LABORATORY OF DATA DISCOVERY FOR HEALTH
Seminar Series

Seminar title: **Leveraging healthcare big data for screening and treatment of lipid disorders in the United Kingdom and Hong Kong**

Date: **30 March 2021 (Tuesday)**
Time: **5:00 p.m. - 6:00 p.m. (HKT) / 10:00 a.m. - 11:00 a.m. (UKT)**
Language: **English**
Location: **Zoom**
Enquiries: **jblais@connect.hku.hk (Mr Joseph Blais)**
Register via Zoom meeting link: **https://bit.ly/3sRIWhF**

Abstract:
Hypercholesterolaemia is a major cause of atherosclerotic cardiovascular disease. Organised by the Laboratory of Data Discovery for Health (D²4H), this seminar will present examples from the United Kingdom and Hong Kong on how electronic health record data coupled with machine learning can be used to enhance the detection of familial hypercholesterolaemia, and can improve cardiovascular risk prediction in primary care. Furthermore, electronic health data was used in observational research to assess the benefits of achieving low cholesterol levels for patients treated with statins in Hong Kong. Participants will have an opportunity to further their understanding of the implementation of precision medicine ("stratified medicine") for screening of familial hypercholesterolaemia and cardiovascular risk estimation in clinical practice.

Speakers:

Professor Nadeem Qureshi
Clinical Professor, Faculty of Medicine & Health Sciences, and Co-lead of Primary Care Stratified Medicine (PRISM) Research Group, University of Nottingham

Presentation title: **Development and implementation of FAMCAT (familial hypercholesterolaemia case ascertainment tool) in primary care practice**
Time: 5:00 p.m. - 5:20 p.m. (HKT) / 10:00 a.m. - 10:20 a.m. (UKT)

Biography: Professor Nadeem Qureshi completed his undergraduate medical degree at the University College London Medical School in 1986. He became a Member of the Royal College of General Practitioners (MRCGP) with Distinction in 1991. He achieved his MSc in Health Service Research & Technology Assessment with Distinction in 1999 and completed a Doctorate in 2006. Between 2004 and 2005, he was awarded a US Harkness fellowship at the CDC Office of Genomics and Disease Prevention in Atlanta. He is currently a member of the General Practice Genomics Board and Ethics Advisory Committee of Genomics England. He has been a primary care representative on the English NICE guideline development groups for

Familial Hypercholesterolaemia, Lipid modification and Familial Breast Cancer. He has also recently been appointed as a Fellow of the Faculty of Clinical Informatics. In 2011, he was appointed as Clinical Professor at University of Nottingham. His research focuses on translating genomic medicine into non-specialist healthcare settings and stratifying patients' care according to primary care databases and genomics profiles. The research includes a portfolio of health service research on cardiovascular genetics and familial cancer risk assessment. This is developed in tandem with advances in genomic technology, emerging screening policies and related national clinical guidelines, such as, NICE Lipid Modification guidelines. He has collaborated with academics in Malaysia, Qatar, Netherlands and South Africa on primary care genetics research.

Mr Joseph Blais
PhD Student, Centre for Safe Medication Practice and Research (CSMPR), Department of Pharmacology and Pharmacy, The University of Hong Kong

Presentation title: **Is there a lower threshold of benefit for LDL-C and non-HDL-C in patients treated with statins for primary prevention of cardiovascular disease in Hong Kong?**
Time: 5:20 p.m. - 5:30 p.m. (HKT) / 10:20 a.m. - 10:30 a.m. (UKT)

Dr Ralph Akyea
Research Associate and PhD Student, Primary Care Stratified Medicine (PRISM) Research Group, University of Nottingham

Presentation title: **Performance and clinical utility of supervised machine-learning approaches in detecting familial hypercholesterolaemia in primary care**
Time: 5:30 p.m. - 5:40 p.m. (HKT) / 10:30 a.m. - 10:40 a.m. (UKT)

Dr Celine Chui
Co-Principal Investigator, Laboratory of Data Discovery for Health;
Assistant Professor, School of Nursing, The University of Hong Kong

Presentation title: **Cardiovascular risk prediction model: a machine learning approach**
Time: 5:40 p.m. - 5:50 p.m. (HKT) / 10:40 a.m. - 10:50 a.m. (UKT)

Q&A and Discussion Session: 5:50 p.m. - 6:00 p.m. (HKT) / 10:50 a.m. - 11:00 a.m. (UKT)

Moderator:

Professor Ian Wong
Lead Scientist, Laboratory of Data Discovery for Health;
Head of Department and Lo Shiu Kwan Kan Po Ling Professorship in Pharmacy, Department of Pharmacology and Pharmacy, The University of Hong Kong