

# Diabetes Preventing the Preventables Forum 2017



#### Supporting organizations:





7 May 2017 Kerry Hotel



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#### WELCOME MESSAGE

Dear faculty and delegates,

Welcome to Hong Kong, a beautiful city with a rich history and culture. Just like most cities in Asia undergoing rapid transition, diabetes has come a long way over the last two decades. From a simple classification of type 1 and type 2 diabetes, there is now an explosion of information on the phenotypes and genotypes of this complex disease. From a handful of medications, we are now overwhelmed with a growing number of compounds for the treatment, of not just diabetes, but many of its associated conditions and comorbidities.

Diabetes is a lifelong disease and the most challenging aspect in managing diabetes is to help patients manage their disease for the rest of their life. To do this effectively, the care team has to systematically collect and manage a large amount of information, collected at any one time and over time, in order to assess and advise their patients accordingly.

Our health care systems have never been designed to manage these chronic problems and information which are new health care challenges. This DPP Forum is a meeting designed to address these needs. It aims to foster collaborations amongst all relevant stakeholders, who see the need of a new paradigm shift to change the way how chronic care should be delivered, in order to bring out the best of our expertise and technologies to make chronic care accessible, sustainable and affordable.

To this end, we are fortunate to have invited a faculty of experts and thought leaders with a diversity of experiences who will share with us their views and insights into this health care challenge.

We hope you will enjoy this meeting and that you will continue to be part of this growing network to prevent and control diabetes and chronic disease.

Best regards,

Prof. Juliana Chan

Chairman

Prof. Alice Kong Co-chairman

#### **ORGANIZER**



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> Email: enquiry@adf.org.hk Website: www.adf.org.hk

#### **SUPPORTING ORGANIZATIONS**





#### **ORGANIZING COMMITTEE**

Chairman: Prof. Juliana Chan Members: Dr. Douglas Chan

Co-chairman: Prof. Alice Kong

Ms. Amy Fu

Ms. Vanessa Lau

Prof. Andrea Luk Prof. Ronald Ma Dr. Risa Ozaki Dr. Wing-Yee So Dr. Rose Ting Prof. Martin Wong Ms. Rebecca Wong

Dr. Alvin Cheung



**Douglas Chan**General Practitioner, Hong Kong

Dr. Douglas Chan obtained his MBBS at the University of Hong Kong in 1986. He practiced as General Practitioner (GP) for more than 25 years. He obtained Diplomas in Community Psychological Medicine, Practical Dermatology, Medicine, Community Geriatrics, and Family Medicine during his years of GP practice. He is also a Honorary Clinical Assistant Professor in Family Medicine, the University of Hong Kong since 2011 and Clinical Tutor in the Chinese University of Hong Kong since 2013. Dr. Chan serves as Council Member of the Hong Kong Medical Association since 2014 and is currently Co-chairman of the Task Force in Public-Private Partnership.



#### **Juliana Chan**

Chair Professor, Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong and Chief Executive Officer, Asia Diabetes Foundation, Hong Kong

Professor Juliana Chan is a Chair Professor of Medicine and Therapeutics, at the Chinese University of Hong Kong. She is also the Founding Director of the Hong Kong Institute of Diabetes and Obesity and Chief Executive Officer of the Asia Diabetes Foundation. Her major areas of interest include genetic epidemiology, clinical trials and care models in diabetes. Her team advocates the use of risk stratification, registry, personalized reporting and collaborative care to prevent and control diabetes. She has published over 500 papers and trained more than 50 postgraduate students/fellows. She is also a member of steering committees of multinational studies and advisory boards of Hong Kong Government and international agencies.



**Alice Kong** 

Associate Professor, Division of Endocrinology and Diabetes, Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong

Dr. Alice Kong is an Associate Professor in the Department of Medicine and Therapeutics at the Chinese University of Hong Kong, and Honorary Associate Consultant at the Prince of Wales Hospital, Hong Kong. Dr. Kong is the Steering Committee Member of Joint Asia Diabetes Evaluation (JADE) Program. She is the Vice President of Hong Kong Association for the Study of Obesity. Other professional association memberships include Hong Kong Society of Endocrinology, Metabolism and Reproduction and American Diabetes Association. Dr. Kong's research interests are obesity and diabetes including care models and diabesity associated lifestyle factors and complications. She is an invited reviewer for many local and international journals, including Annals of Internal Medicine, Diabetes, Clinical Endocrinology, Diabetic Medicine, etc. She is an Associate Editor of Primary Care Diabetes and an editorial board member of Current Diabetes Reports. She has presented at numerous local, regional and international meetings and has published over 190 articles in peer-reviewed journals.



Joseph Lam

General Practitioner, Hong Kong

Dr. Joseph Lam worked as solo practice in Wanchai as a family doctor since 1994. Apart from working as a local community family doctor, he also interested in chronic disease management such as Diabetes, Hypertension, Hyperlipidaemia, mood disorders and dementia. He is a Committee Member in the Hong Kong East Cluster of Hong Kong Medical Association. He participated in public-private interface of chronic disease management and liaise with other paramedical nongovernmental organizations (NGO) such as Community Rehabilitation Network (for DM management) and Baptist Oi Kwan Social Service (for mood and dementia management). He has been working with Tung Wah Group of Hospitals Substance Abuse Centre since 2008 to deal with substance abuse counseling. He was also a Honorary Clinical Professor for Department of Family Medicine and Primary Care, teaching medical students since 2014.



#### **Andrea Luk**

Associate Professor, Division of Endocrinology and Diabetes, Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong

Dr. Andrea Luk is a specialist in endocrinology and is currently the Associate Professor, Division of Endocrinology at the Department of Medicine and Therapeutics, Faculty of Medicine, the Chinese University of Hong Kong. She is also the Deputy Medical Director of the Phase 1 Clinical Trial Centre at the Chinese University of Hong Kong, Honorary Associate Consultant at the Prince of Wales Hospital, and Deputy Medical Director of the Asia Diabetes Foundation. Dr. Luk graduated from the University of Auckland, New Zealand, and received post-graduate training in Sydney, Australia and Hong Kong. She obtained her fellowship in endocrinology, diabetes and metabolism in 2007 at the Hong Kong College of Physicians. Her main research focus is in diabetes epidemiology with special interests in diabetic kidney disease and young-onset diabetes. She is extensively involved in clinical trials from phase 1 through to phase 3.



#### **Margaret McGill**

Adjunct Associate Professor, Sydney Medical School and Sydney Nursing School, The University of Sydney, Australia

Professor Margaret McGill is an Associate Professor with the Sydney Medical School and Sydney Nursing School, the University of Sydney. She is an Associate Director of the Royal Prince Alfred Hospital Diabetes Centre.

She was the Vice President of the International Diabetes Federation (IDF) from 2003 - 2009. She was the Chair of the IDF Consultative Section on Diabetes Education (DECS) for 9 years and developed its global education strategy during this time.

She led the successful application for the RPAH Diabetes Centre to become an International Diabetes Federation Centre of Excellence in Education for health professionals and an NADC Centre of Excellence.

She was named in the 2011 Australia Day Honours List with the award of Order of Australia (AM) for her contribution to diabetes nationally and overseas.



**Graham Ogle** 

LFAC General Manager, International Diabetes Federation (IDF) Life for a Child Program, Australia

Dr. Graham Ogle is a paediatric endocrinologist in Sydney, Australia. In the 1990s he worked in Papua New Guinea and Cambodia. Since 2000 he has been the General Manager of the International Diabetes Federation Life for a Child Program, which supports the care of 18,000 young people with diabetes in 42 countries, with the vision that "no child should die of diabetes". He has research interests in epidemiology, access to care, and other diabetes issues in less-resourced countries.



**Brian Oldenburg** 

Professor, Non-Communicable Disease Control and Director, Centre for Health Equity, Melbourne School of Population and Global Health, The University of Melbourne, Australia

Professor Brian Oldenburg is a behavioral scientist and population health researcher. He is a Professor of Non-Communicable Disease Control and Director of the Centre for Health Equity in the School of Population and Global Health, the University of Melbourne, Australia. His research focuses on how to improve the prevention and control of diabetes, heart disease and co-morbid mental health conditions. He has also developed and evaluated new technologies and mHealth interventions to improve diabetes control and outcomes. In recent years, he also has been studying the spread of cardiometabolic disease in developing countries in Asia and Africa and how this can be addressed. He is a current Visiting Professor in Finland and China, including Shanghai Jiao Tong University and also, the Chinese University of Hong Kong.



#### **Ambady Ramachandran**

President, India Diabetes Research Foundation (IDRF) and Chairman, Dr. A. Ramachandran's Diabetes Hospitals, India

Professor Ambady Ramachandran is the President of IDRF. He has contributed extensively for diabetes care and epidemiological research in India for more than three decades and has published more than 300 research papers. His main fields of research have been epidemiology of diabetes in India and primary prevention of diabetes. The Indian Diabetes Prevention Programme (IDPP), conducted by him, has contributed significantly to the understanding of the preventive methodologies specifically effective in the Indian population.

He is a visiting professor in the division of diabetes, endocrinology and metabolism, department of medicine, Imperial College London, United Kingdom. He is the Regional Editor of Diabetic Medicine (United Kingdom) and serves on the Editorial Board for Diabetes Care (United States of America), Diabetes Research and Clinical Practice.



#### **Guy Rutter**

Professor and Head of Section of Cell Biology and Functional Genomics, Department of Medicine, Faculty of Medicine, The Imperial College London, United Kingdom

Professor Guy Rutter is the Head of Section of Cell Biology and Functional Genomic at the Imperial College London. With funding from the Wellcome Trust, MRC, EU and others, his chief goals are to develop new means to enhance insulin secretion in Type 2 diabetes by studying the fundamental signalling pathways through which glucose act on the pancreatic  $\beta$  cell. He deploys knowledge flowing from genome-wide and other genetic studies for this disease, and state-of-the-art technologies ranging from mouse models through genome editing, optogenetics and photopharmacology.



**Catherine Yeung** 

Associate Professor, Department of Marketing, Business School, The Chinese University of Hong Kong, Hong Kong

Professor Catherine Yeung is Associate Professor of Marketing at the Chinese University of Hong Kong Business School. She conducts scientific research in social and behavioral sciences. She examines how seemingly irrational thoughts influence judgments in everyday life. She also conducts community-based research, which develops and evaluates interventions that aim at improving individual and community wellbeing. She works extensively with partners including government agencies (e.g., Land Transportation Authority of Singapore) and community organizations (e.g., Singapore General Hospital, Asia Diabetes Foundation) that are interested in deriving policy implications based on research findings.

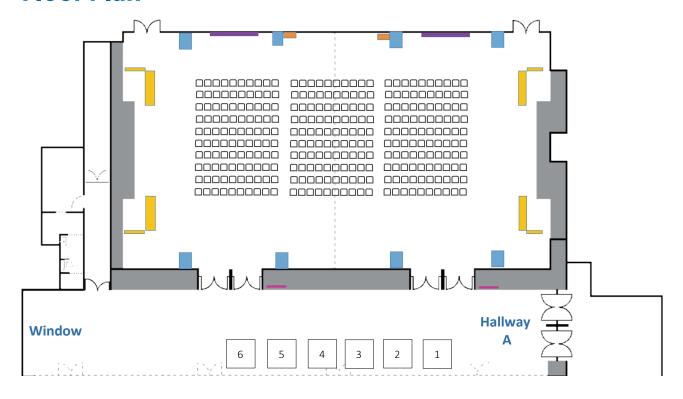


# **SCIENTIFIC PROGRAMME**

7 May (Sund	day)				
09:00 - 09:10	Welcome remarks	Alice Kong, Hong Kong			
Plenary Symposium 1 Co-chairs: Alice Kong and Rose Ting					
09:10 - 09:55	Pancreatic beta cell pacemakers	Guy Rutter, United Kingdom			
09:55 - 10:40	Diabetes in the youth – evidence and trends	Graham Ogle, Australia			
10:40 - 10:55	Coffee Break				
Symposium 1 Co-chairs: Clive Cockram and Wing-Ye					
10:55 - 11:25	How to personalize your choice of antidiabetic drugs	Andrea Luk, Hong Kong			
11:25 - 11:55	Putting genetic testing in practice	Juliana Chan, Hong Kong			
AstraZeneca	Lunch Symposium				
11:55 - 12:25	Safety and effectiveness of SGLT2 inhibitors in real-world practice – An Asian perspective	Juliana Chan, Hong Kong			
12:25 - 13:00	Lunch				
Plenary Symposium 2 Co-chairs: Risa Ozaki and Rebecca Wong					
13:00 - 13:45	Behavior change to improve diabetes outcomes – what works	Brian Oldenburg, Australia			
13:45 - 14:30	Improving patient outcomes through communication	Margaret McGill, Australia			
14:30 - 15:15	Challenges and opportunities in diabetes prevention	Ambady Ramachandran, India			
15:15 - 15:30	Coffee Break				
Symposium 2 Co-chairs: Andrea Luk and Alvin Cheung					
15:30 - 16:00	How to promote healthy behaviors using behavioral economics	Catherine Yeung, Hong Kong			
16:00 - 16:30	Diabetes Care in hospital setting – insights from specialists	Alice Kong, Hong Kong			
16:30 - 17:00	Diabetes Care in community setting – insights from family doctors	Douglas Chan and Joseph Lam, Hong Kong			
17:00 - 17:10	Closing Remarks	Juliana Chan, Hong Kong			

## **FLOOR PLAN AND EXHIBITORS**

#### **Floor Plan**



#### **Exhibitors**

Booth No.	Exhibitors Name
1	Asia Diabetes Foundation
2	AstraZeneca Hong Kong Ltd.
3	Eli Lilly Asia, Inc. (Hong Kong)
4	Merck Sharp & Dohme (Asia) Ltd.
5	Novartis Pharmaceuticals (HK) Ltd.
6	Sanofi-aventis Hong Kong Ltd.



# ACADEMIC ACCREDITATIONS

## **Academic accreditations**

Name of Institutions	CME/CNE/CPD points
Association of Hong Kong Diabetes Nurses Limited	6
College of Dental Surgeons of Hong Kong	Pending
College of Ophthalmologists of Hong Kong	3 passive
Hong Kong College of Community Medicine	6
Hong Kong College of Emergency Medicine	6 Cat. PP
Hong Kong College of Paediatricians	6 Cat. A
Hong Kong College of Physicians	6 passive
Hong Kong College of Radiologists	6 Cat. B Passive
Hong Kong Dietitians Association	5 non-core
Hong Kong Physiotherapy Association Limited	3
International Podiatrists Association of Hong Kong	10
MCHK CME Programme	5 passive
Medical Laboratory Technologists Board	0.5
Occupational Therapists Board	3
Pharmacy Central Continuing Education Committee	6
Radiographers Board	5
The College of Surgeons of Hong Kong	6 passive
The Hong Kong College of Anaesthesiologists	Pending
The Hong Kong College of Family Physicians	5 Cat. 5.2
The Hong Kong College of Obstetricians and Gynaecologists	5 non O&G
The Hong Kong College of Orthopaedic Surgeons	5 Cat. C
The Hong Kong College of Otorhinolaryngologists	3
The Hong Kong College of Pathologists	3 Cat. PP
The Hong Kong College of Psychiatrists	Pending
The Nethersole School of Nursing	6

#### PLENARY SYMPOSIUM 1

09:10 - 09:55

#### Pancreatic beta cell pacemakers

#### **Guy Rutter**

Professor and Head of Section of Cell Biology and Functional Genomics, Department of Medicine, Faculty of Medicine, The Imperial College London, United Kingdom

Persistently elevated levels of glucose and fatty acids are known to contribute to failed insulin secretion during the development of Type 2 diabetes. We have shown that glucolipotoxic conditions impair cell-cell communication ("connectivity") to impair insulin secretion <sup>1</sup>. Recently we have combined optogenetics and rapid  $Ca^{2+}$  imaging across the islet syncytium to demonstrate that a subset (~5%) of beta cells ("hubs") coordinate the activity of "follower" cells<sup>2</sup>. Photo-painting using a light sensitive-RFP revealed that hub cells are enriched for glucokinase, but show low levels of Nkx6.1 and insulin gene expression. These cells also display enhanced mitochondrial membrane potential in response to high glucose. Interrogation of single  $\beta$  cell RNASeq data<sup>3</sup> confirms the existence of a subset of cells with a similar transcriptomic configuration. Hub cells are unusually susceptible to metabolic stresses including high fatty acid/glucose levels, and cytotoxic cytokines, suggesting that they may be targeted in diabetes. Since deletion of GWAS genes for diabetes including *ADCY5* and *TCF7L2* affect cell-cell communication, future work will explore the possibility that genes at other *loci*, including *STARD10*<sup>4</sup> also act in part by altering hub cell-led  $\beta$  cell connectivity.

#### References

- 1. Hodson DJ, Mitchell RK, Marselli L, Pullen TJ, Brias SG, Semplici F, et al. ADCY5 couples glucose to insulin secretion in human islets. Diabetes 2014;63(9):3009-21.
- 2. Johnston NR, Mitchell RK, Haythorne E, Pessoa MP, Semplici F, Ferrer J, et al. Beta cell hubs dictate pancreatic islet responses to glucose. Cell Metab 2016;24(3):389-401.
- 3. Xin Y, Kim J, Ni M, Wei Y, Okamoto H, Lee J, et al. Use of the fluidigm C1 platform for RNA sequencing of single mouse pancreatic islet cells. Proc Natl Acad Sci U S A 2016;113(12):3293-8.
- 4. Carrat GR, Hu M, Nguyen-Tu M, Chabosseau P, Gaulton KJ, Bunt M, et al. Decreased STARD10 expression is associated with defective insulin secretion in humans and mice. Am J Hum Genet 2017;100(2):238-256.

#### Diabetes in the youth - evidence and trends

Graham Ogle

LFAC General Manager, International Diabetes Federation (IDF) Life for a Child Program, Australia

Type 1 diabetes (T1D) and Type 2 diabetes (T2D) vary in incidence across the globe. T1D is less common in East Asia populations than in many other countries, but incidence is rising steadily in some countries (including China and South Korea). T2D could be more common in East Asia than in most other countries, and rates in some East Asian countries are similar or higher than T1D.

There are four key components of care: (1) Adequate insulin given as multiple daily injections or by insulin pump; (2) Self Monitoring of Blood Glucose (SMBG) 3-5 times per day, or by Continuous Glucose Monitoring (CGM) with the young person/family learning to adjust insulin dosages appropriately; (3)  $HbA_{1c}$  testing every three months (with a target of  $\leq 8.5\%$  (69mmol/mol), and ideally  $\leq 7.5\%$  (58mmol/mol)), with annual complications screening; and (4) Diabetes education. The importance of diabetes education cannot be over-emphasised – appropriate instruction, educational materials, encouragement, and 24-hour access to advice empowers the young person and their family to adjust insulin to their lifestyle rather than having diabetes dominate their lifestyle. In concert with SMBG, they learn to anticipate the effect of exercise and of various types of meals, and make appropriate insulin adjustments.

There is now strong evidence that complications appear even more frequently in youth with T2D compared to T1D, necessitating diligent care.

Careful attention to the issue of transitioning from paediatric to adult care is needed in all clinics to prevent hiatuses in care and deterioration in blood glucose control.

Benchmarking – comparing  $HbA_{1c}$  and other results across clinics – is proving to be an effective method of stimulating improvements in care.

Promising developments are occurring, in particular the "artificial pancreas" involving linkage of insulin administration by pump to CGM. Extensive research efforts are underway in the areas of islet cell transplantation and the vision of one day being able to prevent or cure T1D.

The talk will conclude with a brief summary of a successful international intervention to improve youth diabetes care in less-resourced countries.

#### **SYMPOSIUM 1**

10:55 - 11:25

#### How to personalize your choice of antidiabetic drugs

Andrea Luk

Associate Professor, Division of Endocrinology and Diabetes, Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong

Development of new anti-diabetic agents has taken momentum over the past decade and currently there are nine broad classes of drugs available for use in patients with type 2 diabetes. Each class is unique in its mechanism of action targeting different pathophysiological pathways of diabetes. Beyond the shared effect of glucose lowering, there are dissimilarities with respect to action on other metabolic outcomes, side effects and safety profile. The choice of anti-diabetic agent should factor in age, duration of diabetes, pre-treatment glycaemic control, metabolic phenotype and co-morbidities. Among patients with youngonset diabetes, measure of beta-cell reserve using C-peptide as surrogate, detection of autoimmune markers, and confirmation or exclusion of maturity onset diabetes of the young or other monogenic diabetes, are relevant information in the treatment selection process. For instance, sodium-glucose cotransporter-2 inhibitors which reduce weight and lower blood pressures, should be considered early in the therapeutic ladder of patients with metabolic syndrome. On the other hand, in those who are lean and have low C-peptide levels, initiation of insulin early in the disease continuum is recommended particularly if glycaemic control is not maintained. Whilst international guidelines broadly advocate personalisation of anti-diabetic treatment, the specifics of how this is best achieved are inadequately presented mostly due to the relative lack of evidence in this area. Future research should close this gap and focus at comparing drug combination and examine their relative effects in patients of different disease phenotypes.

#### **Putting genetic testing in practice**

Juliana Chan

Chair Professor, Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong and Chief Executive Officer, Asia Diabetes Foundation, Hong Kong

Diabetes is a multisystem disease due to complex interactions amongst multiple causes including but not limited to autoimmune and genetic factors, modified by age, gender and treatment to influence clinical outcomes spanning from full functionality to multiple morbidities. While autoimmune markers can be used to identify patients with or at risk of having type 1 diabetes, family-based linkage analysis, investigations of candidate genes and genome wide association studies have discovered rare and common genetic variants in type 2 diabetes, the majority of which are implicated in beta cell biology. Alongside, over 10 classes of anti-diabetic drugs including injectables have been developed calling for better disease classification and timely use of these drugs to maximize benefits, minimize harm and reduce glycemic burden. However, the phenotypic and genotypic heterogeneity in diabetes often leads to delayed initiation and intensification of therapy due to insufficient information. Using molecular markers to classify diabetes in young and lean patients and those with genetic predisposition for beta cell failure and complications should help physicians and patients make informed decision in selecting drugs based on aetiologies and risk stratification. Diagnosis of these index cases may also lead to opportunistic testing to identify high risk family members for early intervention. While ongoing research is needed to unravel the complexity of diabetes including clinical trials to provide the definitive evidence regarding the utility of these biomarkers, the practice of personalized medicine remains an art guided by evolving evidence, clinical acumen and informed choices.

#### ASTRAZENECA LUNCH SYMPOSIUM

11:55 - 12:25

# Safety and effectiveness of SGLT2 inhibitors in real-world practice – An Asian perspective

Juliana Chan

Chair Professor, Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong and Chief Executive Officer, Asia Diabetes Foundation, Hong Kong

After more than 2 decades of intensive research, we have amassed a large body of knowledge regarding the causes, consequences and treatment of diabetes. The 'Asian' phenotypes, characterized by early onset of disease, low body weight but high adiposity as well as propensity for renal disease, reflect insufficient insulin secretion to overcome obesity-associated insulin resistance with rapid acculturation. The early onset of disease and thus prolonged exposure to glycemic burden can lead to multi-system failure, notably the heart and kidney.

The introduction of new anti-diabetic drugs such as DPP4i, SGLT2i and GLP1 RA lower blood glucose without causing weight gain and hypoglycemia has offered new avenue for controlling cardiometabolic risk factors. The encouraging results regarding the benefits of SGLT2i in reducing cardiovascular-renal events may be particularly relevant to Asians with high prevalence of visceral adiposity and renal dysfunction.

Based on a large number of randomized clinical trials conducted in Japan and China, different SGLT2i have been shown to reduce HbA<sub>1c</sub>, body weight and blood pressure as mono-or add-on therapies with low incidence of side effects such as ketosis, fractures or sepsis. In a real-world database consisting of 300,000 patients with type 2 diabetes from North America and Europe, the cardiovascular benefits of different SGLT2i were evident supporting that this may be a class effect.

Thus, we are now in a golden era where we can use evidence and technologies to reduce the burden of diabetes. The remaining challenge is to advocate the use of a system and policy approach to ensure that these benefits can reach out to a population of people with diabetes at large.

#### **PLENARY SYMPOSIUM 2**

13:00 - 13:45

#### Behavior change to improve diabetes outcomes - what works

Brian Oldenburg

Professor, Non-Communicable Disease Control and Director, Centre for Health Equity, Melbourne School of Population and Global Health, The University of Melbourne, Australia

Achieving significant behavior change even in well-controlled trials has proven difficult and challenging. And the evidence from more 'real world' trials is even more equivocal. Reasons for these disappointing outcomes include the following common beliefs or assumptions: (1) Behavior change is so obvious that it does not require serious scientific research; (2) Changing behavior is simply a matter of packing the messages correctly; (3) Improvements in knowledge and information will automatically lead to behavior change; (4) People act rationally all of the time; and (5) We can predict accurately who will change their behavior and when this will occur. However, we have learnt a lot about behavior change over the last 20 years and how to improve diabetes and other chronic disease outcomes. This presentation will discuss how we can improve these outcomes.

#### Improving patient outcomes through communication

Margaret McGill

Adjunct Associate Professor, Sydney Medical School and Sydney Nursing School, The University of Sydney, Australia

To practice the best medicine a deep knowledge of science is required but equally important is to practice the art of medicine. In this way we use evidence-based medicine, clinical judgement and take into account the patient's values and preferences. What is known about doctor/patient communication is: (1) Telling patients what to do is not effective, (2) Improving knowledge does not change behavior, (3) Health literacy is a problem and (4) Patients often leave the most critical issue to the end of the consultation. Barriers exist to effective communication including the patient may: (1) Feel they are wasting the doctor's time if you appear rushed, (2) Not mention details that place them in a "unfavorable light" and (3) Not understand medical terminology. Interestingly, most complaints about doctors are related to communication skills not clinical skills. Yet it is known that effective doctor/patient communication can be a great source of motivation, incentive, reassurance and support. Elements of an effective consultation are: expertise, empathy, listening, respecting the patient's viewpoint, shared decision making, encouraging the patient to ask questions and being culturally sensitive. Studies on communication tell us that 80% of people want their health care provider to listen to them, but just 6 in 10 say it actually happens and 90% of people want their providers to work together as a team, but just 4 in 10 say it actually happens. Patients of physicians with high empathy scores are: more likely to reach target HbA<sub>1c</sub> (p<001), higher proportion of patients with good LDL control (p<001), lower rate of acute complications (p<001) and better self-care (e.g., improved diet, SMBG) (p<001). Patient's social disadvantage predicts: (1) Patient provides less information, (2) Less likely to be examined by doctor, (3) Doctor provides less information, (4) Lower levels of understanding and (5) Less satisfied by consultation. However, good communication takes this into account. The language used in diabetes needs to be considered. Many words have negative connotations eg compliance, "failing" to meet goals and make people feel they are passing or failing when they talk with their doctor. The answer is shared decision making or in other words talking with patients not at them. Finally, it is often difficult in busy diabetes services to give adequate time to each patient but highly functioning team based care can address many issues.

#### **Challenges and opportunities in diabetes prevention**

Ambady Ramachandran

President, India Diabetes Research Foundation (IDRF) and Chairman, Dr. A. Ramachandran's Diabetes Hospitals, India

According to the International Diabetes Federation (IDF) estimates, the global prevalence of 415 million people with diabetes in 2015 is expected to increase to 642 million by 2040. More than 80% of the persons with diabetes live in low and middle income countries where healthcare resources are meagre.

The rising incidence of diabetes calls for urgent action to prevent the occurrence of new cases, ie primary prevention is a major strategy to be adopted by every country. Community-based randomized, controlled prevention trials, conducted in the past two to three decades have unequivocally shown that primary prevention of diabetes is possible in all ethnic groups by lifestyle modification or by a few pharmacological agents. Many studies have indicated that the benefits of lifestyle modification can last for periods, varying from 10 to 20 years. Lifestyle transition related to diet, physical activity and stress factors have been the chief determinants of the rising prevalence of diabetes seen in the developing countries.

Ample evidences are available to show that lifestyle modification is an effective and safe strategy for primary prevention of type 2 diabetes in people of all ethnicities. However, several major challenges are faced in implementing primary prevention of diabetes on a large scale in a majority of the countries. The major challenges include identification of a simple and effective screening method for selecting persons for the programme and implementing strategies to keep the participants motivated and adherent to the lifestyle changes advised for long periods.

Therefore, the strategy should focus on health education of the public including the youth and the adolescent population. Stress should be on improving the national capacity to detect and manage diabetes and other non-communicable diseases and to develop innovative, cost-effective and scalable methodologies. Recent studies haves shown the potential of information technology and mHealth in conducting large scale population studies in the prevention of several non-communicable diseases. It is ideal to develop national programmes such as the Finnish DEKHO initiated by the government.

A concerted effort by the government, the public and voluntary associations is mandatory to promote such programmes.

#### **SYMPOSIUM 2**

15:30 - 16:00

#### How to promote healthy behaviors using behavioral economics

Catherine Yeung

Associate Professor, Department of Marketing, Business School, The Chinese University of Hong Kong, Hong Kong

Behavioral economics (BE) integrates economics, psychology, and behavioral science to study and influence the ways people make choices. It provides insights into understanding why some people make seemingly irrational decisions regarding their health; it also sheds light on how behaviors can be shaped to improve health outcomes. According to BE theories, while most overweighed people know that they are at increased risk of developing type 2 diabetes, they may not be motivated enough to change their lifestyle for the better because they tend to discount delayed rewards, such as reduced risks of heart disease and cancer, relative to more immediate, smaller rewards, such as the immediate enjoyment of food indulgence. Accordingly, the key to chronic disease prevention is to motivate the initiation of lifestyle change by introducing more attractive immediate rewards and, at the same time, engage people in good habits that constitute a sustainable, healthful lifestyle. Behavioral insights are often used to change people's perception of a reward to make it more enticing; a given reward could deliver dramatically different health outcomes depending on how we frame it and how people perceive it. Behavioral insights can also be used to induce stronger commitment and adherence to weight loss programs. A theoretical framework with illustrating examples will be discussed in the talk.

Results of a Randomized Controlled Trial (RCT) conducted by the speaker will also be presented in the talk. The RCT demonstrated how men and women differ in the way they respond to incentives for weight loss. Insights derived from the RCT shed lights on the different forces that motivate men and women for weight loss.

#### Diabetes Care in hospital setting - insights from specialists

Alice Kong

Associate Professor, Division of Endocrinology and Diabetes, Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong

Diabetes is both a public and personal health disaster if not managed properly. Over 60% of all causes mortality and morbidities including stroke, leg amputation, heart disease, cancer, kidney disease, depression, to name but a few are causally linked to diabetes<sup>1, 2</sup>. Moreover, it is a worldwide phenomenon that majority of patients with diabetes are not reaching treatment goals due to clinical inertia with delayed escalation of therapy, poor treatment compliance and/or inadequate self management<sup>3, 4</sup>. Using Joint Asia Diabetes Evaluation (JADE) Program, a web-based platform and protocol-driven portal for the management of diabetes in Asia<sup>5-7</sup> as an example, how diabetes, a complex and chronic disease with multi-systems involvement, be managed within the framework of available guidelines to enhance collaboration between primary care providers and specialists would be elaborated.

Furthermore, patients with diabetes usually require multi-disciplinary care but many of them cannot afford time to see doctor on top of getting support from allied health professionals. By re-engineering of traditional clinic consultation format to a multi-component care program including a series of workshops led by a diabetes specialist team further augmented by peer support, we would like to share our experience in improving glycemic control and reducing attrition rate in difficult-to-treat group of diabetes in hospital setting.

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#### Diabetes Care in community setting – insights from family doctors

Douglas Chan and Joseph Lam

General Practitioner, Hong Kong

Primary care doctors in the private sector (GPs) are less equipped with resources in their clinics. Compared to colleagues working in government clinics, they do not have the luxuries of diabetologists or endocrinologists who can work closely with DM nurses, dietitians, podiatrists or physiotherapists to provide comprehensive care to their patients. Thus, many primary care doctors would resort to collaborating with non-governmental organizations to provide more comprehensive services for their patients; such as supporting patient empowerment, offering dietary advice, and providing advice on lifestyle modifications, including exercise prescription, etc.

Primary care doctors have the privilege of easy availability in terms of consultation time and clinic location and they have a long trusting relationship with their patients. They provide continual, comprehensive care not only to their diabetic patients, taking care of their physical and psycho-social well-being but also support their family members and carers. Furthermore, they have full range of diabetes drug armory at their full disposal and can tailor treatments according to individual patient needs.

In terms of prevention, primary care doctors have important roles. They can provide opportunistic screening to their patients by simple urine tests or finger capillary blood tests at any consultations. They can participate in public education on prevention of diabetes such as early detection, early symptoms recognition, and lifestyle modifications. These goals can be achieved through newspaper, radio/TV programs, roadshows, different forms of social media, carers groups, public lectures etc. Drug companies and pharmacists can chip-in their share in providing public education with collaboration with primary care doctors.

Primary care physicians also have pivotal roles in the prevention of diabetes complications by providing good glucose, blood pressure, and lipid control to their patients. Screenings of possible complications are offered to diabetes patients at regular intervals.

With the advent of Electronic Health Record Sharing System (eHRSS), primary care doctors can access patient records in Hospital Authority and share the patient data effectively. This platform provides comprehensive multidisciplinary care for patients and hence enhances efficient use of medical resources.

NOTES

# **NOTES**





# DIABETES PREVENTING THE PREVENTABLES FORUM 2018

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# **ACKNOWLEDGEMENTS**

The Organizing Committee would like to extend their sincere thanks to the following companies for their support to the Diabetes Preventing the Preventables Forum 2017.

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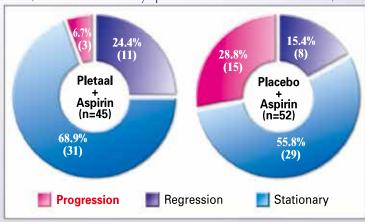
Pletaal is indicated for 1) the improvement of the maximal and pain-free walking distances in patients with intermittent claudication, who do not have rest pain and who do not have evidence of peripheral tissue necrosis (peripheral arterial disease Fontaine stage II); 2) Prevention of recurrence of cerebral infarction (excluding cardiogenic cerebral embolism).1

For the product's safety, contraindications and side effects or toxic hazards, please refer to the package insert.

Further information available on request

#### References:

- 1. Pletaal® package insert
- 2. Kwon et al. Stroke. 2005; 36(4): 782-786



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- Lower risk of nocturnal hypoglycaemia versus glargine U100<sup>1,2\*</sup>
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Abbreviated prescribing information
Tresiba® (insulin degludec) 100U (100 units/mL insulin solution for injection) in a prefilled pen (FlexTouch®) Consult Summary of Product Characteristics before prescribing. Presentation: Tresiba® FlexTouch®. All presentations contain insulin degludec. Tresiba® 100 units/mL – 1 mL of solution contains 100 units insulin degludec (equivalent to 3.66 mg). One pre-filled device contains 300 units of insulin degludec in 3 mL solution. Indications: Treatment of diabetes mellitus in adults. Posology and administration: Tresiba® is a basal insulin for once-daily subcutaneous administration at any time of the day, preferably at the same time of day. On occasions when administration at the same time of the day is not possible, Tresiba® allows for flexibility in the timing of insulin administration. A minimum of 8 hours between injections should be ensured. In patients with type 2 diabetes mellitus, Tresiba® can be administred alone, in combination with oral anti-diabetic medicinal products as well as in combination with bolus insulin. In type 1 diabetes mellitus, Tresiba® is to be used with short-frapid-acting insulin. Administration by subcutaneous injection only. Tresiba® is available in 100 units/mL. For Tresiba® 100 units/mL a dose of 1–80 units per injection, in steps of 1 unit, can be administered. by subcutaneous injection only. Tresiba" is available in 100 units/ml. For Tresiba" 100 units/ml. a dose of 1–80 units per injection, in steps of 1 unit, can be administered. When initiating patients with type 2 diabetes mellitus the recommended daily starting dose is 10 units. Transferring from other insulins; in type 2 diabetes changing the basal insulin to Tresiba" can be done unit-to-unit, based on the previous basal insulin component; in type 1 diabetes the same applies apart from where transferring from twice-daily basal insulin or patients with an HbA1c <8.0%, the Tresiba" dose needs to be determined on an individual basis with a dose reduction considered. Doses and triping of concomitant treatment may require adjustment. In all cases doses should be timing of concomitant treatment may require adjustment. In all cases doses should be adjusted based on individual patients' needs; fasting plasma glucose is recommended

to be used for optimising glycaemic control. In elderly patients and patients with renal/hepatic impairment glucose monitoring should be intensified and the dose adjusted on an individual basis. Tresiba® comes in a pre-rilled pen, FlexTouch®, designed to be used with Novo Fine®/NovoTwist® needles. Contraindications: Hypersensitivity to the active substance or any of the excipients. Special warnings and precautions: the active substance or any of the excipients. Special warnings and precautions: Too high insulin dose, omission of a meal or unplanned strenuous physical exercise may lead to hypoglycaemia. Reduction of warning symptoms of hypoglycaemia may be seen upon tightening control and also in patients with long-standing diabetes. Administration of rapid-acting insulin recommended in situations with severe hyperglycaemia. Inadequate dosing and/or discontinuation of treatment in patients requiring insulin may lead to hyperglycaemia and potentially to diabetic ketoacidosis. Concomitantillness, especially infections, may lead to hyperglycaemia and thereby cause an increased insulin requirement. Transferring to a new type, brand or manufacturer of insulin should be done under strict medical supervision. When using insulin in combination with weight again and opedma. Poolitzone should be discontinued if any of heart fail with weight rain and opedma. Poolitzone should be discontinued if any combination with pioglitazone, patients should be observed for signs and symptoms of heart failure, weight gain and oedema. Pioglitazone should be discontinued if any deterioration in cardiac symptoms occurs. Patients must be instructed to always check the insulin label before each injection to avoid accidental mix-ups between the two strengths of Tresiba\* and other insulins. Hypoglycaemia may constitute a risk when driving or operating machinery. **Pregnancy and lactation**: There is no clinical experience with use of Tresiba\* in pregnant women and during breastfeeding. Animal perpoduction studies with insulin degludec have not revealed any adverse effects on fertility. **Undesirable effects**: Refer to SmPC for complete information on side effects. Very common (≥1/10); common (≥1/100 to < 1/10); uncommon (≥1/1.000 to

\* Applies to the adult population only

<1/100); rare (≥ 1/10.000 to < 1/10.000); very rare (< 1/10.000); not known (cannot be estimated from the available data). Very common: Hypoglycaemia. Common: Injection site reactions. Uncommon: Lipodystrophy and peripheral oedema. Rare: Hypersensitivity and urticaria. With insulin preparations, allergic reaction may occur; immediate-type allergic reactions may potentially be life threatening. Injection site reactions are usually mild, transitory and normally disappear during continued treatment.</p>

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#### PROGRAMME HIGHLIGHTS

- Management of obesity - what is the current best practice?
- Fecal microbiota transplantation in metabolic syndrome and obesity: does it work?
- Environmental pollutants and impact on cardiometabolic health
- Behavioural intervention of obesity
- Cardiometabolic risk profile among people with silicosis
- Auriculotherapy for improving sleep condition and glycaemic control in people with type 2 diabetes
- Updates on recent cardiovascular outcome studies in diabetes

Diabetes, depression and cancers

- what are the links?

• Intensive lowering of low-density lipoprotein

Vascular disease and congestive heart failure

Hypoglycaemia and cardiovascular disease

How technology can help improve diabetes

cholesterol - what's the new target?

care - from pumps to sensors to apps • The role of traditional Chinese medicine in

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1. Jardiance® Hong Kong prescribing information. 2. Roden M, et al. Lancet Diabetes Endocrinol. 2013;1:208-219. 3. Häring HU, et al. Diabetes Care. 2014;37:1650-1659. 4. Häring HU, et al. Diabetes Care. 2013;36:3396-3404. 5. Kovacs CS, et al. Diabetes Obes Metab. 2014;16:147-158. 6. Rosenstock J, et al. Diabetes Obes Metab. 2015;17:936-948. 7. Rosenstock J, et al. Diabetes Care. 2014;37:1815-1823. 8. Zinman B, et al. N Engl J Med. 2015;373(22):2117-2128.

Presentation: Empagliflozin. Film-coated tablet 10 mg and 25 mg. Indications: Adjunct to diet and exercise to improve glycaemic control in adults with type 2 diabetes mellitus as monotherapy or as combination therapy with other glucose-lowing medicinal products including insulin. Dosage and administration: Recommended starting dose is 10 mg once daily. For patients who tolerate 10 mg and need additional glycaemic control, their dose can be increased to 25 mg once daily. Can be taken with or without food. Contraindication: Hypersensitivity to empagliflozin or to any of the excipients. Special warnings and precautions: Should not be used in patients with type 1 diabetes or diabetic ketoacidosis. In patients tolerating empagliflozin whose eGFR falls persistently below 60 ml/min/1.73 m² or CrCl (60 ml/min, the dose of empagliflozin should be adjusted to or ketoacidosis. In patients tolerating empagliflozin whose eGFR falls persistently below 60 ml/min/1.73 m² or CrCl <60 ml/min, the dose of empagliflozin should be adjusted to or maintained at 10 mg once daily. Should be discontinued when eGFR is persistently below 45 ml/min. Should not be initiated in patients with eGFR below 60 ml/min/1.73 m² or CrCl <60 ml/min; ESRD or patients with dialysis; aged 85 years and older; severe hepatic impairment. Caution should be exercised in patients at risk for volume depletion. Temporary interruption of treatment until the fluid loss is corrected or in patients with complicated urinary tract infections. Caution in patients with NYHA III and IV cardiac failure. Avoid use in patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption. A lower dose of the sulphonylurea or insulin may be considered to reduce the risk of hypoglycaemia when used in combination with empagliflozin. Test positive for glucose in urine. Should be avoided during pregnancy; breast-feeding. Caution when driving or operating machines. Interactions: Diuretics, insulin & insulin & insulin secretagogues. May decrease efficacy with inducers of UGT enzymes. Adverse reactions: Very common: hypoglycaemia when used with sulphonylurea or insulin. Common: vaginal moniliasis, vulvovaginitis, balanitis and other genital infection, urinary tract infection, pruritus (generalised), increased urination. Uncommon: volume depletion, dysuria. Note: Before prescribing, please consult full prescribing information. prescribing, please consult full prescribing information.



# 由認識潛在風險開始

全力策動:





全力支持:





中國香港體通能總會





# 健康飲食3低1高 日日運動 30 分鐘

坐言起行 立即行動

#### 健康飲食

「三低一高」飲食原則

# 低糖







≥ 25 克

< 60 克 (大約相當 於 4 湯匙油)

\*按2.000千卡的每日膳食計算,個人攝取量會因應能量需要而有所增減

- 應定時定量推食,少食多餐
- 少食高糖份食物/飲品,多選擇高纖食物
- 選用蒸、烚、滾、燉或炆等烹調方法
- 調味時,除鹽外,可以多選用天然香料,如檸檬、薑、蔥及蒜頭等
- 多選擇低升糖指數(GI)#的食物,例如全穀物、低脂奶類和乾豆等

#### 適量運動

- 運動方程式:每星期做3至5次運動,每次至少30分鐘,一星期要有150分鐘中等強度帶氧運動
- 使用主要肌肉如大腿、臀部的運動,而運動時使呼吸加重及心跳加速,都可視作劇烈程度
- 與家人、朋友一起制定時間表,日常實踐做運動
- 除一般帶氧運動(如急步行、緩步跑、踏單車、游泳等)外,大家可以:

#### 在家裏

- 1. 做簡單體操
- 2. 做家務

#### 在工作間

- 1. 以步行代替乘車往返公司
- 2. 多行樓梯,少乘電梯或升降機
- 3. 做鬆弛頸、背、肩膊、腰、手和腳的伸展運動
- 4. 午膳後散步

"升糖指數(GI):量度各類含碳水化合物的食物在進食之後對身體血糖的影響。低升糖食物內的碳水化合物會相對高升糖食物消化及吸收較緩慢,令血糖升幅相對較輕微。

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