Hong Kong Primary Care Conference 2018 **"Family Physician – Nexus of the New Era of Primary Care"**

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Seminar C Pharmacological Management of Patients with Cognitive Impairment

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Dr. Chiu is a Specialist in Geriatrics in Queen Mary Hospital, Grantham Hospital, Fung Yiu King Hospital and Tung Wah Hospital. He received his post-graduate training in memory disorders in the UK in 1999 under the supervision of Professor Gordon Wilcock (currently the Emeritus Professor of Geratology, Nuffield Department of Clinical Neurosciences, University of Oxford, UK). Dr. Chiu continued to provide clinical care to patients with memory disorder in Hong Kong West cluster since his return from overseas training. He is currently the consultant in-charge of Memory Clinic in Queen Mary Hospital.

Dr. Chiu dedicates much of his professional time to academia and teaching. He is Honorary Clinical Associate Professor in the University Department of Medicine and the Department of Family Medicine and Primary Care, LKS Faculty of Medicine at The University of Hong Kong. He is the Program Director (Hong Kong Island) and examiner of the Specialty Board in Geriatric Medicine of the Hong Kong College of Physician. Dr. Chiu is also an active member of several public health bodies. He is the honorary secretary of the Hong Kong Society of Aging Research and a council member of the Osteoporosis Society of Hong Kong. He is also the cluster representative in the Task Force on Dementia Community Support Scheme which is led by Food and Health Bureau, HKSAR.

Dr. Chiu's research interest includes pharmacological treatment in Alzheimer's disease. He is currently leading his team to participate in a multi-centre phase III clinical trial to investigate on the safety and efficacy of a potential pharmaceutical drug for prodromal to mild Alzheimer's disease. Dr. Chiu has been an invited speaker and chairman at numerous scientific meetings and he is also a regular invited journal reviewer for peer review journals.

Dementia is a progressive neurological and degenerative syndrome. The most common type of dementia is Alzheimer's disease (AD), followed by vascular dementia. In general, management of dementia can be divided into non-pharmacological and pharmacological strategies that target the cognitive and non-cognitive symptoms.

Currently, there are no cures for progressive dementias including AD. However, there are two classes of pharmacological treatment for symptoms of AD. The first class aims at correcting the reduction of cholinergic neurotransmission through cholinesterase inhibitors (e.g. rivastigmine, donepezil, galantamine). The other class is based on N-methyl-D-aspartate (NMDA) receptor blockade (e.g. Memantine). There is convincing evidence that cholinesterase inhibitors have efficacy in improving cognition and global functioning at all stages of AD. Memantine was approved by the US Food and Drug Administration for the symptomatic treatment of moderate-to-severe AD. Use of memantine in moderate-to-severe AD has been shown to improve cognition and global functioning. It is also associated with an improvement in secondary outcome measures of activities of daily living and behavior. Doctors should be mindful of the potential unrealistic expectations of patients and their family to the medications (e.g. hoping for cure of AD). Careful explanation should be provided before starting the pharmacological therapy.

If non-pharmacological treatment of potential causes of behavioural and psychological symptoms of dementia (BPSD) is unsuccessful, pharmacological therapy can be considered for BPSD that cause extreme distress or pose an imminent threat of harm to self or others. A variety of medications have been used to treat BPSD including antipsychotics and other drugs. These drugs have variable efficacy and effectiveness, depending on the target symptom and class of medication. It should be prescribed at the lowest effective dose for the shortest possible duration, taking into account the significant risks compared with potential benefits.