

CHP SYMPOSIUM 2014

CHP ten years on:

Challenges and Collaboration in Disease Prevention and
Control in the Asia-Pacific Region

衛生防護中心研討會 2014

衛生防護中心的十年：亞太區疾病防控的挑戰與合作

24 October 2014 – Afternoon

25 October 2014 – Whole Day

L'hotel Nina et Convention Centre, 8 Yeung Uk Road,
Tsuen Wan, Hong Kong

Organised by

Centre for Health Protection

Department of Health

The Government of the Hong Kong Special Administrative Region

CHP Symposium 2014 Secretariat

Tel: 2125 2551 Fax: 3523 0740 Email: chpsymposium2014@dh.gov.hk



WELCOME MESSAGE

It is my great pleasure in welcoming you to the Centre for Health Protection (CHP) Symposium 2014.

Ten years ago in June 2004, the CHP was set up under the Department of Health with a mission to achieve effective prevention and control of disease in Hong Kong in collaboration with local and international partners and stakeholders. Since then, the CHP has come a long way in strengthening the capacity of Hong Kong's public health system to deal with various public health challenges. At this 10th anniversary of an important milestone in the Government's efforts to protect community health, we hope this Symposium will serve not only as a commemorative event, but also, more importantly, as a forum for healthcare experts from various fields and our public health counterparts in the Asia-Pacific region to come together to share and exchange knowledge and experience in disease prevention and control.



The theme of this Symposium is "*Challenges and Collaboration in Disease Prevention and Control in the Asia-Pacific Region*". We fully recognise that diseases do not stay within geographical boundaries and that effective solutions for their prevention and control must come with professional exchange and cooperation on a regional and global basis. In this Symposium, 24 eminent speakers, who are overseas experts in various public health disciplines or local healthcare professionals, will tell us the latest developments on different health issues of local and regional concern and new strategies for tackling them. We trust that this Symposium will keep us updated on the disease challenges ahead.

Finally, I would like to extend special thanks to all of the speakers and moderators for their distinguished presentations and invaluable contributions in making this Symposium a success. My deepest appreciation also goes to members of the Scientific Subcommittee for their efforts in developing a comprehensive and exciting programme for the various sessions. I am sure that all of you will thoroughly enjoy this Symposium. Thank you.

A handwritten signature in black ink, appearing to be 'Chan Hon-ye'.

Dr. CHAN Hon-ye, Constance

Director of Health

The Government of the Hong Kong Special Administrative Region

ORGANISING COMMITTEE

Chairperson

Dr. CHING Cheuk Tuen, Regina

Head, Surveillance and Epidemiology Branch,
Centre for Health Protection, Department of Health

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Consultant (Special Preventive Programme),
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Centre for Health Protection, Department of Health

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Programme Management and Professional Development Branch,
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Chairman, Scientific Committee on Vaccine Preventable Diseases

Prof. LAM Tai Hing

Chairman, Scientific Committee on AIDS and STI

Prof. LEE Shiu Hung *

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Prof. John SIMON

Chairman, Scientific Committee on Vector-borne Diseases

Dr. TSANG Ngai Chong, Dominic

Chairman, Scientific Committee on Infection Control

Prof. YUEN Kwok Yung

Chairman, Scientific Committee on Emerging and Zoonotic Diseases

Secretary

Dr. WONG Man Ching, Anna

Senior Medical and Health Officer (Programme Management),
Programme Management and Professional Development Branch,
Centre for Health Protection, Department of Health

** Deceased on 9 January 2014*

PROGRAMME

Day 1: 24 October 2014 (Friday)

Plenary Session

Time	Programme
1:30pm- 2:10pm	Registration
2:10pm- 2:40pm	Opening Ceremony
2:40pm- 3:20pm	KEYNOTE SPEECH
	Moderator: Dr. Thomas TSANG <i>Chairman, Scientific Subcommittee for CHP Symposium 2014</i>
	Climate change and human health - from global and regional perspectives Dr. Wilfried KREISEL <i>Former Executive Director, Health and Environment, World Health Organization / Headquarters, Geneva, Switzerland</i>
3:20pm- 3:40pm	Panel Discussion Dr. Thomas TSANG, Dr. Wilfried KREISEL, Dr. Christine LOH and Mr. Mok Hing-yim (<i>Acting Assistant Director of the Hong Kong Observatory</i>)
3:40pm- 4:00pm	Tea Break
4:00pm- 5:15pm	AIR POLLUTION
	Moderators: Prof. John SIMON <i>Chairman, Scientific Committee on Vector-borne Diseases, CHP</i> Prof. Ignatius YU <i>Chairman and Honorary President, Hong Kong Occupational and Environmental Health Academy; Honorary Clinical Professor, The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong</i>
	Air pollution and health: new aspects of an old problem Prof. Jonathan SAMET <i>Distinguished Professor and Flora L. Thornton Chair, Department of Preventive Medicine, Keck School of Medicine of University of Southern California (USC); Director, USC Institute for Global Health, USC, Los Angeles, USA</i>
	Control of air pollution in Singapore Mr. Joseph HUI <i>Deputy Chief Executive Officer (Technology & Corporate Development), Singapore National Environment Agency, Singapore</i>
	Air pollution problems in Mainland China and Hong Kong: causes and emissions control Prof. WANG Tao <i>Chair Professor of Atmospheric Environment, The Hong Kong Polytechnic University, Hong Kong, China</i>
	Hong Kong's clean air plan and protection of public health Dr. Christine LOH <i>Under Secretary for the Environment, Hong Kong Special Administrative Region Government, Hong Kong, China</i>
5:15pm- 5:35pm	Panel Discussion

PROGRAMME

Day 2: 25 October 2014 (Saturday)

Parallel Tracks on Communicable Diseases (CD) and Non-communicable Diseases (NCD)

Time	CD Track	NCD Track
8:45am- 9:10am	Registration	
9:10am-10:10am	<p>ANTIBIOTIC RESISTANCE (PART I)</p> <p>Moderators: Dr. Dominic TSANG <i>Chairman, Scientific Committee on Infection Control, CHP</i> Dr. Andrew Tin Yau WONG <i>Head, Infection Control Branch, CHP</i></p> <p>Infection control measures to reduce transmission of multiple drug resistant organisms (MDROs): what work and what don't? Prof. Yehuda CARMELI <i>Head, National Institute for Antibiotic Resistance and Infection Control & Division of Epidemiology, Tel Aviv Medical Centre; Professor in Medicine, Tel Aviv University, Tel Aviv, Israel</i></p> <p>MDROs in Hong Kong: an appraisal of the current threats Dr. HO Pak Leung <i>Chairman, Health Protection Programme on Antimicrobial Resistance, Scientific Committee on Infection Control, CHP, Hong Kong, China</i></p>	<p>CHILDHOOD OBESITY – A GLOBAL EPIDEMIC</p> <p>Moderators: Dr. SP MAK <i>Chairman, Scientific Committee on Enteric Infections and Foodborne Diseases, CHP</i> Dr. Anne FUNG <i>Assistant Director (Health Promotion), Surveillance and Epidemiology Branch, CHP</i></p> <p>Leave it or beat it! Ms. Hannah BRINSDEN <i>Policy and Advocacy Researcher, World Obesity Federation</i></p> <p>Childhood obesity in China Prof. YANG Xiaoguang <i>Professor, National Institute of Nutrition and Food Safety, Chinese Center for Disease Control and Prevention, China</i></p>
10:10am-10:30am	Panel Discussion	Panel Discussion
10:30am-10:50am	Tea Break	
10:50am-11:40am	<p>ANTIBIOTIC RESISTANCE (PART II)</p> <p>Moderators: Dr. Janice LO <i>Head, Public Health Laboratory Services Branch, CHP</i> Dr. TAM Cheuk Ming <i>Head, Public Health Services Branch, CHP</i></p>	<p>STRATEGIES FOR NON-COMMUNICABLE DISEASE CONTROL</p> <p>Moderators: Dr. Janice JOHNSTON <i>Associate Professor and Head of the Division of Health Economics, Policy and Management, School of Public Health, The University of Hong Kong</i> Dr. Emily LEUNG <i>Community Physician, Surveillance and Epidemiology Branch, CHP</i></p>

PROGRAMME

Day 2: 25 October 2014 (Saturday)

Time	CD Track	NCD Track
10:50am-11:40am	Impact of antibiotic policy on control of MDRO Prof. Herman GOOSSENS <i>Professor of Medical Microbiology, University of Antwerp; Director, Laboratory of Clinical Pathology, Antwerp University Hospital; Head, Research Laboratory of Medical Microbiology, University of Antwerp, Antwerp, Belgium</i>	Hong Kong experience Dr. Regina CHING <i>Head, Surveillance and Epidemiology Branch, CHP, Hong Kong, China</i>
	Hong Kong experience in combating antibiotic resistance Dr. Andrew Tin Yau WONG <i>Head, Infection Control Branch, CHP, Hong Kong, China</i>	When doctors voice advocacy Dr. Donald LI <i>President, Hong Kong Academy of Medicine, Hong Kong, China</i>
11:40am-12:00pm	Panel Discussion	Panel Discussion
12:00pm-1:15pm	Lunch Break	
1:15pm- 2:15pm	VACCINES Moderators: Dr. HO King Man <i>Consultant Dermatologist i/c, Public Health Services Branch, CHP</i> Dr. Henry NG <i>Head, Programme Management and Professional Development Branch, CHP</i>	MENTAL HEALTH Moderators: Dr. Teresa LI <i>Assistant Director of Health (Family and Elderly Health Services), Department of Health</i> Dr. Sammy NG <i>Principal Medical Officer (Primary Care), Primary Care Office, Department of Health</i>
	National experience in Human Papilloma Virus mass vaccination campaign in Australia Ms. Kylie JONASSON <i>First Assistant Secretary, Department's Office of Health Protection, Australia Department of Health, Canberra, Australia (This session was not conducted due to unforeseeable circumstances.)</i>	beyondblue 14 years on tackling depression, anxiety and suicide in Australia Ms. Susan ANDERSON <i>General Manager Adult Programs Priority Populations, Beyondblue, Melbourne, Australia</i>
	Evidence for recommendations on seasonal influenza vaccination Dr. CHOW Chun Bong <i>Chairman, Scientific Committee on Vaccine Preventable Diseases, CHP, Hong Kong, China</i>	Early detection and management of depression in primary care setting Prof. Sandra CHAN <i>Associate Professor, Department of Psychiatry, The Chinese University of Hong Kong, Hong Kong, China</i>
	Local epidemiology of invasive pneumococcal disease Prof. LAU Yu Lung <i>Chairman, Working Group on Pneumococcal Vaccination, Hong Kong, China</i>	
2:15pm- 2:35pm	Panel Discussion	Panel Discussion
2:35pm- 2:55pm	Tea Break	

PROGRAMME

Day 2: 25 October 2014 (Saturday)

Time	CD Track	NCD Track
2:55pm- 3:55pm	AVIAN FLU Moderators: Prof. YUEN Kwok Yung <i>Chairman, Scientific Committee on Emerging and Zoonotic Diseases, CHP</i> Dr. Heston KWONG <i>Head, Emergency Response and Information Branch, CHP</i>	CANCER Moderators: Prof. Shelly TSE <i>Associate Professor, Division of Occupational and Environmental Health, The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong</i> Dr. Eddy NG <i>Principal Medical Officer (Non- Communicable Disease), Surveillance and Epidemiology Branch, CHP</i>
	Perspectives of the control of H7N9 infection in the mainland of China Prof. ZHONG Nanshan <i>Director, State Key Laboratory of Respiratory Disease, Guangzhou, China</i>	What have we learnt from 30 years of anti-tobacco efforts? Dr. Judith MACKAY <i>Senior Advisor, World Lung Foundation</i>
	Local efforts in prevention and control of human avian flu H7N9 infection Dr. CHUANG Shuk Kwan <i>Consultant Community Medicine (Communicable Disease), Surveillance and Epidemiology Branch, CHP, Hong Kong, China</i>	Colorectal Cancer Screening - From evidence to practice Prof. Martin WONG <i>Director, The Chinese University of Hong Kong Jockey Club Bowel Cancer Centre, Hong Kong, China</i>
	Laboratory testing of human H7N9 infection - Hong Kong experience Dr. Janice LO <i>Head, Public Health Laboratory Services Branch, CHP, Hong Kong, China</i>	Is Hong Kong ready for population-based mammography screening? Prof. LAM Tai Hing <i>Chairman, Cancer Expert Working Group on Cancer Prevention and Screening, Hong Kong, China</i>
3:55pm- 4:15pm	Panel Discussion	Panel Discussion
4:15pm- 4:20pm	Closing Ceremony	

(Programme is subject to change without prior notice.)

FACULTY OF SPEAKERS

Names presented below are arranged in alphabetical order of surname:

Ms. Susan ANDERSON

General Manager Adult Programs Priority Populations, Beyondblue, Melbourne, Australia

Ms. Hannah BRINSDEN

Policy and Advocacy Researcher, World Obesity Federation

Prof. Yehuda CARMELI

Head, National Institute for Antibiotic Resistance and Infection Control & Division of Epidemiology, Tel Aviv Medical Centre; Professor in Medicine, Tel Aviv University, Tel Aviv, Israel

Prof. Sandra CHAN

Associate Professor, Department of Psychiatry, The Chinese University of Hong Kong, Hong Kong, China

Dr. Regina CHING

Head, Surveillance and Epidemiology Branch, CHP, Hong Kong, China

Dr. CHOW Chun Bong

Chairman, Scientific Committee on Vaccine Preventable Diseases, CHP, Hong Kong, China

Dr. CHUANG Shuk Kwan

Consultant Community Medicine (Communicable Disease), Surveillance and Epidemiology Branch, CHP, Hong Kong, China

Prof. Herman GOOSSENS

Professor of Medical Microbiology, University of Antwerp; Director, Laboratory of Clinical Pathology, Antwerp University Hospital; Head, Research Laboratory of Medical Microbiology, University of Antwerp, Antwerp, Belgium

Dr. HO Pak Leung

Chairman, Health Protection Programme on Antimicrobial Resistance, Scientific Committee on Infection Control, CHP, Hong Kong, China

Mr. Joseph HUI

Deputy Chief Executive Officer (Technology & Corporate Development), Singapore National Environment Agency, Singapore

Ms. Kylie JONASSON

First Assistant Secretary, Department's Office of Health Protection, Australia Department of Health, Canberra, Australia

FACULTY OF SPEAKERS

Prof. LAM Tai Hing

Chairman, Cancer Expert Working Group on Cancer Prevention and Screening, Hong Kong, China

Prof. LAU Yu Lung

Chairman, Working Group on Pneumococcal Vaccination, Hong Kong, China

Dr. Donald LI

President, Hong Kong Academy of Medicine, Hong Kong, China

Dr. Janice LO

Head, Public Health Laboratory Services Branch, CHP, Hong Kong, China

Dr. Christine LOH

Under Secretary for the Environment, Hong Kong Special Administrative Region Government, Hong Kong, China

Dr. Judith MACKAY

Senior Advisor, World Lung Foundation

Prof. Jonathan SAMET

Distinguished Professor and Flora L. Thornton Chair, Department of Preventive Medicine, Keck School of Medicine of University of Southern California (USC); Director, USC Institute for Global Health, USC, Los Angeles, USA

Prof. WANG Tao

Chair Professor of Atmospheric Environment, The Hong Kong Polytechnic University, Hong Kong, China

Dr. Andrew Tin Yau WONG

Head, Infection Control Branch, CHP, Hong Kong, China

Prof. Martin WONG

Director, The Chinese University of Hong Kong Jockey Club Bowel Cancer Centre, Hong Kong, China

Prof. YANG Xiaoguang

Professor, National Institute of Nutrition and Food Safety, Chinese Center for Disease Control and Prevention, China

Prof. ZHONG Nanshan

Director, State Key Laboratory of Respiratory Disease, Guangzhou, China

ABSTRACTS

24 October 2014 (Friday)



Dr. Wilfried KREISEL

Former Executive Director
Health and Environment, World Health Organization / Headquarters
Geneva, Switzerland

Keynote Speech: Climate change and human health -
from global and regional perspectives

Date: 24 October 2014 (Friday)

Time: 2:40pm - 3:20pm

There is now consensus that warming of the climate system is unequivocal. It is also clear that the earth is warming predominantly as a consequence of human activities. This is evident from the increasing greenhouse gas concentrations in the atmosphere, positive radiative forcing, observed warming, and advanced understanding of the climate system.

Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Global surface temperature change for the end of the 21st century is likely to exceed 1.5°C relative to pre-industrial levels for nearly all Representative Concentration Pathways (RCP) scenarios. It is likely to exceed 2°C even if strict mitigation measures are applied immediately. Most aspects of climate change will persist for many centuries even if emissions of CO₂ are stopped. This represents a substantial multi-century climate change commitment created by past, present and future emissions of CO₂.

The implications are widespread, affecting all domains of life. The implications for health are diverse, global, and slow or impossible to reverse. In 2000, an estimated 2.6 million DALYs were attributable to climate change in WHO's South-East Asia and Western Pacific Regions, overwhelmingly affecting the poorest populations in low income countries where vulnerability is highest.

Until mid-century climate change will act mainly by exacerbating health problems that already exist. New conditions may emerge under climate change and existing diseases (e.g. foodborne infections) may extend their range into areas that are presently unaffected. But the largest risks will apply in populations that are currently most affected by climate-related diseases severely compromising the goal of health equity.

If climate change continues as projected across the RCP scenarios until mid-century, the major increases of ill-health compared to no climate change will occur through, among others, greater risk of injury, disease, and death due to more intense heat waves and fires; increased risk of under-nutrition resulting from diminished food production in poor regions, and increased risks of food- and water-borne diseases and vector-borne diseases.

More specifically, in Asia-Pacific, people living in low lying coastal zones and flood plains are probably most at risk from climate change impacts. With more than 90% of the global population exposed to tropical cyclones in Asia-Pacific, the impact of such storms, even if their frequency or severity remains the same, is magnified for low lying and coastal zone communities because of rising sea level. In addition, more frequent and intense heatwaves will increase mortality and morbidity in vulnerable groups in urban areas and the transmission of infectious disease and diarrheal outbreaks in rural children will be affected due to warmer air and water temperatures and altered rain patterns and water flows.

Modest improvements in cold-related mortality and morbidity in some areas will be out-weighed, world-wide, by the magnitude and severity of the negative effects of climate change.

In addition to their implications for climate change, essentially all the important Climate Altering Pollutants (CAPs) other than CO₂ have near-term health implications. There are multiple opportunities to achieve co-benefits from actions in different economic sectors such as transport, housing, and food and agriculture that reduce emissions of CAPs and at the same time improve health.

The most effective adaptation measures to reduce risks and vulnerability for health to climate change in the near-term are strengthening health systems, in particular programmes that implement basic public health measures such as provision of clean water and sanitation, secure essential health care including vaccination and child health services, increase capacity for disaster preparedness and response, and alleviate poverty. Enhanced surveillance and early warning systems are essential tools to improve adaptation measures.

Climate change is an impediment to continued health improvements in many parts of the world. Unless immediate and forceful actions are taken to reduce and respond to this threat through appropriate and balanced mitigation and adaptation measures, the disease burdens will increase, with the possibility of severe shocks to global public health security.

ABSTRACTS

24 October 2014 (Friday)



Prof. Jonathan SAMET

Distinguished Professor and Flora L. Thornton Chair
 Department of Preventive Medicine,
 Keck School of Medicine of University of Southern California (USC);
 Director, USC Institute for Global Health, USC
 Los Angeles, USA

Topic: Air pollution
 Talk: Air pollution and health: new aspects of an old problem
 Date: 24 October 2014 (Friday)
 Time: 4:00pm - 4:30pm

Air pollution in cities has long been recognized as a controllable threat to public health through both its acute and long-term adverse effects. Motivated by well-chronicled disasters during the 20th century, such as the London Fog of 1952, evidence-based regulations and resulting air quality management programs have led to marked improvement in air quality in the United States, Europe, and elsewhere. In spite of these gains in some countries, air quality has deteriorated rapidly and sharply in others, and ongoing research continues to link air pollution to adverse health consequences even at concentrations now extant in the United States and Europe. The Global Burden of Disease 2010 placed ambient air pollution and indoor air pollution from biomass smoke among the leading contributors to the global burden of disease.

This presentation addresses outdoor air pollution in the global context, covering the heterogeneity of the pollution problem and the current risks to population health associated with air pollution. The topics to be addressed include:

- The findings of contemporary studies that link ambient air pollution to diverse adverse effects at current concentrations in high-income countries, including the United States and Europe, along with Hong Kong. Emphasis will be given to the findings of recent reports based on long-term cohort studies of air pollution and mortality.
- The implications of the recent classification by the International Agency for Research on Cancer (IARC) of outdoor air pollution and particulate matter air pollution as causing cancer in humans (IARC Group 1).
- The rising evidence that traffic-associated air pollution has adverse effects on the health of adults and children. These effects appear to reflect exposure to the pollutant mixture and not to particular components.
- The potential for the quickly rising air pollution levels in the cities of India, China, and elsewhere to cause air pollution disasters comparable to those that occurred historically in London, the Meuse Valley, and Donora, Pennsylvania.

ABSTRACTS

The presentation will also cover the need for research targeted at critical gaps that impede decision-making, which include: 1) New methods and new research directed at the toxicity of air pollution mixtures, attempting to identify determinants of mixture toxicity and appropriate indicators; 2) Deeper understanding of the risks of traffic-associated pollution; 3) Sharper characterization of the exposure-response relationships for air pollution at lower exposure concentrations, such as those in the United States at present; and 4) Surveillance methods for tracking adverse consequences of air pollution in those cities experiencing ever-higher levels of air pollution. The presentation will close by addressing the challenges to policy-makers at present, given the uncertainties in the current evidence foundation on air pollution and health.

ABSTRACTS

24 October 2014 (Friday)



Mr. Joseph HUI

Deputy Chief Executive Officer (Technology & Corporate Development)
Singapore National Environment Agency
Singapore

Topic: Air pollution
Talk: Control of air pollution in Singapore
Date: 24 October 2014 (Friday)
Time: 4:30pm - 4:45pm

Maintaining good air quality so that residents enjoy a healthy and pleasant living environment has been a priority in Singapore. As a result, the air quality in Singapore compares favourably with that in other major cities in spite of its small land area and the presence of industries within the city state. However, this achievement did not come easily. As a small urbanised city state, maintaining clean air quality is a constant challenge in view of the many constraints.

When Singapore gained independence in 1965, the air quality was a far cry from that of the present day as smoky chimneys and smoky vehicles were common. Although the need for rapid industrialisation was urgent then, the Singapore Government realised that it was necessary to ensure that industrialisation and infrastructure development would not be carried out at the expense of the environment.

The story of air pollution control in Singapore began with the formation of the Anti-Pollution Unit (APU) under the Prime Minister's Office in April 1970. The APU was subsequently transferred to the Ministry of the Environment (ENV) and merged with the Water Pollution Control Section to form the Pollution Control Department (PCD). When the National Environment Agency (NEA) was formed in 2002, PCD became a department under the NEA.

The philosophy of pollution control in Singapore is based on the "Polluter Pays" principle. Over the years, the government has taken a pragmatic approach to balance industrial and economic growth with protection of the air quality. It has adopted various legislative and pollution control measures to ensure that the air quality remains within acceptable standards even as the industries and motor vehicles continue to grow. Technology was also used to enhance the control of emissions from stationary and mobile sources. Through extensive air quality monitoring, judicious environmental planning and effective enforcement, the government has managed to safeguard the ambient environment in Singapore.

As other cities continuously improve their air quality, Singapore will similarly need to ensure that its air quality improves in tandem so that it stays ahead or, at least, has comparable air quality to remain an attractive city in which to live, work and play. There are always new challenges ahead that need to be met by new measures and strategies.

ABSTRACTS

24 October 2014 (Friday)



Prof. WANG Tao

Chair Professor of Atmospheric Environment
The Hong Kong Polytechnic University
Hong Kong, China

Topic: Air pollution

Talk: Air pollution problems in Mainland China and Hong Kong:
causes and emissions control

Date: 24 October 2014 (Friday)

Time: 4:45pm - 5:00pm

This talk gives an overview of air pollution in populated regions of China, including major types of pollutants and present and future emission control policies. Rooted in heavy dependence on coal as the main energy source, sulfur (and associated acid rain) and particulate matter have long been the air-quality concerns at the national level. The recent decades also saw rapid increase in vehicles and industrial activities, leading to another type of air pollution-photochemical smog, which is characterized by harmful levels of ozone (O_3) and fine particulate matter (also called $PM_{2.5}$). Added to these is the outbreak of dust storms in spring in some cities of the north.

To combat serious air pollution problems, Chinese governments have implemented many measures to reduce emission of air pollutants, first to power generation and later to other sectors. The recent extremely severe haze events in Beijing have prompted the central government to set the long-awaited air-quality standard for $PM_{2.5}$ and very challenging air-quality improvement targets in China's three most developed urban clusters.

Developing an effective air-quality management program requires knowledge of pollutant emission, chemical transformations and transport in the atmosphere, impact from local and the regional sources, and effect of air pollution on human health and ecosystems. In this talk, I will give my view on future overlook of air quality in China and need for development, implementation, and evaluation of air-pollution control programs.

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24 October 2014 (Friday)

**Dr. Christine LOH**

Under Secretary for the Environment
Hong Kong Special Administrative Region Government
Hong Kong, China

Topic: Air pollution
Talk: Hong Kong's clean air plan and protection of public health
Date: 24 October 2014 (Friday)
Time: 5:00pm - 5:15pm

Hong Kong is situated in a relatively high air emissions region. This results in Hong Kong being affected not only by its own emissions, but also by emissions from the Pearl River Delta region. Hong Kong is not unique as many cities around the world are affected by their regional environments. It's important to conduct scientific studies in order to make evidence-based control pollution policies. Hong Kong's clean air plan focusses on reducing local emission sources, as well as collaborating regionally with regional authorities to improve air quality. As Shenzhen and Guangdong are making aggressive efforts to reduce their local emissions, the time is ripe for widening and deepening collaboration to manage our shared regional air quality more effectively. Within Hong Kong, beyond implementing local end-of-pipe reduction efforts, Hong Kong must also consider how to help people to reduce their daily exposure to air pollutants. This requires a new approach to health communication that must have the active involvement of health professionals, who are treating or giving health advice to people vulnerable to high pollution episodes.

ABSTRACTS

25 October 2014 (Saturday)



Prof. Yehuda CARMELI

Head

National Institute for Antibiotic Resistance and Infection Control &
Division of Epidemiology, Tel Aviv Medical Centre;

Professor in Medicine

Tel Aviv University

Tel Aviv, Israel

Topic: Antibiotic resistance (Part I)

Talk: Infection control measures to reduce transmission of multiple drug resistant organisms (MDROs): what work and what don't?

Date: 25 October 2014 (Saturday)

Time: 9:10am - 9:50am

Infections by MDROs are associated with severe patients' outcomes. MDR turns antibiotic treatment into non-effective thus leads to delay in effective empiric therapy, null the protective effect of prophylactic antibiotic therapy, and limit to the definitive treatment options. Beyond the effect on the infected individual, the threat of MDROs infections, threaten the ability of hospitals to provide advance medical care and conduct complex procedures which are associated with high risk of infections. The prevalence of various MDROs varies between regions and between healthcare facilities within the same region. Each hospital and region has its unique typical ecology, however, there is no doubt that MDROs are spreading rapidly within and between healthcare facilities and geographical regions. Some MDROs are spreading in the community while others are restricted almost entirely to the healthcare setting. New MDROs and pan-resistant strains for which no effective treatment is available are emerging and their control challenges the healthcare setting. On the other hand antibiotic development is drying. This has led multiple national and international agencies and professional societies and NGOs to call for action to save antibiotics.

Infection control efforts can be focused on two complimentary domains: 1. Measures directed at preventing infections 2. Measures aimed at limiting the spread of MDROs. Infection control efforts may be horizontal (i.e. not directed at specific MDRO) or vertical. Targets and interventions in healthcare setting are traditionally organized at the institution level, however growing evidence suggest that coordinated regional interventions are required to limit the spread of MDROs. Interventions should be tailored to the local epidemiology, structure of the healthcare setting, and the local culture. Great success has been achieved in preventing the spread of MDROs for example various Scandinavian and North European countries have been able to prevent for several decades the spread of MRSA such as the despite worldwide increasing prevalence using a "search and destroy" strategy. The UK, which had established high endemicity of MRSA infections, has been able to reduce by more than 50% the incidence of MRSA bacteremia following governmental program. France, has been able to prevent the wide spread of carbapenemase producing strains (CRE), despite repeated introduction from other countries. Israel has been able through a coordinated program to overcome a CRE nationwide outbreak and reduce dramatically the incidence of CRE in acute and long-term care facilities. The successes and failures in limiting the spread of MDROs will be further discussed.

ABSTRACTS

25 October 2014 (Saturday)



Dr. HO Pak Leung

Chairman
Health Protection Programme on Antimicrobial Resistance
Scientific Committee on Infection Control, CHP
Hong Kong, China

Topic: Antibiotic resistance (Part I)
Talk: MDROs in Hong Kong: an appraisal of the current threats
Date: 25 October 2014 (Saturday)
Time: 9:50am - 10:10am

The WHO's 2014 global report on antimicrobial resistance reveals that it is no longer a prediction for the future. By looking at 7 common bacteria that cause serious infections from bacteremia to gonorrhoea, high levels of resistance were found in all regions of the WHO. As a densely-populated city, Hong Kong is not spared by this plight of antibiotic-resistant bacteria. As bacteria including *Staphylococcus aureus*, *Escherichia coli*, *Streptococcus pneumoniae*, *Acinetobacter baumannii* which are causative agents of the major infectious syndromes - skin and soft tissue infections, pneumonia, urinary tract infections, septicemia - become increasingly resistant to agents that are widely used for their empirical treatment. Clinicians face increasing numbers of "hit and miss" situations in the hospital and in the community. While there is clearly a need for new antibiotics, pharmaceutical investment in antibiotic research has declined in the past decade leading to a decreasing number of new antibacterial drugs approved for marketing and a dry pipeline for the near future. This is why the medical profession must be more critical than ever of antibiotic use.

The most notorious antibiotic-resistant bacteria are often referred to as MDROs (multidrug-resistant organisms), which the Nobel Prize Laureate, Joshua Lederberg defined as ones that are resistant to one or more therapeutic classes of antimicrobial agents. Examples of MDROs include MRSA (resistant to β -lactams), VRE (resistant to vancomycin/glycopeptides), ESBL (resistant to 3rd generation cephalosporins), CRE (resistant to carbapenems) and CRA (resistant to carbapenems). Besides, resistance percentages (i.e. proportions of resistant isolates among all isolates), changes in the burden of MDROs in healthcare institutes can be monitored by proxy measures including (1) crude incidence, defined as the number of episodes per year; (2) cumulative incidence, defined as the number of episodes per 10000 hospital admission; and (3) incidence density, defined as the number of episodes per 1000,000 patient-days.

While there are significant gaps in knowledge, the current resistance metrics reveal that MDROs are a major public health threat. We need to do more to (1) increase public and professional access figures on patient morbidity / mortality associated with the MDROs, (2) mitigate their adverse impact on patients through better access to rapid diagnostic tests with better turnaround time, and (3) prevent infections to reduce the need for antibiotics in the community and healthcare settings.

ABSTRACTS

25 October 2014 (Saturday)



Prof. Herman GOOSSENS

Professor of Medical Microbiology
University of Antwerp;
Director, Laboratory of Clinical Pathology
Antwerp University Hospital;
Head, Research Laboratory of Medical Microbiology
University of Antwerp
Antwerp, Belgium

Topic: Antibiotic resistance (Part II)
Talk: Impact of antibiotic policy on control of MDRO
Date: 25 October 2014 (Saturday)
Time: 10:50am - 11:20am

MDRO have caused many local and national outbreaks, mostly within specialised hospital units. Control has been difficult in proportion to the size of the outbreak. The recognition that antimicrobial resistance is related to antimicrobial use led to the logical hypothesis that reducing antimicrobial use would reduce antimicrobial resistance. If this hypothesis is true, than simply altering antibiotic formularies may be effective at reducing antibiotic resistance, including MDRO. Such formulary interventions are very attractive because new antibiotics may become available and because strict control practices to prevent transmission of MDRO are difficult to institute and enforce in hospitals. Strategies and antibiotic stewardship programmes have been endorsed for controlling MRSA, ESBL-producing organisms and *C. difficile*. Published studies in support of the effectiveness of changes of antibiotics in reducing MDRO are however far from plentiful and evidence is not strong that reducing antibiotic selective pressure alone can control the spread of MDRO. This is perhaps not surprising because determinants conferring resistance to several different classes of antibiotics are often found together on the same mobile genetic elements, such as plasmids or transposons, and because bacteria can develop resistance very rapidly and therefore switching to another antibiotic can result in perhaps more troublesome resistance outcome. In my lecture I will review the evidence of the impact of antibiotic policies on the control of MDRO, including MRSA, Gram-negative organism, and *C. difficile*.

ABSTRACTS

25 October 2014 (Saturday)



Dr. Andrew Tin Yau WONG

Head
Infection Control Branch, CHP
Hong Kong, China

Topic: Antibiotic resistance (Part II)
Talk: Hong Kong experience in combating antibiotic resistance
Date: 25 October 2014 (Saturday)
Time: 11:20am - 11:40am

Antibiotic resistance is a serious global challenge and Hong Kong is no exception. In Hong Kong, the Centre for Health Protection (CHP) of the Department of Health puts tremendous effort to control antibiotic resistance and works closely with various stakeholders in hospitals in the public and private sectors, as well as the community. The Scientific Committee on Infection Control (SCIC) has been set up under CHP to advise on the scientific basis of infection control practices and develop strategies to control multi-drug resistant organisms (MDROs). Multi-faceted territory-wide control strategies and programmes are in place to combat antibiotic resistance, which covers: 1) Laboratory surveillance and case reporting of antibiotic-resistant organisms, 2) Promotion of rational use of antibiotics, 3) Infection prevention and control, and 4) Promotion of public engagement.

1) Surveillance

Control of antibiotic resistance cannot be achieved without accurate surveillance data. In Hong Kong, a comprehensive surveillance program of antibiotic resistance has been established and CHP has been keeping track of various antibiotic-resistant organisms of public health significance through liaison with public and private hospital laboratories on testing of referred bacterial isolates. In addition, infections caused by Community - associated methicillin resistant *Staphylococcus aureus* (CA-MRSA) has been listed as a notifiable disease since 2007. Unusual clustering of antibiotic-resistant organisms will also be notified to CHP and necessary epidemiological investigations will be conducted.

2) Rational use of antibiotics

Wise use of antibiotics is important to preserve our existing antibiotics. Various programmes have been launched to promote proper use of antibiotics in Hong Kong. For example, antibiotic stewardship programmes have been implemented in public hospitals since 2005; and the "Inter-hospital Multidisciplinary Programme on Antimicrobial Chemotherapy" ("IMPACT") guidelines has been developed for health care workers to facilitate appropriate prescription of antibiotics.

3) Infection prevention and control

Appropriate infection control measures can minimize the transmission and clinical consequences of antibiotic-resistant organisms. In Hong Kong, robust infection prevention and control programs have been implemented in healthcare settings and residential care homes for the elderly (RCHEs). Each hospital has an infection control team to oversee policy and implementation of infection control programs, and RCHEs are required to designate infection control officers for licensure purposes. Infection control guidelines for different MDROs have been published, infection control audits and training programs have been conducted, and training materials are available at a designated training portal on internet for easy reference. Measures to prevent nosocomial infections such as central venous catheter care bundle and infection control measures such as hand hygiene compliance and environmental hygiene have been promulgated in health care settings.

4) Public engagement

Combating antibiotic resistance is everyone's responsibility, and this difficult war cannot be won without the engagement of general public. Mass media campaigns and media briefings to promote hand hygiene and awareness of antibiotic resistance have been arranged from time to time. For instance, promotional activities on the annual Hand Hygiene Awareness Day (5 May) and annual Antibiotic Awareness Day (18 November); and territory-wide Hand hygiene Campaign have been organised to engage the health-care professionals and general public.

ABSTRACTS

25 October 2014 (Saturday)



Ms. Kylie JONASSON

First Assistant Secretary
Department's Office of Health Protection, Australia Department of Health
Canberra, Australia

Topic: Vaccines

Talk: National experience in Human Papilloma Virus mass vaccination campaign in Australia

Date: 25 October 2014 (Saturday)

Time: 1:15pm - 1:45pm

In April 2007, Australia became the first country to introduce an ongoing government funded National Human Papillomavirus (HPV) Vaccination Programme for females aged 12-13 years and a time-limited school and community-based catch up programme, for females up to the age of 26 years.

In February 2013, Australia extended its school-based programme to include males aged 12-13 years, with a two year catch-up programme for males aged 14-15 years.

Australia's three dose coverage rate for females aged 15 years in 2013 is 71%. This coverage rate has remained steady since 2009 and is amongst the best in the world. Whilst there is still room for improvement, uptake of the programme is strong.

National three dose coverage for males in the first year of programme delivery is estimated to be 5-10% lower than that achieved in the female programme. This achievement is very promising with male uptake expected to steadily improve in the coming years as gender neutral HPV vaccination becomes routine.

This broad vaccination coverage is already resulting in significant disease prevention in Australia, with studies indicating a significant decline in the prevalence of genital warts, in both the vaccinated and unvaccinated cohorts, as well as declines in the prevalence of the four HPV vaccine types (6, 11, 16 and 18) in Pap smears.

Australian reviews of our vaccine safety system have found that establishing appropriate risk management strategies, including the implementation of active vaccine safety surveillance mechanisms (where required) prior to implementing large scale vaccination programmes, was an important part of maintaining widespread community acceptance of the benefits of vaccination and confidence in the safety of vaccines. Active vaccine safety surveillance of known conditions in order to monitor, analyse and report on any adverse events outside that expected is integral to maintaining this confidence in vaccine programs.

This presentation will discuss some of the positive actions to date, lessons learnt in managing and responding to vaccine safety concerns, and how these were implemented during the extension of the National HPV Vaccination Programme to males in 2013.

ABSTRACTS

25 October 2014 (Saturday)



Dr. CHOW Chun Bong

Chairman
Scientific Committee on Vaccine Preventable Diseases, CHP
Hong Kong, China

Topic: Vaccines
Talk: Evidence for recommendations on seasonal influenza vaccination
Date: 25 October 2014 (Saturday)
Time: 1:45pm - 2:00pm

Seasonal influenza causes a significant disease burden in Hong Kong and vaccination remains one of the most effective measures against the disease. Since 2004, the Scientific Committee on Vaccine Preventable Diseases (SCVPD) under the Centre for Health Protection (CHP) has been reviewing the scientific evidence of influenza vaccination and recommended the priority groups for influenza vaccinations annually.

The Northern hemisphere experienced the 2013/14 winter influenza season from the end of 2013 to the early months of 2014. Locally the winter influenza season started in early January 2014 and lasted for about four months until late April. The season's onset was reflected by increase in a number of parameters, including the percentage of respiratory specimens tested positive for influenza viruses by the Public Health Laboratory Services Branch (PHLSB) of CHP and hospital admission rate with diagnosis of influenza.

It is noted that locally influenza A and B viruses co-circulated in this season. The first half of the season was dominated by influenza A viruses especially influenza A(H1N1)pdm09, while the later half was dominated by influenza B viruses. The majority of the influenza B viruses belonged to the Yamagata lineage which was well matched with the vaccine virus for the 2013/14 season.

Similar to previous influenza seasons, in the 2013/14 winter season, there were severe adult and paediatric cases of influenza associated with ICU admissions or deaths reported. It was found that the majority of severe influenza cases did not receive the influenza vaccine.

Based on the number of influenza virus detections by PHLSB from 2003 to 2014 (as of March), influenza A and influenza B viruses respectively constituted about 85% and 15% of all positive influenza detections on average. During the same period, out of the 20 influenza seasons, there were 8 seasons when the percentage of influenza B viruses among the positive influenza detections was more than 15%. This means influenza B circulated in a season approximately every one to two years. For influenza B, Yamagata and Victoria lineages each constituted approximately half of the influenza B detections with varying proportions in a single season. Therefore trivalent influenza vaccine may potentially prevent majority of influenza burden in Hong Kong, while quadrivalent influenza vaccine may potentially offer additional protection against influenza B.

(To be continued on P.24)

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25 October 2014 (Saturday)

(Continued from P.23)

With regard to priority groups for influenza vaccination, WHO recommends in its latest position paper on influenza vaccine that pregnant women should have the highest priority for vaccination. Such recommendation is based on evidence of a substantial risk of severe disease in this group and evidence that seasonal influenza vaccine is safe throughout pregnancy and effective in preventing influenza in the women as well as in their young infants in whom the disease burden is also high. In Hong Kong, pregnant women have been listed as one of the priority groups since 2006/07 and this group continues to be recommended to receive 2014/15 seasonal influenza vaccine.

ABSTRACTS

25 October 2014 (Saturday)



Prof. LAU Yu Lung

Chairman
Working Group on Pneumococcal Vaccination
Hong Kong, China

Topic: Vaccines
Talk: Local epidemiology of invasive pneumococcal disease
Date: 25 October 2014 (Saturday)
Time: 2:00pm - 2:15pm

Streptococcus pneumoniae (pneumococcus) is a common causative agent for acute otitis media and pneumonia. It also causes various forms of invasive pneumococcal disease (IPD) such as meningitis and septicaemia.

In Hong Kong, incidence of IPD is highest among young children and the elderly. In September 2009, 7-valent pneumococcal conjugate vaccine (PCV7) was included in the Hong Kong Childhood Immunisation Programme (HKCIP). In October 2010, it was replaced by 10-valent pneumococcal conjugate vaccine (PCV10), which was in turn replaced by 13-valent pneumococcal conjugate vaccine (PCV13) in November 2012.

The Centre for Health Protection (CHP) of the Department of Health (DH) conducts surveillance of IPD at several levels. Firstly, a laboratory surveillance system covering all microbiology laboratories in public and private hospitals in Hong Kong was set up. The Public Health Laboratory Services Branch (PHLSB) of the CHP centrally processes all pneumococcal isolates from sterile sites for serotyping, antimicrobial susceptibility testing and characterisation. Secondly, starting from 2014, doctors are requested to report IPD cases in children under the age of 18 to the CHP. Thirdly, data related to hospitalized IPD cases can be obtained from the Hospital Authority (HA). The data from the different surveillance systems are analysed to monitor the trend of IPD in Hong Kong, with particular focus on issues of serotype replacement, emergence of serotype 3 and apparent increase in cases of empyema.

According to the laboratory surveillance system, the annual number of IPD cases aged under five was similar in the pre-vaccine era (19 in both 2007 and 2008) and the post-vaccine era (15 to 22 from 2010 to 2013). In addition, we observed significant changes in serotype distribution of IPD cases. Proportion of cases caused by serotypes contained in PCV7 (i.e. 4, 6B, 9V, 14, 18C, 19F and 23F) decreased from 53% in the pre-vaccine era to 11% in the post-vaccine era. On the other hand, proportion of cases caused by serotypes 3, 6A and 19A, which are only contained in PCV13, increased from 13% in the pre-vaccine era to 68% in the post-vaccine era.

(To be continued on P.26)

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25 October 2014 (Saturday)

(Continued from P.25)

Since the start of paediatric IPD reporting in 2014, we received 20 reports of IPD cases aged under five from January to July. Pneumonia (80%) was the commonest clinical presentation and 55% also presented with empyema. Serotypes 3 and 19A accounted for 60% and 20% of these cases. Of these 16 cases caused by serotypes 3 and 19A, 10 had received at least three doses of PCV13. 60% of these 20 cases were admitted to intensive care unit. One fatal case affecting a three year old girl was recorded.

In conclusion, serotype replacement in the IPD cases was observed. Surveillance of IPD at different levels should be continued and evaluation of the vaccine effectiveness of PCV13 can be done when more data is available.

ABSTRACTS

25 October 2014 (Saturday)



Prof. ZHONG Nanshan

Director
State Key Laboratory of Respiratory Disease
Guangzhou, China

Topic: Avian flu
Talk: Perspectives of the control of H7N9 infection in the mainland of China
Date: 25 October 2014 (Saturday)
Time: 2:55pm - 3:25pm

From March 2013 to June 2014, there were 434 cases with H7N9 infection and 165 died (38%) in the mainland of China. Among them, 46% patients were over 60 years old, 44% with a history of direct poultry exposure and 50% with indirect poultry exposure. HA in certain strains of H7N9 (ex, rAH-H7N9 <Anhui>) was able to bind both the human and avian receptor; AH-H7N9 mutant HA (L226Q) still has dual receptor binding property.

Medical professionals should be alert in clustering infected patients who may be with unknown etiology. Denomination (human H7N9 infection or human avian H7N9 infection) was important for the government to draw up policies in the control of poultry breeding and butchering. Lack of ideal animal models for avian influenza virus is a problem for further research. Tree shrew may be an ideal animal model with influenza infection.

Late diagnosis, patients with underlying diseases (61.3%) and delay of antiviral therapy (≥ 3 days) contributed to the high mortality of H7N9 infection. Patients who developed ARDS were significantly related to the age, underlying diseases, Lymphocyte $<1000/mm^3$, AST $>40u/L$, CK $>200u/L$. Detection rate of virus was much higher and sensitive in expectorate sputum, aspiration from the lower airway than from the specimen of throat swab. In contrast to general influenza, duration of positive detection of H7N9 influenza was lasting for up to 30 days in severe patients. Period of viral load in the airway correlated to the severity and outcome. Double dose of Oseltamivir may be effective in the management of critical ill patients. Anti-H7N9 (neutralizing antibody) serum from horse or Rhesus macaque may be of value in rescuing life-threatening patients.

Owing to the diversity and variability of virus and the relative stability of hosts, more attention should be paid to the management of host innate/acquired immune dysfunction following viral infection. Certain agents had been shown to be effective in inhibiting cytokine storm caused by H7N9. Data also suggested that such severe influenzas are associated with increased transcription of inflammatory cytokine genes, reduced transcription of lipid metabolism and coagulation genes. Further study could help investigators to identify potential therapeutics aimed at turning down the response.

ABSTRACTS

25 October 2014 (Saturday)



Dr. CHUANG Shuk Kwan

Consultant Community Medicine (Communicable Disease)
Surveillance and Epidemiology Branch, CHP
Hong Kong, China

Topic: Avian flu

Talk: Local efforts in prevention and control of human avian flu H7N9 infection

Date: 25 October 2014 (Saturday)

Time: 3:25pm - 3:40pm

Avian influenza first caught global attention in 1997 when Hong Kong experienced the first human outbreak of H5N1 infection with about 20% positive detections in chickens in farms and markets. Since then a series of prevention and control measures have been put in place by multiple sectors to prevent and control of both poultry and human avian influenza infection. Such measures have been refined and stepped up over the years in response to local poultry outbreaks. No locally acquired human H5N1 infection has been recorded since 1997 despite a few imported infections.

H7N9 virus differs from H5N1 in that it causes a low pathogenic infection in poultry but is highly lethal in human. Local prevention and control measures for H5N1 are applicable for H7N9 but there is not yet poultry H7N9 vaccine and there are no chicken dies off to signify infected poultries. This makes the prevention and surveillance of H7N9 more difficult in poultry populations. The speed of spread of human H7N9 infections has been faster than in the case of H5N1 with more than 400 cases reported in the Mainland since March 2013. In addition, 15 cases were imported into other areas from Mainland China (10 cases in Hong Kong, 4 cases in Taiwan and 1 case in Malaysia). The affected cases were older with a case fatality rate of about 40%. With the extensive contact tracing, Tamiflu chemoprophylaxis of close contacts and medical surveillance, no secondary transmission occurred among the contacts of the 10 imported cases.

With the likely re-emergence of H7N9 in the coming winter, the prevention and control will become more challenging. The Hong Kong Government has a Preparedness Plan for Influenza Pandemic with preparedness in antiviral stockpiling. We have enhanced surveillance of suspected human cases in collaboration with the medical community. Any suspected case will be notified, isolated and tested. We will continue to maintain close liaison with the World Health Organization, the Mainland and overseas health authorities to monitor the latest development and obtain timely information. Regarding risk communication, we maintain a high degree of transparency in dissemination of results and providing updates on the disease to the general public, healthcare professionals and relevant stakeholders. We have organised various health education activities and provided health advice on disease prevention, personal hygiene and environmental hygiene to increase the publicity and raise community awareness. On the infection control front, we have promulgated guidelines and organised training to healthcare workers, residential care homes and schools. The CHP will continue to maintain a high degree of vigilance to monitor the situation and implement necessary control measures timely to prevent the spread of the disease in collaboration with other relevant government departments and stakeholders.

ABSTRACTS

25 October 2014 (Saturday)



Head
Public Health Laboratory Services Branch, CHP
Hong Kong, China

Topic: Avian flu
Talk: Laboratory testing of human H7N9 infection - Hong Kong experience
Date: 25 October 2014 (Saturday)
Time: 3:40pm - 3:55pm

With the continued emergence of infections of public health significance, a public health laboratory must be vigilant for necessary service developments to ensure constant preparedness. Apart from the adoption of advanced technologies and automation, it is paramount to prioritize efforts on the development of professional knowledge and expertise of personnel, so as to fulfill evolving medical needs and public expectations. In terms of influenza A H7N9 infections in human, since the first public announcement of the infection in March 2013, the public health laboratory in Hong Kong has initiated preparations for laboratory testing, in anticipation of the detection of cases in the local healthcare setting. The first laboratory-confirmed case in Hong Kong was diagnosed in December 2013. This presentation will describe the local experience in laboratory testing of influenza A H7N9, in terms of screening and confirmation of infection, and virus characterization, in support of clinical management and public health considerations.

ABSTRACTS

25 October 2014 (Saturday)



Ms. Hannah BRINSDEN

Policy and Advocacy Researcher
World Obesity Federation

Topic: Childhood obesity - a global epidemic
Talk: Leave it or beat it!
Date: 25 October 2014 (Saturday)
Time: 9:10am - 9:50am

Obesity has nearly doubled worldwide since 1980 and is now recognized as one of the most important public health problems facing the world today. Figures suggest that between 1.5 and 2.1 billion adults are overweight or obese, representing approximately a quarter of all adults globally. Obesity is a key risk factor of non-communicable diseases (NCDs), including type-2 diabetes, hypertension and coronary-heart disease, and many different cancers. The number of children who are overweight is of particular concern, with over 200 million school-age children and over 40 million under-fives being classified as overweight. Even from young ages, overweight and obese children suffer from associated physical, psychological and social morbidities and are at increased risk of adolescent and adult obesity and associated health issues.

A complex range of factors can lead to weight gain in an individual, with genetics and psychology playing an important role. These factors however cannot explain the rise in obesity that has been seen over the past few decades. Instead, widespread changes to our environment and culture as a result of globalisation and development are to blame. In response to this growing burden, the World Health Organisation (WHO) has set a target to halt the rise in obesity by 2025. This will require global action focused on the prevention of obesity and tackling the root causes. This presentation will describe the obesity levels around the world, identify the major causes and highlight the concerted actions that are required by governments, researchers, civil society and businesses alike to tackle this global epidemic.

ABSTRACTS

25 October 2014 (Saturday)



Prof. YANG Xiaoguang

Professor

National Institute of Nutrition and Food Safety, Chinese Center for Disease Control and Prevention
China

Topic: Childhood obesity - a global epidemic

Talk: Childhood obesity in China

Date: 25 October 2014 (Saturday)

Time: 9:50am - 10:10am

With the rapid changes in lifestyle, the problem of overweight and obese of children become increasingly prominent not only in urban areas, but also in rural areas. In 2005, the prevalence of overweight and obesity in urban and rural children under 5 were 5.3% and 3.9% respectively, by 2010, the prevalence of overweight and obesity increased to 8.5% and 6.5% respectively in urban and rural. National Constitution Student Survey data show that the prevalence of obesity of aged 6-18 children in 2005 was 3.82%, it increased to 4.95% in 2010. National Nutrition and Health Survey data show that the prevalence of overweight and obesity of children aged 7-17 were 4.5% and 2.1% respectively in 2002, it was higher in urban than rural areas, and boys than girls. The prevalence of overweight and obesity of children aged 7-17 were increased respectively to 9.6% and 6.2% in 2012. The situation is more serious in big cities, such as in Beijing, the prevalence of obesity of children 7-17 increased from 9.84% in 2004 to 16.58% in 2013, the incidence of severe obesity increased from 1.86% to 4.17% by 2013. Compared with normal weight children, overweight and obese children were more likely to have metabolic syndrome (MetS), it was worse in the case of severe obesity, 52.69% of severe obese children was hypertension. The rapidly rising trend of overweight and obesity in Chinese children has become an important public health problem seriously endanger public health, if we do not take effective interventions, childhood overweight and obesity will affect China's sustainable development and people's health and well-being.

ABSTRACTS

25 October 2014 (Saturday)



Dr. Regina CHING

Head
Surveillance and Epidemiology Branch, CHP
Hong Kong, China

Topic: Strategies for non-communicable disease control

Talk: Hong Kong experience

Date: 25 October 2014 (Saturday)

Time: 10:50am - 11:15am

Non-communicable diseases (NCD) are chronic diseases affecting all age groups in all regions. Driven by population ageing, rapid urbanisation, social disparity and globalisation, the NCD epidemic is seriously threatening global health by causing suffering, disability and premature deaths. The epidemic also undermines social development and economic prosperity worldwide.

Locally, as life expectancy at birth for both sexes steadily increases, the proportion of population aged 65 and over is projected to rise markedly, from 13% in 2011 to 30% in 2041. Added to population ageing, increasing health disparity is set to make certain underprivileged groups more vulnerable to the effect of NCD. Meanwhile, major modifiable behavioural risk factors remain prevalent as revealed by the Behavioural Risk Factor Surveillance System. In year 2012, among local adults aged 18 to 64 years, the prevalence of inadequate daily fruit and vegetables intake (< 5 servings per day), inadequate physical activity (by the WHO's recommended levels), overweight or obesity (BMI \geq 23) and binge drinking (\geq 5 drinks on one occasion in the past 30 days) were 82.0%, 60.4%, 36.6% and 6.3% respectively. The daily smoking prevalence released in 2013 reached 10.7%, an all-time low. A lot remains to be done to tackle the unprecedented NCD challenge.

The good news is, NCD burden and productivity loss can be ameliorated through effective public health interventions that target modifiable behavioural risk factors and environmental determinants. According to the World Health Organization, 'best-buy' population-based measures for reducing tobacco and harmful alcohol use, as well as unhealthy diet and physical inactivity, are estimated to cost less than USD 0.40 per person in low and middle income countries. Combating NCD is no longer a remote possibility.

For efficient and cost-effective tackling of the NCD epidemic in Hong Kong, a strategic document entitled "Promoting Health in Hong Kong: A Strategic Framework for Prevention and Control of Non-communicable Diseases" was launched by the Department of Health in 2008. The strategy calls for **P**artnership, creation of a supporting **E**nvironment, **O**utcome-focused and **P**opulation-based interventions so that along the **L**ife course, individuals are **E**mpowered to make healthy life choices. In gist, we drive actions through **P**EOPLE. A high level steering committee chaired by the Secretary for Food and Health serves as infrastructure to oversee all-of-society efforts to battle against NCDs. These pave the way for the promulgation of Action Plans in 2010, 2011 and 2014 to promote healthy diet and physical activity participation, reduce alcohol-related harm and strengthen prevention of unintentional injuries respectively. In the last decade, various community-wide programmes including StartSmart@school.hk, EatSmart@school.hk, EatSmart@restaurant.hk and Exercise

ABSTRACTS

Prescription Project have been implemented to promote healthy lifestyle in different settings. By working closely with partners and stakeholders from across sectors and disciplines, we strengthen community capacity for combating NCDs. Only political commitment and unwavering community support can take NCD control to the next level of impact.

ABSTRACTS

25 October 2014 (Saturday)



Dr. Donald Li

President
Hong Kong Academy of Medicine
Hong Kong, China

Topic: Strategies for non-communicable disease control

Talk: When doctors voice advocacy

Date: 25 October 2014 (Saturday)

Time: 11:15am - 11:40am

Advocacy has a wide range of meanings, depending on the context. There is no single thing that advocacy describes. The simplest definitions describe it as *“Public support for or recommendation of a particular cause or policy”* (Oxford English dictionary), and *“The act or process of supporting a cause or proposal”* (Merriam-Webster’s medical dictionary).

However, when advocacy is applied to health, especially applied to supporting or changing health behaviours and determinants, it becomes more complex. While doctors have traditionally been protectors and advocates of their patients, today, there is ever greater need for doctors to be advocates for the wellbeing of whole populations.

Not only is there need, doctors have the power to be highly effective advocates. Doctors regularly top the list, both here and overseas, of most trusted professions. They should capitalize on this trustworthiness to persuade both the general public and decision-makers to make changes for better health.

During this presentation, the ways in which advocacy has been effectively applied by the Hong Kong medical profession - both as individuals challenging powerful anti-health interests such as the tobacco lobby (e.g. Dr. Judith Mackay) and as organizations (e.g. one of the Colleges is no longer serving alcohol at gatherings in order to encourage reduction in alcohol use - leading by example).

The discussion will also consider medical advocacy as a conduit or channel, mediating and negotiating between opposing forces in the interests of positive health, abandoning adversarial positions in order to develop a common agenda. This is very much a part and purpose of the work of the Hong Kong Academy of Medicine (HKAM).

Lastly I will discuss the role of the medical profession and the HKAM in improving the health of communities through advocating for healthy public policies and supportive environments; mediating between different interests in society to benefit health; and enabling communities and individuals to achieve their full potential.

ABSTRACTS

25 October 2014 (Saturday)



Ms. Susan ANDERSON

General Manager Adult Programs Priority Populations
Beyondblue
Melbourne, Australia

Topic: Mental health

Talk: *beyondblue* 14 years on tackling depression, anxiety and suicide in Australia

Date: 25 October 2014 (Saturday)

Time: 1:15pm - 1:45pm

beyondblue, the national depression and anxiety initiative, is an independent, not-for-profit organisation working to increase awareness and understanding of depression and anxiety in Australia and to reduce the associated stigma. 14 years ago our original objective was to raise awareness of depression. Our work over the years has increased and now includes services and support aimed not only at raising awareness of depression but also, anxiety and most recently suicide prevention.

Our work takes a population health approach in raising awareness of depression and anxiety, reducing the associated stigma, building resilience and encouraging people to take action.

We have always aimed to help people to recognise the signs and symptoms of depression and anxiety, and encourage them to get help early, before these conditions become more severe and disabling.

Today across Australia, 90% of people recognise the *beyondblue* brand – and expect us to be able to help when they themselves, a family member or friend needs advice when things get on top of them.

Ms. ANDERSON will outline *beyondblue's* current strategies and showcase some initiatives at a population level, and also others which target specific groups.

For example; over the past few years, *beyondblue* has been implementing initiatives to get prevention, early intervention and help-seeking messages to hard-to-reach men. *beyondblue* adapted a successful US suicide prevention campaign called Man Therapy, which uses humour to get men take action.

Recently, in association with a national alliance of business, community and government, *beyondblue* launched the Heads Up initiative to encourage business and employers to give people's mental health the same priority they give people's physical health and safety.

beyondblue also run campaigns to raise awareness about how discriminatory behaviour towards specific population groups can, not only increase people's levels of distress, but can lead to higher levels of depression and anxiety - and even suicide.

Ms. ANDERSON will reflect on the lessons learned by *beyondblue*, its successes and future challenges.

ABSTRACTS

25 October 2014 (Saturday)



Prof. Sandra CHAN

Associate Professor

Department of Psychiatry, The Chinese University of Hong Kong
Hong Kong, China

Topic: Mental health

Talk: Early detection and management of depression in primary care setting

Date: 25 October 2014 (Saturday)

Time: 1:45pm - 2:15pm

Depression is a common and potentially disabling mental health problem accounting for substantial proportion of disability adjusted life years attributable to chronic medical diseases. Individual vulnerability responds to developmentally specific stressors across lifespan to develop disabling depressive symptoms that are prone to recurrence and escalation over the course of illness. The ensuing risks of depression are not directly correlated with quantity of symptoms but also the social context and individual personality factors. Sub-threshold symptoms of depression can also be disabling. The public health significance of depression on a wide continuum of symptom severity calls for depression care with a flexible, multi-layered and collaborative approach. This is analogous to the management of common vascular risk factors such as diabetes mellitus (DM) that is a chronic and prevalent medical problem with multiple aetiologies across lifespan associated with common pathways to potentially disabling health hazards in terms of end organ failure. In the case of DM, early detection, adequate homeostatic control with multi-modal means, and prevention (or early intervention) of end-organ complications are effected through primary care gatekeeping, early and continuous treatment, and multi-level collaborative care management across its chronic course of illness.

The unique quality of therapeutic alliance in primary care setting makes it ideal for the health awareness promotion, early detection of depression and initiation of treatment, gatekeeping and referral for tertiary level collaborative care. Help-seeking behaviour of depressed patients can usually be met by primary health care provision as most depressed patients (unlike patients with psychosis) have preserved insight and motivation to seek treatment. There are many collaborative care models that are proven effective with rigorous scientific evaluation on a large number of patients in generic clinical setting. Despite the feasibility and effectiveness of depression care in the primary care setting, barriers to service implementation unique to local setting has to be addressed to promote reception of depression cases in primary care.

ABSTRACTS

25 October 2014 (Saturday)



Dr. Judith MACKAY

Senior Advisor
World Lung Foundation

Topic: Cancer

Talk: What have we learnt from 30 years of anti-tobacco efforts?

Date: 25 October 2014 (Saturday)

Time: 2:55pm - 3:25pm

Background:

The tobacco epidemic has persisted in spite of centuries of knowledge and decades of action, progress in policy development and public awareness, multiple World Health Assembly resolutions, 15 World Conferences since 1967, many regional, national and sub-national meetings, regional action plans, the 2005 World Health Organization Framework Convention on Tobacco Control (WHO FCTC), and the 2011 United Nations High Level Summit on Non-Communicable Diseases.

The Asia-Pacific is the world's largest producer and consumer of tobacco, and thus the prime target of the tobacco industry. Some jurisdictions like Singapore and Hong Kong have a history of tobacco control activities from the 1970s. Asia has been a front-runner on bans on advertising and duty-free cigarettes (Singapore), the establishment of a government-funded tobacco-control organisation and a ban on smokeless tobacco (Hong Kong), the use of tobacco tax to fund health promotion (Thailand), plain packaging (Australia), and a 5% "Endgame" prevalence target (New Zealand). The Western Pacific remains the only WHO region where all countries have ratified the WHO FCTC. Several jurisdictions (Hong Kong, Japan, Singapore) have halved male prevalence over the last 40 years, and the expected increase in female smokers has not materialised.

Lessons learned:

- The approach to reducing the tobacco epidemic is very different from previous communicable epidemics.
- In spite of differences between countries of population size, income and political systems, the similarities of the harm caused, obstacles faced, and tobacco control action is virtually identical.
- Obstacles include comparative lack of involvement by health professionals and a focus on curative not preventive medicine; preoccupation with other diseases or events that kill far fewer than tobacco; lack of awareness of the degree of risk; misunderstanding of the economic and environmental costs; lack of funds for research and intervention; the Millennium Development Goals failed to mention non-communicable diseases as, wrongly, tobacco has not been seen as a development issue and until recently no targets.

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ABSTRACTS

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- The biggest obstacle is the tobacco industry, the vector of this epidemic, which secretly hires consultants to discredit evidence; finances research; funds ineffective youth smoking prevention campaigns, smokers' rights organizations and front groups; engages in promotion strategies; lobbies to oppose effective control measures; challenges governments with trade-based threats, and wrongly claims tobacco control will harm the economy.
- Political will is crucial: this epidemic will never be solved in the corridors of hospitals and clinics, but in the corridors of power. Only governments can mandate public health legislation, implement taxation policy, ratify and implement UN treaties such as the WHO FCTC, and broadcast regular mass media campaigns.
- There is a need for sound data to support comprehensive policies, effective health promotion, support from WHO, NGOs, academia and individuals, enforcement after legislation, and decades of persistence.
- The future challenge to Asian countries is to meet the WHO target of a 30% relative reduction in prevalence of tobacco use in persons aged 15+ years by 2025. More ambitiously, Hong Kong could adopt an "Endgame" target of 5% prevalence rate by 2022, thus becoming the first jurisdiction in the world to achieve this.

ABSTRACTS

25 October 2014 (Saturday)



Prof. Martin WONG

Director

The Chinese University of Hong Kong Jockey Club Bowel Cancer Centre
Hong Kong, China

Topic: Cancer

Talk: Colorectal Cancer Screening - From evidence to practice

Date: 25 October 2014 (Saturday)

Time: 3:25pm - 3:40pm

Colorectal cancer (CRC) is the second most common cancer in men and third in women, comprising of more than 10% of all malignancies and 8% of all cancer deaths globally. In the past few decades, many Asia Pacific countries like Japan, China, Korea, Singapore and Hong Kong have experienced a two-to three-fold rise in new CRC cases. In Hong Kong, CRC ranks the first among the most common malignancies, and is also the second commonest cause of cancer-specific deaths. The age-standardized incidence rates per 100,000 persons in 2010 were 47.0 and 30.1 for men and women, respectively. The direct medical cost for the care of colorectal neoplasia was estimated at US\$45,115 for stage IV CRC in the initial year of care, leading to a substantial public health burden to the healthcare system.

CRC screening by faecal occult blood tests, flexible sigmoidoscopy and colonoscopy was shown to be effective to reduce CRC mortality by 33%, 40% and 56%, respectively. Guidelines recommended population-based CRC screening among average-risk individuals aged 50-75 years. The Hong Kong Government has formulated strategies to subsidize eligible citizens to undergo CRC screening in the community.

A pilot CRC screening programme will be launched in 2015. Important questions include:

1. What tools are available to risk stratify screening participants in the Asian countries?
2. Which screening test should be used as the primary screening tool? How about test brands, number of specimens and screening intervals?
3. What performance indicators should be under rigorous audits?
4. How can we enhance screening uptake and compliance over time?

The seminar will address these questions based on the most updated evidence from existing literature, as well as data from more than 10,000 screening participants who joined the screening programme of the CUHK Jockey Club Bowel Cancer Education Centre since 2008.

ABSTRACTS

25 October 2014 (Saturday)



Prof. LAM Tai Hing

Chairman
Cancer Expert Working Group on Cancer Prevention and Screening
Hong Kong, China

Topic: Cancer

Talk: Is Hong Kong ready for population-based mammography screening?

Date: 25 October 2014 (Saturday)

Time: 3:40pm - 3:55pm (15 mins)

INTRODUCTION

The Cancer Expert Working Group on Cancer Prevention and Screening (CEWG) was established in 2002 under the Government's Cancer Coordinating Committee to keep in view local and international scientific evidence and formulate local recommendations on cancer prevention and screening.

SUMMARY

In examining whether to introduce a population-based cancer screening programme, a number of factors need to be carefully considered, such as prevalence of that cancer, accuracy and safety of screening tests for local population, as well as effectiveness in reducing incidence and mortality rates and potential harms. Other issues must be considered carefully, such as feasibility, cost-effectiveness, public acceptance, implications on symptomatic patients and service load.

Mammography is widely used in countries with population-based breast cancer screening programme. However, debate has grown in recent years over the benefits and harms of breast cancer screening. Findings of some studies showed mammography screening did not reduce mortality from breast cancer but led to over-diagnosis and unnecessary treatments. A report published by the Swiss Medical Board in December 2013 recommended suspension of systematic mammography screening programmes, given that small reduction in mortality from breast cancer is offset by excess therapy and psychological stress in the event of false-positive screening results. In February 2014, another randomised controlled trial in Canada showed that annual mammography did not decrease breast cancer deaths in women aged 40-59, but caused substantial over-diagnosis, supporting the rationale for mammography screening should be urgently reassessed by policy makers.

Locally, the age-standardised incidence rate of breast cancer is still much lower than those in Western countries and the positive predictive value of mammography is hence lower. Population-based mammography screening may yield more harms and not be cost-effective.

RECOMMENDATIONS

The CEWG reaffirmed its recommendations in 2012 that there is insufficient evidence to recommend *for or against* population-based mammography screening for **general female population** in Hong Kong. Recent review and evidence also support this recommendation. Physicians should discuss both the benefits and harms of breast cancer screening with each woman so as to help her make an informed decision for personal benefit. For **women at increased risk** (e.g. being a carrier of BRCA1/2 deleterious mutations, with family history of breast/ovarian cancer etc.), the CEWG recommends them to consult a cancer specialist whether they should receive breast cancer screening, starting age and frequency of screening. Moreover, CEWG advises that all women should be breast aware and visit their doctors promptly if unusual changes appear.

CONCLUSION

Since there are no locally validated tools for breast cancer risk assessment, the CEWG supports local research to bridge knowledge gaps on prediction and quantitative risk assessment of breast cancer in the local female population is urgently needed. Currently, there is insufficient evidence *for or against* population-based mammography screening in Hong Kong. CEWG will continue to monitor global and local evidence and developments to ensure Government's cancer screening policy is scientifically sound and relevant to local needs and circumstances. Last but not least, high priority should be accorded to primary preventive measures.

