



## Seminar 6

Saturday, 7 December 2019 • 11:30 – 12:30 • Pao Yue Kong (G/F)

### From Hepatitis Management to Achieve its Elimination



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As a Senior Public Health Physician with more than three decades experience in public health program at various level in Malaysia, he has been engaged in a wide range of public health issues including HIV/AIDS, other sexually transmitted infections, vector borne diseases, food and water borne diseases, vaccine preventable diseases, public health management and others. He is currently Director of the State Health Department of Pahang, Malaysia; President of Malaysian Alumni, Malaysian Alumni of Epidemic Intelligence Program; President of College of Public Health of Academy of Medicine; Head of Discipline for Communicable Disease Epidemiologist; Deputy Chair of Country Coordinating Committee (CCM) on Global Fund for Malaysia; Supervisor for Epidemic Intelligence Program (EIP) of Malaysia and Board of Study for Epidemic Intelligence Program of Malaysia.

#### Initiative on Triple Elimination of Mother to Child Transmission (EMTCT) of HIV, Syphilis and Hepatitis B – The Malaysia Experience

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Malaysia received the much-coveted validation status from WHO for achieving the EMTCT of HIV and syphilis in October 2018; making it the first country in the Western Pacific Region to receive the honour. With achievement of dual elimination, Malaysia has set target to achieve triple elimination (Hepatitis B) in the years to come.

Intervention to prevent vertical transmission dated 20 years and 30 years back for HIV and congenital syphilis. It entails provision of antenatal screening of syphilis and HIV at first booking. Infected pregnant women and infants are given free treatment, continued for life in case of HIV infection. HIV-exposed infants are given free antiretroviral prophylaxis and free infant formula for two years. While congenital syphilis has always remained less than 50 per 100,000 live births, HIV vertical transmission rate reached global elimination target of less than 2% for the first time in 2016 and maintained till now.

One of Malaysia's strong points in achieving eMTCT is full integration of HIV and syphilis care into the existing Maternal and Child Health (MCH) services which is of high-quality, low-cost and universally accessible for all including the vulnerable populations. In 2019, three sub-nationals in Peninsular Malaysia embarked on Hepatitis B antenatal screening pilot program besides Sabah of Borneo that pioneered the Hepatitis B screening among antenatal mothers since 2003.



#### Dr. SETO Wai Kay

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Dr. Wai-Kay Seto is currently a Clinical Associate Professor in the Department of Medicine, the University of Hong Kong, Hong Kong. He is also the Assistant Hospital Chief Executive (Research); Director, Clinical Trials Center; and Consultant in Medicine of the University of Hong Kong-Shenzhen Hospital, Shenzhen, China. He has published more than 150 international journal articles and book chapters, including first-authored articles in the Lancet, Journal of Clinical Oncology, Gut, Journal of Hepatology and Hepatology, majority related to research on chronic liver diseases. He has been awarded the Distinguished Young Fellow (2013) from the Hong Kong Academy of Medicine; the Guangdong Province Outstanding Young Medical Talent Award (2017), the Outstanding Young Research Award (2016-2017) from The University of Hong Kong, and the Asia-Pacific Digestive Week Emerging Leader from the APDW Federation (2018).

#### 2030: Will Viral Hepatitis be Eradicated?

Much progress has been made in the treatment and management of chronic hepatitis B virus (HBV) and hepatitis C virus (HCV) infection. For HBV, long-term nucleoside analogue therapy can achieve potent viral suppression and can effectively reduce the risk of cirrhotic complications and liver cancer. New drugs are currently being developed in clinical trials, aiming at achieving a functional cure. For HCV, direct-acting antiviral agents for a finite duration can eradicate the disease in the vast majority of patients. Hence, the World Health Organization has set a 2030 target of eliminating HBV and HCV as a public health threat, which will require achieving a diagnostic uptake of 90% and treatment uptake among eligible patients of 80%. Such objectives are required to achieve a reduction in liver-related mortality by 65%.

Nonetheless, majority of countries and regions worldwide are not on target in achieving the WHO 2030 objectives. Using HBV as an example, the Center for Disease Control estimated a global diagnostic and treatment uptake of only 10% and 5% respectively. A recent mathematical modeling estimated that the diagnostic and treatment uptake in Hong Kong for HBV was only 22% and 27% respectively. For Mainland China, the rates were 11% and 19% respectively. There is thus much discussion on the need for linkage to care, i.e. identifying patients and arranging a follow-up strategy.

Linkage to care strategies depends on local epidemiology. There are currently innovative methods that have been published, but if applied, need to be tailored to the local setting. For HCV, the identification of high-risk groups and the simplification of follow-up logistics will be important. For HBV in endemic regions e.g. Hong Kong, it will come down to screening and the involvement of non-specialists, primary care physicians, nurses and non-government organizations in promoting and improving uptake. If we act early, the WHO 2030 objectives may still be achievable.



#### Dr. Kenneth SH CHOK

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*Clinical Associate Professor, Department of Surgery, The University of Hong Kong*

Dr. Kenneth Chok graduated from the University of Hong Kong in 1999. He soon became the Consultant Surgeon and Faculty Member and subspecialized himself to be the liver transplant surgeon. He is also the Clinical Associate Professor and Principal Investigator for the State Key Laboratory of Liver Research at the University of Hong Kong. He is the Council member for the Society of HK HBP Surgery, Honorary Secretary for Hong Kong Society of Transplantation and Council member/ Chairman of Liver Donation Committee for Hong Kong Liver Foundation. He is also the finance committee member for the International Liver Transplant Society (ILTS).

#### Management of Hepatitis B Virus Infection in Liver Transplantation

For patients undergoing liver transplantation for hepatitis B-related complications, effective antiviral prophylaxis has improved both the short and long term outcome and survival by preventing graft loss and death due to hepatitis B recurrence. The use of hepatitis B immune globulin (HBIG) as a prophylactic agent during the eighties was a major milestone for liver transplant patients with hepatitis B virus (HBV) infection. The approval of lamivudine (LAM) for the treatment of chronic hepatitis B (CHB) in 1998 was another major milestone. The major limitation of LAM is the high rate of drug resistant mutation occurring with long-term use.

After liver transplantation, the use of LAM monotherapy has been associated with a variable resistance rate of up to 60% at 3 years after transplantation. Entecavir (ETV), a cyclic guanosine nucleoside analog, was approved in 2005. The major advantages of ETV over LAM include the superior antiviral potency and the high barrier to the development of viral resistance. After 7 years of ETV therapy, the resistance rate was only 1.2%, compared to 70% for LAM. Therefore, the considerable beneficial effects of reducing viral resistance of LAM when combined with HBIG may not be substantiated when ETV is used for liver transplantation. A study of 80 CHB patients treated with ETV monotherapy after liver transplantation with a median follow up of 26 months demonstrated a high hepatitis B surface antigen (HBsAg) seroclearance rate with excellent virological suppression without evidence of virological rebound.