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the inclusion and exclusion criteria were selected. 6 criteria for the structure indicators were selected based on the Chronic Care Model. 19 criteria for the process of care and 6 outcome indicators were selected based on the Malaysian Type 2 Diabetes Mellitus CPG 2015. Adequacy standards of 100% for 6 structure criteria and 50% - 80% for the process and outcome criteria were set. Data were analyzed using the SPSS software version 19.0.

**Results:** A total of 200 T2DM patients were included in this clinical audit. Mean age was 58.9 years (SD + 9.8, range 31 to 83 years), of which 46% were females and 54% were males. Adequacy standard was achieved in 4 structure criteria (T2DM registry, multidisciplinary team management, self-management support and CPG utilisation), 9 process criteria (BP and BMI recording, lipid profile, renal function, UFEME, lifestyle modification, statin prescription, nephrology referral and follow up visits) and 4 outcome criteria (targets TC, LDL, TG and HDL).

**Conclusion:** This audit shows satisfactory standards of T2DM management in this clinic. Remedial measures were discussed and a re-audit will be conducted.

### Poster Abstract 13

#### Assessment of Peripheral Neuropathy by Neuropathy Impairment Score and Nerve Conduction Studies in lower extremities of diabetes patients

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**Introduction:** Peripheral neuropathy is a common complication among diabetes patients. Diabetic Peripheral Neuropathy (DPN) develops gradually over time in a stocking-glove distribution and is a length dependent process with most occurrences in lower limbs. It often leads to foot ulceration, and if left untreated, can eventually result in amputation.

**Objectives:** This study aims to investigate the relations between Neuropathy Impairment Score of the Lower Limbs (NIS-LL) and Nerve Conduction Studies (NCS) in a cohort of patients with DPN in Malaysia.

**Methods:** A group of 57 patients with DPN from public health clinics around Penang were assessed with NIS and NCS. NIS performed on their lower limbs includes tests for muscle power, tendon reflexes and sensations. NCS was performed on sural sensory nerve, common peroneal and tibial motor nerves at the lower extremities, in which the parameters investigated were conduction velocity, amplitude, and latency. Relations between these assessments of DPN were analyzed by Pearson correlation test.

**Results:** The patients with DPN in this study consist of 18 males(31.6%) and 39 females(68.4%) with type 2 diabetes. From the correlations test performed, it was observed that the NIS-LL was significantly correlated with the conduction velocities of sural sensory( $r=-0.496$ ,  $p<0.000$ ) and tibial motor NCS( $r=-0.427$ ,  $p=0.001$ ). Besides that, significant correlations were also found between NIS-LL and the amplitudes of tibial ( $r=-0.326$ ,  $p=0.013$ ) and common peroneal motor NCS( $r=-0.304$ ,  $p=0.022$ ).

**Conclusion:** Patients with more severe clinical DPN signs at lower extremities showed weaker and slower responses in their NCS. The nerve impairment signs observed were related to abnormal performance of sural sensory nerve, tibial and common peroneal motor nerves at lower extremities.

### Poster Abstract 14

#### Cardiovascular disease risk factors assessment and glycemic control among type-2 diabetes mellitus patients: a comparative study between primary care and diabetic specialist clinic in Kuantan, Pahang

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**Background:** Type-II Diabetes Mellitus (T2DM) patients have high prevalence of cardiovascular disease (CVD) and high morbidity and mortality. They present with other co-morbidity and suffer from its complications. Thus, modifiable cardiovascular risks assessment and glycaemic control should be analyzed for prevention and early intervention.

**Objectives:** To compare between the public primary care clinics and DM specialists' clinic at Tertiary Hospital regarding the patients' characteristics and CVD risk factors assessment.

**Methods:** A cross-sectional descriptive study was carried out among 281 T2DM from two selected public primary care clinics (PPCCs) and 153 from DM specialists' MOPD (DMS-MOPD) at Public Hospital (HTAA) Kuantan. They were interviewed for social-demographic background, clinical profile and modifiable CVD risk assessment using validated pretested questionnaire. HbA1C  $\leq 6.5\%$  was defined as good glycaemic control. A cross analysis was done to compare the patients' characteristics, CVD risk assessment and glycaemic control between PPCCs and DMS-MOPD.

**Results:** Higher percentage of Chinese T2DM (20% vs 5%) and higher education group (69% vs 42%) seek treatment at the DMS-MOPD while Malay (94% Vs 71%) and dependents (72% vs 28%) were seen more at the PPCCs. Regarding modifiable CVD risk factors; Higher percentage of assessment on exercise (82% vs 62%), smoking status (63% vs 48%) and family history of CVD (80% vs 65%) were done in the DMS-MOPD. More dietitian (61% vs 47%) and ophthalmologist (81% vs 61%) referrals were noted at the DMS-OPD. Smoking Cessation Program referral was low in both PPCCs (3.3%) and DMS\_MOPD (7.8%). Good glycaemic control was noted higher in PPCCs (15%vs10%).

**Conclusion:** Sub-optimal glycaemic control status indicated the need of intensive treatment for both clinics. Assessment on exercise and smoking status as well as referral to dietitian, smoking cessation program and ophthalmologist should be done among all T2DM patients for better prevention and early intervention of its complications.

### Poster Abstract 15

#### Co-morbidity and cardiovascular risk assessment among Type-2 diabetes mellitus patients: A preliminary study at a public primary care clinic in Kuantan, Malaysia

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**Introduction:** Diabetes mellitus (DM) patients with cardiovascular (CVD) co-morbidity have higher risk of