence anywhere in the world that the food and licenced trade had suffered any economic downturn on top of existing background trends from smoke-free policies.”

Dr Chit Ming Wong, a researcher leading several environmental health projects of the Department of Community Medicine, The University of Hong Kong emphasized, “The evidence of impaired lung function in catering workers had serious implications for their current and future health. All exemptions should end, including smoking patios and terraces, which are a health risk for waiters and others in such places.”

Professor Tai Hing Lam, director of the Public Health Research Centre, School of Public Health, The University of Hong Kong said, “All sectors of the community must now be involved in tobacco control and particularly the elimination of involuntary exposures to tobacco smoke. Tobacco tax should be increased to support smoking cessation in Hong Kong to reduce illness and premature deaths from smoking and secondhand smoke.”

Professor Anthony Hedley said “We thank the government for supporting the study. We hope that government leaders would take careful note of the study results and adopt a more pro-active and consistent approach to the incorporation into policy and legislation of the overwhelming scientific evidence on health risks of SHS. The new study is an important demonstration of the need for accountability in all public health and environmental regulations.”

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