## Control and treatment profiles of 70,889 adult type 2 diabetes mellitus patients in Malaysia - a cross sectional survey in 2009.

## **ABSTRACT**

Background: Understanding the current diabetes care in Malaysia is the first step towards successful control. Many local studies have contributed toward knowledge of diabetes control and treatment profile but none had reported from such a large cohort of patients as in this registry. Aim & Objectives: To describe glycaemic control, risk factors, and treatment profile for quality assessment of diabetes care in Malaysia. Methods: This is a descriptive study based on secondary data from the online Adult Diabetes Control and Management (ADCM) looking into the control and treatment profiles of type 2 diabetes mellitus patients aged 18 years old and above from 1st January until 31st December 2009. Clinical characteristics included were age, sex, diabetes duration and treatment, glycaemic control, blood pressure, body mass index, and treatment for co-morbidity. Results: A total of 303 centres contributed a total of 70889 patients. Fifty-nine percent was female. The study population included 61.9% Malay, 19% Chinese and 18% Indian. The mean age at diagnosis was 52.3 years old (SD 11.10) and the mean duration of diabetes was 5.9 years (SD 5.56). The mean of HbA1c was 8.3% (SD 2.10); only 18.1% attained HbA1c < 6.5%. There were 61.8% diabetic hypertensive patients based on blood pressure measurements and about one third were treated to target BP  $\leq 130/80$  mmHg. The mean of low density lipoprotein-cholesterol was 3.2 mmol/L (SD 1.10); one-third achieved the target of  $\leq$  2.6 mmol/L. Eighteen percent was on more than two anti-hypertensive agents and 41.6% were on anti-lipid agents. Metformin (83.2%), angiotensin-converting enzyme inhibitors (63.9%) and statin (89.8%) were the mostly prescribed anti-diabetic, anti-hypertensive and anti-lipid agents respectively. Conclusion: Diabetes and its co-morbidities (hypertension and hyperlipidaemia) were less satisfactorily controlled. The choice of drugs was appropriate but probably inadequate. More effort and resources are needed to improve diabetes care in this country especially in the primary healthcare.

**Keyword:** Type 2 diabetes mellitus; Hypertension; Dyslipidaemia; Registry; Disease management.