5th Asia Pacific Primary Care Research Conference

4 - 6 December 2015
Everly Hotel, Putrajaya, Malaysia

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Oral Presentation

Oral Abstract 1
Barriers and facilitators to health screening in men: A systematic review

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Introduction: Globally, men live five years shorter than women and have higher mortality and morbidity rates across most of the diseases. Health screening is an effective strategy to improve men's health; however, screening uptake remains low among men. It is therefore necessary to explore the factors that influence men's decision to go for health screening.
Objective: This systematic review presents current evidence on the barriers and facilitators to engaging men in health screening.
Methods: We included qualitative, quantitative and mixed-method studies identified through five electronic databases, contact with experts and reference mining. We included all types of screening recommended by the United States Preventive Services Task Force (USPSTF) (Grade A and B) as well as prostate cancer screening and testicular self-examination because they were male-specific conditions. Two researchers selected and appraised the studies independently. Data extraction and synthesis were conducted using the 'best fit' framework synthesis method.
Results: 53 qualitative, 44 quantitative and 6 mixed-method studies were included. Factors influencing health screening uptake in men were categorised into five domains: individual (knowledge, attitudes, fear, masculinity, resources); social (family and peer influence, stigma); health system (access to screening services, health information, policy, service quality); healthcare professionals (communication, physician's gender and ethnicity, physician's recommendation) and screening procedure (nature of the screening procedure). The most commonly reported barriers are fear of getting the disease and low risk perception; for facilitators, they are perceived risk and benefits of screening. Male-dominant barriers include heterosexual self-representation, avoidance of femininity and lack of time. Spouse's role is the most common male-dominant facilitator to screening.
Conclusion: This systematic review provides a comprehensive overview of barriers and facilitators to health screening in men. The findings may be particularly useful for clinicians, researchers and policy makers who are developing interventions and policies to increase screening uptake in men.

Oral Abstract 2
Coverage and acceptance of seasonal influenza vaccination of healthcare workers in primary care clinics in Hong Kong: A cross sectional questionnaire study

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Introduction: Influenza poses a significant burden to our healthcare system. It has been observed that the uptake rate of seasonal influenza vaccination among healthcare workers (HCWs) remained low both locally and internationally. Primary care clinics are often the first contact point of patients presenting with influenza-like illness. There is limited evidence and lies a research gap of investigating the situation of vaccination in HCWs particularly in primary care clinics in Hong Kong.
Method: This is a cross-sectional questionnaire study involving staffs of all groups working in 18 Kowloon West Cluster General Outpatient Clinics (KWC GOPCs). Self-administered questionnaire in Chinese was used. Statistical Package for the Social Sciences (SPSS) was used for statistical analysis.
Results: There were 530 staff in 18 KWC GOPCs and 85.6% responded. The overall vaccination rate was 39.7%, doctors had the highest vaccination rate (75%) while pharmacy staff had the lowest (23.6%). The most common reason for not having flu vaccine was the fear of systemic side effects (30.0%). Around 27.7% of unvaccinated HCWs believed vaccine is ineffective to protect themselves or others. Doctors were significantly more likely to be vaccinated when compared with other groups (p<0.005). Uptake of flu vaccine last year also significantly predicts the uptake of flu vaccine this year (p<0.0005, OR 69.3 [95% CI 30.0-160.4]).
Conclusion: The vaccination of HCWs in primary care remained low despite continuous promotions. It is crucial for broader vaccination coverage so as to protect HCWs and patients. There is a need to revise the promotion strategies and further qualitative research especially on the characteristics those unvaccinated HCWs would be helpful.

Oral Abstract 3
Primary care based transition to insulin to improve outcomes in type 2 diabetes: Results of the stepping up cluster randomised controlled trial

Furler J[1], O'Neal D[2], Speight J[3,4], Manski-Nankervis J-A[1], Gorelik A[7], Holmes-Truscott E[3,4], Ginnivan L[1], Young D[1], Best J[5], Patterson E[6], Liew D[7], Segal L[8], May C[9], Blackberry I[1,10]

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Introduction: Insulin is effective in achieving glycaemic targets, yet initiation is often delayed in primary care. Stepping Up is an education and practice systems change intervention developed to address this issue. It consists of on-site training for general practitioners (GPs) and practice nurses (PNs), clinical algorithms for initiation and up-titration of insulin (glargine +/- glulisine) with specialist support as required.
Objectives: To examine the effectiveness of Stepping Up compared to usual care.

Methods: A cluster randomised controlled trial was conducted involving 266 patients from 74 practices in Victoria. Eligible patients were insulin naïve, aged 18 - 80 years with T2D, on ≥2 oral hypoglycaemic agents and HbA1c ≥7.5% (53 mmol/mol). Multilevel mixed-effects linear regression with adjustment for clustering effect was used to explore the primary outcome of change in HbA1c at 12 months follow up. Two sample test of proportions was used to explore the number of participants who commenced insulin and the proportion who achieved HbA1c ≤7.0%.

Results: The intervention and control groups were similar at baseline. 61% of patients were male, mean (SD) age 62 (10) years, diabetes duration 9 (5, 13) years, median (IQR) HbA1c 8.6 (8.0, 9.7)%. Intention to treat analysis showed a significant difference in HbA1c between groups favouring the intervention (mean difference =-0.7%; 95%CI -1.0%, -0.3%). Insulin was more likely to be initiated in the intervention group (102/146 (70%) versus 24/108 (22%), p<0.001) and HbA1c ≤7% was more likely to be achieved (53/142 (37%) versus 22/106 (21%), p=0.005). No episodes of severe hypoglycaemia were reported.

Conclusion: Stepping Up, an educational and practice system change intervention specifically targeting insulin therapy, led to a clinically significant improvement in glycaemic control amongst patients with T2D in general practice. This pragmatic translational study has important implications for the organisation of care for people with T2D in primary care.

Oral Abstract 4
Socioeconomic inequalities in the distribution of diabetes among Malaysian adults: The National Health and Morbidity Survey (NHMS) II, III & IV

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This population-based study aimed to explore the trends of the socioeconomic inequalities in diabetes among Malaysian adults aged 30 years and above from Peninsular Malaysia. The socioeconomic trends in diabetes was analysed using the NHMS II, III and IV data sets for the years 1996 (n=15968), 2006 (n=19118) and 2011 (n=10178). Household per-capita income was used as a measure of socioeconomic position and for descriptive purposes was categorised into population-weighted quintiles. As a measure of inequality, the concentration index (C) which quantifies the degree of socioeconomic inequality in a health outcome was computed. The findings show that the prevalence of diabetes increased from 11.73% in 1996 to 24.60% in 2011. Among the three major ethnic groups, Indians particularly Indian men had the highest prevalence of diabetes and Chinese the lowest. Indian men also had the highest increase in diabetes (28.07%) while Chinese women had the lowest increase (9.85%). The prevalence of diabetes for all three years decreases with increase in education. The difference in the prevalence of diabetes of those with no education compared to those with a tertiary education increases across the years from a difference of 7.73% in 1996 to 12.52% in 2011. There appears to be a gradual reverse in the direction of the socioeconomic gradient in diabetes; as in 1996, the poorest quintile had the lowest prevalence and by 2011 the richest quintile had the lowest prevalence. In terms of socioeconomic inequality, diabetes was concentrated among the rich in 1996 [C=0.05, 95%CI (0.03 to 0.08)], equally distributed in 2006 [C=-0.005, 95%CI (-0.02 to 0.01)] and concentrated among the poor in 2011 [C=-0.05, 95%CI (-0.08 to -0.03)]. The change from rich to poor concentration seemed to be more prominent for women than men. In conclusion, the distribution of diabetes is progressively moving towards burdening the poor

Oral Abstract 5
The role of social network in facilitating self-monitoring of blood glucose practices among insulin-treated type 2 diabetic patients. An explorative study

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Introduction: Self-monitoring of blood glucose plays an important role in diabetes management. Many factors influence the uptake, among these is the influence of social network.

Objectives: This study explores the role of social networks in facilitating SMBG practices among insulin-treated type 2 diabetics.

Methods: This was a qualitative study involving 18 patients with Type 2 diabetes mellitus from a primary care clinic in Malaysia. In-depth interviews were conducted using a semi-structured interview guide, which was developed based on the Social Cognitive Theory. The interviews were audio-recorded, transcribed verbatim and checked for accuracy. Thematic analysis was performed.

Results: Family is a common source of participants' social network. They consist of a spouse, children and extended family members. Interaction with social network impact participants' personal factors in glucose monitoring by making them capable of monitoring, motivating them to monitor and empowering their coping mechanism. Social network provide social influence in the environment via collaborative practice, closeness, social comparison and access to resources. Social network promotes collaborative

practice in several ways such as providing reminders and creating routines to monitor. Closeness in the interaction produce conducive environment for sharing SMBG practice and promote information exchange. In addition, social network allowed participants to compare their experience with them and they mediate the access to resources like to medical knowledge and provision of glucometer and strips.

Conclusion: Social network play an important role in facilitating blood glucose monitoring practices. Compared to other sources of informal social network, family members are the major contributors of support. As such, families can be a useful resource for empowering blood glucose monitoring practices.

Poster Presentation

Poster Abstract 1
Adaptation and validation of the Malay version of Osteoarthritis Knee and Hip Quality Of Life (OAKHQOL) questionnaire among knee osteoarthritis patients: A confirmatory factor analysis

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Introduction: Health-related quality of life that accurately reflects a patient's experience with respect to specific disease is one of the important outcomes recommended for interventional study. Therefore, the need to assess conceptual relevance and psychometric properties in other cultures or countries is increasing.

Objectives: To evaluate the construct, convergent, criterion validity and reliability of the Malay version Osteoarthritis Knee and Hip Quality Of Life (OAKHQOL)

Methods: The English version OAKHQOL was adapted into Malay. Then a pilot study was conducted. For the psychometric properties, a cross sectional study was conducted in 191 knee osteoarthritis patients. Patients completed the Malay version OAKHQOL and validated WOMAC questionnaires. Confirmatory analysis, reliability analysis, known group analysis and Pearson correlation test were performed to assess the psychometric properties of the Malay version questionnaire.

Results: The results showed that the original five-factor model with 40 items failed to achieve acceptable values of the goodness of fit indices, indicating poor model fit. A new five-factor model of 28 items demonstrated acceptable level of goodness of fit (Comparative Fit Index = 0.915, Tucker Lewis Index = 0.905, Incremental Fit Index = 0.916, Chi-squared/degree of freedom 1.953 and Root Mean Squared Error of Approximation 0.071) indices to signify a model fit. The Cronbach's alpha value for the new model ranged from 0.865 to 0.933. The composite reliability values of each construct ranged between 0.819 and 0.921, indicating satisfactory to high level of convergent validity. Pearson correlation coefficient between OAKHQOL and Validated Malay version WOMAC showed adequate convergent validity. Known groups validity showed that there is statistical difference in body mass index in physical activity, mental and pain construct. There was significant difference in the radiograph grading in the physical activity and pain construct.

Conclusion: The five-factor model with 28 items Malay version OAKHQOL is reliable and valid.

Poster Abstract 2
An update on stroke registry: risk factors and complications of acute stroke patients in Hospital Seberang Jaya.

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Introduction: National Stroke Registries has been implemented in Malaysia since 2009. However, less prevalence or incidence of stroke has been recorded nationally although it has been reported that stroke rank one of the top five leading causes of mortality and morbidity in Malaysia.

Objectives: To investigate the risk factors and demographic pattern of stroke patients and stroke management in Hospital Seberang Jaya.

Methods: This prospective observational study was carried out in Hospital Seberang Jaya from January 2015 to June 2015. A standardized case report of National Neurology Registry (stroke) form was used to collect the details of the patient and the clinical presentation. It includes consecutive patients with a clinical diagnosis of ischaemic stroke (first ever or recurrent) or had suffered a stroke during an inpatient stay during the period. Patients were recruited within 72 hours of stroke onset. Stroke severity was measured using the National Institute of Health Stroke Scale.

Results: There were 63 patients registered, of whom 55.6% were Malays followed by Chinese (34.9%) and Indian (6.4%). There were 79.37% patients having stroke for the first time while 19.05% had recurrent stroke. Ischemic stroke accounted the most cases with 77.8% patients while 6.4% having intracerebral haemorrhage (ICH) and 4.8% were having transient ischemic attack (TIA). Smokers presented the most prevalent risk factors to have stroke with 25.3% followed by hypertension (24.7%), diabetes mellitus (15.9%) and hyperlipidaemia (10.4%).Those receiving stroke care education were 83.6% and willingly go for rehabilitation while antiplatelet and lipid lowering therapy given were 72.1% and 73.8% respectively. This resulted in lower mortality rate of 7.9%.

Conclusion: Ischemic stroke demonstrated the most events occurred in Hospital Seberang Jaya, however, enhanced stroke management had improved patient's outcome. More population based data on various aspects of stroke is needed in monitoring the performance of stroke care service.

Poster Abstract 3
Are there ethnic differences in achieving treatment goals amongst patients with dyslipidemia in primary care? A cross-sectional study

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Introduction: Dyslipidemia is the prime risk factor for arthrosclerosis. It is the commonest chronic disease amongst the multi-ethnic Asian population in Singapore. Studies have shown that dyslipidemia control varied across ethnic groups in America due to multiple factors. Amongst patients with dyslipidemia, this study aimed to determine the proportion of those who met their LDL-cholesterol treatment targets and stratified by the local major ethnic groups. It also evaluated the factors which influenced them in achieving LDL-cholesterol treatment-targets, including their diet, exercise and medication.

Methods: Adult patients with physician-diagnosed dyslipidemia were enrolled in this cross-sectional study at two polyclinics in eastern Singapore. Research-assistants administered standardized questionnaire to eligible patients to collect information on their views on diet, exercise and medications. Their lipid profiles were then retrieved from their laboratory reports in their electronic health records. Chi-square and Fisher's exact tests were used for the categorical demographics and questionnaire variables, with

p 60 years old. The proportion of Chinese, Malay and Indian patients who achieved LDL-cholesterol targets were 78.3%, 67.9%, and 68.5% respectively. Among those who would take their favorite cholesterol rich food occasionally when their cholesterol became controlled, 35.8% Indians failed to achieve treatment target, compared to 21.8% Chinese and 30.9% Malay patients. Regular medication adherence was associated with 81.8% Chinese, 69.0% Malay and 69.7% Indian reaching treatment targets. No statistical significance was found between diet and exercise of patients in achieving their LDL-cholesterol treatment target.

Conclusion: More Chinese met LDL-cholesterol treatment targets for compared to Malays and Indians. Diet habits and exercise were not associated with achieving treatment-targets.

Poster Abstract 4
Association between asthma control and healthcare expenditure: Results from a longitudinal study in a primary care setting

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Introduction: Asthma control can be assessed using instruments such as the Asthma Control Test (ACT). An ACT score of 20 or higher indicates good asthma control. Patients pay for their consultation and treatment in the fee-for-service primary healthcare system in Singapore. We hypothesised that achieving asthma control would result in lower asthma costs including reduced acute exacerbations, fewer physician consultations and lower lost productivity.

Objectives: The study quantifies the healthcare costs of patients who achieved asthma control, compared to those with suboptimal asthma control based on ACT scores. The factors influencing asthma control and healthcare expenditure over time were also examined.

Methods: 939 patients were enrolled into an asthma care program in two polyclinics at different times between 2004 and 2013. Direct cost of asthma management was derived from the frequency of polyclinic consultations, medication costs and hospitalization. Indirect costs were estimated from lost work-days due to exacerbations. The Generalized Estimating Equation (GEE) approach was used to model the longitudinal data to examine the factors associated with total healthcare expenditure.

Results: Patients with ACT of 20 or higher in a visit spent on average S$30 less per visit (p<0.01) (S$23 for males and $36 for females). Obese patients cost more than normal weight patients (S$21, p<0.01). Smokers incur higher costs than non-smokers (S$37, p<0.01). More severe asthma patients (measured by GINA) are positively correlated with higher total asthma costs. Indians have highest costs per visit, followed by Chinese and Malays. Males incur less cost than female patients.

Conclusion: Optimal asthma control was associated with reduced healthcare costs. An effective treatment regimen should also consider other modifiable factors such as smoking and weight control to achieve asthma control and eventually reduce asthma costs.

Poster Abstract 5
Attitude, knowledge and treatment practices of gout among doctors working in General out-patient clinics in Hong Kong

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Introduction: Gout is a common form of inflammatory arthritis, with a prevalence rate of 5-6% in Hong Kong. Previous studies in other places showed that the quality of care provided to gout patients was suboptimal. If the knowledge or treatment practices of doctors are suboptimal, further continuing medical education may be needed.

Objectives: This study aims to examine the attitude, knowledge and treatment practices of gout among doctors working in General Out-Patient Clinics (GOPCs) in Hong Kong.

Methods: This is a cross-sectional questionnaire survey. All doctors working in the GOPCs in Kowloon West Cluster of Hospital Authority in Hong Kong were included. The exclusion criteria excluded hospital-based trainees who only need to attend GOPCs once per week.

Attitudes, knowledge, treatment practices, continue medical education and demographic data of doctors were collected. The answers of each question about knowledge or treatment practices were marked to calculate a total score.

Results: A total of 107 questionnaires were distributed and 87 valid questionnaires were received. The response rate was 81.3%. The median mark for the part of knowledge was only 16 out of 36 marks and the median mark for the part of treatment practices was only 8 out of 30 marks. Knowledge was positively correlated to treatment practices with moderate strength of Spearman's correlation coefficient 0.592 (p <0.001). Reading journal articles (p=0.01) or guidelines (p <0.001) about gout correlated with better knowledge. Attending training about gout (p=0.005), reading journal articles (p<0.001) or guidelines (p <0.001) correlated with better treatment practices.

Conclusion: Many doctors had inadequate knowledge about gout and most doctors reported suboptimal treatment practices. It is crucial for family doctors to improve knowledge or treatment practices of gout by attending continuing medical training, reading medical journals and clinical guidelines.

Poster Abstract 6
Blood pressure control among treated hypertensive outpatients in Bintulu, Sarawak

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Introduction: In NHMS 2011, prevalence of hypertension for Malaysia was 32.7% with prevalence for Sarawak is 40.5%. Audits of government health clinic in year 2006 reported that only 28.5% of hypertensive patient had good blood pressure control.

Objectives: To determine the prevalence of blood pressure control among treated hypertensive patients in Bintulu, Sarawak, and its association with their sociodemographic and medical characteristics.

Methods: This is a cross sectional study done in three

government primary health care clinics in Bintulu, Sarawak. Systematic random sampling was used. Hypertensive patients' socio demographics, medical data and physical examination findings were recorded. Two blood pressure reading was taken and mean blood pressure ≤140/90mmHg considered having good control.

Results: 246 patients were involved in this study. Mean age was 54.9±11.8 years.

Majority respondents were females (63.0%), predominantly Iban ethnicity (72.4%) and 40.7% never go to school. Majority does not exercise (78.0%), 10.2% are smoker and 22.4% taking alcohol at least once a month. Forty-five percent had hypertension ≤5 years, 28.0% had diabetes, 65.5% had dyslipideamia and 1/3 had ≥3 diseases. Majority are taking Calcium-Channel-blocker (72.8%) and 63.0% were on combination therapy for their hypertension.

The prevalence of good blood pressure control was 51.6%. Factors related to good blood pressure control are: older age, regular exercise, shorter duration of having hypertension, taking CCB and having other chronic illnesses such as IHD and dyslipideamia.

Multivariate analysis found that regular exercise with duration of >30minutes per-session (p value 0.025, OR2.719, CI 1.134, 6.518) and those taking Calcium-Channel-blocker (p value 0.021, OR2.023, CI 1.134, 6.518) are the independent predictors for good blood pressure control.

Conclusion: Prevalence of good blood pressure control among treated hypertensive outpatient in Bintulu is 51.6%. Predictors for good blood pressure control are regular exercise with duration >30minutes each times and taking calcium channel blocker as one of the anti-hypertensive.

Poster Abstract 7

Evaluation of total body fat and visceral fat distribution according to age, gender and Body Mass Index (BMI) by Bioelectrical Impedance (BIA) among Hospital Seberang Jaya Staffs

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Introduction: Visceral fat also known as abdominal fat that explained as a type of body fat that exists in the abdomen and surrounds the internal organs. It is associated with serious health problems including cardiovascular disease, diabetes and hypertension if there is an excessive deposit.

Objectives: The study conducted is to observe the total body fat and visceral fat level distribution among Hospital Seberang Jaya staffs based on their age group, gender and BMI respectively.

Methods: A total of 112 of Hospital Seberang Jaya staffs' visceral fat level were measured by using Bioelectrical Impedance (BIA) machine from February 2015 until July 2015 regardless of their occupation, health status, age and gender.

Results: More than half of the staffs measured were in very high total body fat group (53.6%) which is defined as >25% for male and >35% for female. For the visceral fat level, high (10.0 – 14.5) and very high (15.0 – 30.3) group represents 24.1% and 18.8% respectively. More than half of the staffs (54.5%) belong to the overweight (25.0 – 30.0) and obese (>30) categories. There were significant correlations (p<0.01) between percentage of total body fat, visceral fat level and BMI in males and females. As for age, there was a significant correlation (plevel 10) group. They can

be considered as high risk group that may lead to conditions such as hypercholesterolaemia, cardiovascular disease and type 2 diabetes. In order to prevent or improve these conditions, it is important to reduce the amount of visceral fat level to an acceptable level by changing the lifestyle, diet or supplement intake.

Poster Abstract 8

Impact of perceived social support on quality of life in patients awaiting for Coronary Artery Bypass Grafting (CABG) surgery

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Introduction: Perceived social support has been of concern among patients who are awaiting Coronary Artery Bypass Grafting (CABG) surgery, yet the level of social support and its effect on an individual's quality of life are inconclusive. This study aimed to survey perceived social support and its effect on quality of life in patients awaiting CABG surgery at Outpatient Department of National Heart Institute, Malaysia.

Methods: In this cross-sectional study, we surveyed perceived social support and its effect on quality of life in 317 patients awaiting CABG surgery at Outpatient Department of National Heart Institute. All participants completed the 12-item Multidimensional Scale of Perceived Social Support (MSPSS) and 26-item World Health Organization Quality of Life (WHO- QOL) questionnaires.

Results: Out of 317 respondents, 242 (76.3%) patients reported poor quality of life. However those aged between 31-50 years and Chinese patients reported significantly higher quality of life as compared to other groups with p-value of <0.05 in ANOVA test. Perceived social support was positively correlated with their quality of life in Pearson correlation test. A linear regression analysis confirmed that there was an association between perceived social support and quality of life with r-value of 0.59.

Conclusion: Evidence indicates that patients who perceived receiving social support while awaiting for their CABG surgery had better quality of life. The results from this study can facilitate health care personnel to design an appropriate structured pre-operative assessment on social support and education program for patients awaiting CABG surgery to improve their quality of life.

Poster Abstract 9

Oral Variant Erythema Multiforme-A Case Study

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Introduction: Erythema multiforme can present as a single mucosal oral lesion without skin target lesions. It is important to identify and distinguish oral erythema multiforme from other ulcerative disorders involving the oral cavity for early management and most importantly because subsequent attacks can produce more severe forms of erythema multiforme involving the skin.

Case Description: An 11 years old girl presented to her general practitioner with fever, sore throat and painful ulcers on her lips. On day 11 after she was started on Carbamazepine for newly

diagnosed epilepsy, she complained of sore throat that was associated with low-grade fever. There was no rash on her trunk or limbs. Full blood count, liver function test and electrolytes were all within normal limits. Her fever increased progressively over the next 5 days and her lips became progressively red, swollen and painful. She was admitted to hospital and was immediately rehydrated with intravenous normal saline. She was also given intravenous amoxicillin- clavulanic acid and oral acyclovir. Carbamazepine was stopped. Her fever settled within 24 hour after admission. However, the ulcers progressed to pan-mucositis of her mouth and throat. Subsequent serological testing for Herpes simplex and Mycoplasma pneumoniae were negative. She recovered over the following 6 days.

Discussion: This case highlights some learning points to clinicians. All patients started on carbamazepine should be warned about possible drug reactions and to stop the drug immediately if there is any fever, oral ulcers or skin rash. There is a strong association between the HLA-B*1502 allele and carbamazepine-induced SJS and TEN in Han-Chinese, Thai, and Malaysian populations. HLAB* 1502 genotyping is highly recommended for all Asians prior to the use of carbamazepine. Such HLA testing is mandatory in Hong Kong, Taiwan and Singapore.

Poster Abstract 10
The effectiveness of pictorial based self-management among adult asthmatics in a primary care health clinic: a randomised controlled trial

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Introduction: Self-management asthma education should be delivered in an easy and comprehensible manner for successful utilisation. Pictograms have been shown to improve patients' understanding of asthma management among population with low literacy level. We tested this in a suburban population in Malaysia.

Objectives: To determine the effectiveness of a pictorial based asthma self-management towards asthma control

Methods: This was a non-blinded, single centre randomised trial. Sixty-two adult asthmatics attending a government primary care clinic in suburban Selangor and taking preventive inhaled corticosteroids were randomised into two groups: pictorial based self-management (*n*=31) or conventional care (*n*=31). The pictorial based group received a ten minute individualised counselling session on pictorial based self-management plan. The main outcome measures were improvement in asthma control test (ACT) scores, number of hospitalisations, unscheduled health care visits and absenteeism after three months of follow up.

Results: A total of sixty-two participants were analysed. Both groups had improvement of asthma control within the follow up period. However, there was no significant difference in the asthma control (ACT score change) between the intervention and control group with their median ACT score (IQR): 22(4) vs 21(4), p=0.391, respectively. The mean difference of ACT score from baseline (SD) were 2.2(3.2) vs 1.3(4.6) p=0.354, respectively. The control group had one hospitalisation and two absenteeism whereas the intervention group had none. No significant statistical difference was observed in the number of unscheduled healthcare visits among the two groups.

Conclusion: Pictorial based self-management did not offer any advantage over the conventional method in a suburban Malaysian population

Poster Abstract 11
Views of primary care doctors in managing patients with chronic low back pain: A qualitative study

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Introduction: Chronic low back pain (CLBP) is a common and often difficult to treat condition. There is a lack of studies on the challenges faced by primary care doctors in managing patients with CLBP.

Objectives: To explore the views and experiences of primary care doctors in managing patients with CLBP.

Methods: This was a qualitative study involving 23 primary care doctors using focus group discussions (FGD). The Theory of Planned Behaviour was used as a framework to develop the topic guide. Data were collected through audio-recorded interviews, transcribed verbatim and checked for accuracy. Data saturation was reached by the third FGD. Another FGD was included to ensure completeness, giving a total of four FGDs. A thematic approach using the one sheet of paper (OSOP) method was used to analyze the data.

Results: Matching of doctors and patients goals were perceived as being a predictor of satisfaction with the clinical consultation. Participants perceived that managing patients with CLBP was difficult because they were unable to meet patients' expectations such as requests for investigations and medical certificates. Managing CLBP elicited strong emotions, which were mainly negative, among the primary care doctors.

Conclusion: There were many challenges faced by primary care doctors in managing CLBP at individual level. Interventions to improve CLBP management should target identified barriers.

Poster Abstract 12
A clinical audit on type 2 diabetes mellitus care in UiTM primary care clinic

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Introduction: Evidence-based T2DM management in primary care as recommended by clinical guidelines is important to detect the condition early and to delay diabetes-related complications.

Objective: To assess the adequacy of T2DM management in UiTM Primary Care Clinic in relation to the current clinical practice guideline (CPG) recommendations.

Methods: A clinical audit was conducted in UiTM Primary Care Clinic in July 2015. A list of T2DM patients who attended the clinic from July 2014 to June 2015 were retrieved from the electronic medical record system. Only those who were seen at least twice by the postgraduate family medicine doctors in the last 1 year were included. Patients who have T1DM were excluded. Approximately 20% of the T2DM who fulfilled

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 ≤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

mortality. Hypertensions, dyslipidaemia, ischemic heart disease (IHD) are common CVD co-morbidity for DM patients. This study was done to determine relationship among CVD co-morbidity, risk assessment and glycemic control status of type-2 DM patients.

Method: A retrospective record review study was conducted among 102 type-2 DM patients' records from one public primary care clinic (PPCC) from Kuantan, Malaysia in 2014. Bio-data, clinical profile, co-morbidity, CVD risks assessment were scrutinized. Glycemic control status was categorized into four groups based on two HbA1C results which were taken from the latest reading and one year earlier - controlled-to-controlled (C-C), uncontrolled-to-uncontrolled (UC-UC), uncontrolled-to-controlled (UC-C) and controlled-to-uncontrolled (C-UC). HbA1c $\leq$ 6.5 % is applied to set cut-off point for glycemic control. A cross analysis was done to infer relationship among co-morbidity status, CVD risks assessment and glycemic control status of the DM patients.

Results: Common CVD co-morbidity among the type-2 DM patients from PPCC were hypertension (74.5%), dyslipidaemia (52.9%), obesity (7.8%) and its complications such as stoke, IHD, retinopathy, nephropathy, peripheral neuropathy (28%). Blood pressure was done in every follow-up visit (99%) while lipid profile (94%) was done annually. BMI (85.3%) smoking (40.2%) and exercise (5.9%) status were assessed at 1st booking. Regarding glycemic control status, 54% were UC-UC followed by C-C (19.6%), UC-C (4.9%) and C-UC (3.9 %) respectively. Higher prevalence of hypertension (58% vs 28%) and dyslipidaemia (69% vs 22%) were found out in UC-UC group than C-C group. Hypertension (50% vs 91.9%) and dyslipidaemia (16.7% vs 83.8%) co-morbidity were lower among the DM patients with exercise status assessment than their counterparts (p<0.05).

Conclusion: Uncontrolled Type-2 DM patients with co-morbidity should be given more intension to assess CVD risks especially exercise status by primary health care providers together with their intensive pharmacological management.

Poster Abstract 16
Correlation Studies of clinical measurements for diabetes patients with Peripheral Neuropathy in Malaysia

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Introduction: Peripheral neuropathy in diabetes patients is a condition of nerve damage caused by exposure to high glucose level over an extended period of time. It is a common long-term complication of diabetes, affecting up to 50% of all diabetes patients. Diabetes peripheral neuropathy(DPN) often occurs in the extremities of body, such as arms and legs. It is usually diagnosed clinically using the patient's medical history, symptoms, and physical examination.

Objectives: The aim of this study is to evaluate the correlations of clinical measurements for a cohort of patients with DPN in Malaysia.

Methods: A total of 300 diabetes patients with peripheral neuropathy were recruited from outpatient clinics in Malaysia. Two neurological scores were used as their neuropathy measurements which were the Total Symptoms Score(TSS) and Neuropathy Impairment Score(NIS). Data were also collected from their demographics and blood biochemistry tests. Correlations analysis were performed on their age, duration of diabetes, body mass index(BMI), blood pressures, HbA1c, fasting blood glucose, and the neuropathy outcome measurements.

Results: From the analysis performed, it was observed that both the neuropathy measurements, TSS and NIS were significantly associated with the duration of diabetes(r=0.156, p=0.007, and r=0.228, p<0.000 respectively). Longer duration of diabetes was associated with higher TSS and NIS. Besides that, significantly poorer glycemic control, HbA1c, was observed in younger diabetes patients(r=-0.128, p=0.027). Patients with longer duration of diabetes also showed poorer glycemic control(r=0.198, p=0.001). Both systolic and diastolic blood pressure were significantly higher in diabetes patients with higher BMI values(r=0.114, p=0.049 and r=0.227, p<0.000 respectively).

Conclusion: Patients with longer duration of diabetes were prone to have more severe peripheral neuropathy. Early diagnosis of DPN may help in limiting the nerve damage and preventing further complications.

Poster Abstract 17
Diabetes- How severe? Evidence from e-HIS

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Introduction: The cost to treat diabetes imposes a great financial burden for primary care services. It is estimated that 60% of resources were used to manage the diabetic outpatient each year. The information obtained from this study is useful for resource management towards efficient outpatient services.

Objectives: This is part of a bigger study to measure the cost of diabetes and its management. This presentation will describe the demographic characteristic of diabetic patients in outpatient department (OPD) Hospital Serdang in 2013.

Method: Data was extracted from e-HIS into three datasets namely all OPD, pharmacy and laboratory. The data was cleaned and merged in STATA version 12. Patients aged below 18 were excluded.

Results: A total of 1,349,053 observations were extracted. OPD patients amounted to 101,372 where 9,232 were diabetic, giving the prevalence of 9.1% (95% CI: 8.9-9.2%) There was an increasing trend with age, starting from 0.4% within those aged 18-19, reaching a peak of 24.3% (95% CI: 23.3-25.4) in the 60-64 age group. There was a significant difference in prevalence by gender and ethnicity.

From 223,568 visits to OPD, the prevalence of diabetic patients visiting OPD was at 16.1%. Mean number of visits to OPD was at (4.6±3.2). Nephrology department received the highest visit at 43.3% (95%CI: 42.5 – 44.2), followed by Cardiology and General Medicine at 31.8% and 29.7% respectively. The prevalence of diabetics utilising emergency department was at 10.1% (95%CI: 9.9 – 10.3).

Among diabetics, majority were females (56.5%) and Malays (51.7%). The mean age was (57±12.95). Among 7,640 HbA1c tests carried out, 80.3% showed uncontrolled diabetes (≥ 6.5%).

Conclusions: Diabetes is getting younger and was highest

in males, Indians and in the age group of 60-64. Majority of diabetic patients are still having poor control which requires evaluation on the treatment given.

Poster Abstract 18
Frequency of peripheral neuropathy symptoms and signs in patients with diabetes mellitus in Malaysia

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Introduction: Peripheral neuropathy, also known as sensorimotor neuropathy or distal symmetrical neuropathy, is the most common type of diabetic neuropathy which affects the nerves of arms and legs. The two main clinical consequences, painful neuropathy and foot ulcerations which can lead to amputation, are associated with patients morbidity and mortality. Pain is the most distressing symptom of neuropathy and often prompts the patients to seek medical treatment for pain relief.

Objectives: This study aims to investigate the frequency of peripheral neuropathy symptoms and signs in diabetes patients from public health clinics in Malaysia.

Methods: Study was conducted on 300 diabetes patients with peripheral neuropathy recruited from 13 public health clinics in north-west region of peninsular Malaysia. Diabetic peripheral neuropathy (DPN) was assessed by two non-invasive tools which were Total Symptoms Score(TSS) and Neuropathy Impairment Score(NIS). Patients were evaluated for the frequency and intensity of four symptoms which were numbness, pricking, burning, and lancinating pain. They were also examined for muscle weakness, tendon reflexes, and sensations at both upper and lower limbs.

Results: Among the symptoms assessed, numbness was the most common symptom experienced by patients with DPN, and the least was lancinating pain. Majority of the patients(79.7%) had almost continuous numbness. Only minority(9%) experienced almost continuous lancinating pain. For the intensity of symptoms, moderate numbness was the most common(65.3%) and the least was severe lancinating pain(3%). Most of the patients demonstrated abnormal signs for touch pressure and pin-prick on their lower limbs(82.7% and 79.3% respectively). About 61.7% of ankle reflexes and 40.2% of brachio-radialis reflexes were abnormal. Only about 1% of the patients had weak muscle power.

Conclusion: Diabetes patients with peripheral neuropathy often experienced numbness as the major symptom. The sensation tests which showed common abnormal signs were touch pressure and pin-prick in their lower limbs.

Poster Abstract 19
How conflicting medical advice leads to the Psychological Insulin Resistance among type 2 diabetes mellitus patients

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Introduction: Psychological insulin resistance (PIR) is common among people with type 2 diabetes mellitus (T2DM).

Objectives: To explore how conflicting medical advice blocks people with T2DM from insulin therapy.

Methods: 24 focus groups were performed in 11 general outpatient clinics. 126 T2DM subjects with recent glycemic haemoglobulin ≥7.5%(58.5 mmol/mol); on maximum tolerable oral glucose lowering agents (OGLAs) were interviewed from July 2013 to May 2014.

Results: Total 126 subjects (Men (43.7%) Women (56.3%)), aged 49 to 89 were interviewed in focus groups. Most of them were not employed (86.4%) and educated just at primary school or below (69.9%). Research results indicate that PIR is due to misconceptions. The main source of misconceptions is hearsay from the community that exaggerates the side effects of insulin with panic descriptions and narratives. Namely, insulin is harmful to pancreas and the whole body system. Switch to insulin therapy for glycemic control implies being seriously ill and disabled. Injecting insulin is to live in a way of life as "drug addicts". Many people with T2DM therefore lack the self-efficacy in starting insulin therapy. The rise of conflicting medical advice in health service practice open the room for such misconceptions to hold the people with T2DM from proper information and hence determination to start insulin therapy.

Conclusions: In order to enhance the self-efficacy of people with T2DM in starting insulin therapy, the health care sector should put special efforts to deal with the common misconceptions among people with T2DM. Clinicians should adopt a standard information package and provide adequate time for discussion. Outreach campaigns should also be launched for rectifying the hearsay from the community.

Poster Abstract 20
'JOM MAMA' – A Pre pregnancy intervention to reduce the risk of diabetes and pre-diabetes

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Introduction: In Malaysia the prevalence of type 2 diabetes mellitus (T2DM) and gestational diabetes has tripled over the past two decades in the younger generations in Malaysia. To combat this public health challenge, Ministry of Health has in collaboration with academic partners (University of Witwatersrand, University of Southampton, Steno Diabetes Centre) and Novo Nordisk established the Jom Mama project. The aim of the project is to optimize women's health prior to pregnancy, so as to minimize the risk of getting T2DM for them and their offspring. The intervention contains of two components: a) Motivational counseling carried out by trained community nurses(CHP); b) E-health platform which contain a mobile and web application. The intervention will be evaluated in a randomized controlled trial (RCT) starting November 2015 in Seremban.

Objectives: To pilot test the three trial components in RCT: recruitment, data collection and intervention.

Methods: We observed different recruitment methods from March to June 2015. For data collection, we tested the data collection forms and assess the quality. For the intervention component, focus group discussions was conducted among 15 nurses and semi structured interviews with 8 couples who at least have had 3 contact points with CHP.

Results: Recruitment: Face to face was assessed as the best recruitment method compared to phone calls. For Data

collection, we found the collection form needed to be shortened. Intervention component: The CHP appreciated the communication skills they have learned in their training but the E-health tool could be a challenge to them due to several identified problems. The young couples appreciated the intervention package and highlighted that both the contact-points with CHP and the E-health platform was important.

Conclusion: The pilot testing confirmed that the trial is feasible for implementation. Though, several adjustments to each trial component are needed before the start of actual trial.

Poster Abstract 21

Locus of control belief among Type 2 Diabetes Mellitus (T2DM) patients and its association with their diabetes self-care activities

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Introduction: Individuals' belief of what control over their behaviour is known as locus of control (LOC). For type 2 diabetes mellitus (T2DM) patients, this belief could influence their self-care activities.

Objectives: To examine the level of LOC beliefs (LOC-Internal, LOC-Chance, and LOC-Powerful others) among T2DM patients and its association with their diabetes self-care activities.

Methods: This cross sectional study involved 360 randomly selected T2DM patients from a primary care clinic. A self-administered Multidimensional Health Locus of Control (Form C) questionnaire was used to assess their belief on how much internal factor, chance and powerful others (e.g. doctors and other people) control their diabetes. The Summary Diabetes Self-Care Activities questionnaire examined their weekly practice of taking five servings of fruits and vegetables in a day, eating high fat food, spacing carbohydrate, doing exercise, performing foot care, and taking medication.

Results: Most of the participants were female (59.7%), between 40-65 years old (78.1%) and had HBA1c of ≥7% (72.8%). Their belief on internal control was relatively high [median LOC-Internal: 30.0 (IQR 3.0); possible score 6-36]. However, they had moderate level of belief that their diabetes was controlled by chance (median: 18.0, IQR 11.0) and other people (median: 25.0, IQR 5.0). Younger participants had significantly lower LOC-Internal compared to older groups [40-65 year-old (p=0.001); >65 year-old (p=0.002)]. Those with tertiary education had the lowest LOC-Chance compared to others with secondary (p=0.001) and primary education (p<0.001). Interestingly, LOC were not significantly associated their diabetes self-care activities.

Conclusion: The commonest LOC among our T2DM patients was internal control. However belief on external factors in influencing their diabetes was at moderate level. Surprisingly, these beliefs may not be the important factors for their diabetes self-care activities. Perhaps, their unassessed religious belief may play a vital role in underpinning their LOC belief, hence it should be examined.

Poster Abstract 22

Prevalence of Gestational Diabetes Mellitus (GDM) and associated risk factors of mothers attending antenatal care in Selangor

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Introduction: The prevalence of diabetes mellitus (DM) is increasing worldwide and in Malaysia the prevalence ranged from 12.7%1 to 24.9% 2. The increasing prevalence in developing countries is related to increase urbanization, decreasing levels of physical activity, changes in dietary patterns and increasing prevalence of obesity1,2,3,4,5.

Methods: A cross-sectional study using retrospective data from antenatal records of new mothers who registered at 72 public health clinics in Selangor for the month of January 2014. Mothers who were transferred out and those with pre-existing diabetes mellitus were excluded. Data was analyzed using univariate and multivariate analysis performed by SPSS version 21.This study was registered with NMRR (NMRR-14-1530-23350).

Results: 745 antenatal records were reviewed. The prevalence of GDM was 27.9% (n=184). Mean HbA1c was 5.5%, with 21.2% (n=32) had HbA1c ≥ 6.0%. A fifth of GDM were uncontrolled but only 12.5% were on insulin. After adjusting for confounding factors, the significant risk factors for GDM were maternal age, maternal obesity, first degree relative with diabetes and maternal previous history of GDM. The risk increases by 3.5 times among maternal age 35 and above, 2.4 times among maternal BMI 27kg/m2 and more, 1.8 times in first degree relative with diabetes and 2.4 times with previous history of GDM. Prevalence of GDM among newly registered mothers in Selangor was 27.9% which was higher than previous studies (20.3%)4. Risk factors which showed similar finding in other studies were obesity 5,14.,family history of DM 14,15,16,17 and increasing age 14,15,16,

Conclusion: Prevalence of GDM among newly registered mothers in Selangor was higher than previous studies. Significant risk factors for GDM were maternal age, maternal obesity, first degree relative with diabetes and maternal previous history of GDM. There was a significant difference in the mode of delivery but no significant difference in fetal outcome.

Poster Abstract 23

Psychological insulin resistance among older patients with type 2 diabetes mellitus

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Introduction: Despite suboptimal glycemic control, most of the older Type 2 Diabetes Mellitus (DM) patients refuse insulin initiation.

Objectives: To explore oral drug failure T2DM older patients' view on insulin initiation when oral drugs failed.

Methods: 24 focus groups were performed in 11 general outpatient clinics from July 2013 to May 2014. Data from T2DM subjects age ≥65 with recent glycemic

haemoglobulin â‰¥7.5%; on maximum tolerable oral drugs were extracted to undergo analysis based on the attitude-behaviour model.

Results: Total 82 subjects (Men (45.1%) Women (54.9%)), aged 65 to 89 were interviewed. Two-third of them attained primary school or below (75.6%). All subjects believed that more stringent lifestyle modification, mainly by reduction of calories intake could improve their glycemic control, therefore delay insulin initiation. Some of them expressed distrust not only of insulin injection but also of high dose of oral drugs. Most of them felt upset and reluctant when doctors suggested stepping up or addition of new glucose-lowering agents. The medicine provided by government clinics was less effective than the new generation of oral medications which only available in private pharmacy. Overall, most of them did not think insulin would improve their health because they perceived short life-expectancy. Older people should not receive 'aggressive' or 'invasive' treatment (i.e. starting insulin) with perceived serious or even lethal adverse effect from the treatment. They could stay asymptomatic until death naturally. Subjects with physical barriers and low health literacy were particularly poorly motivated to starting insulin because learning new skills and knowledge seemed to be particularly unachievable.

Conclusion: Health care professionals should aware the barriers and resistance among older patients with T2DM. Special care to provide information package particular designed for older people with low health literacy should be implemented.

Poster Abstract 24
Quality of diabetes care in primary health care services in Indonesia

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Introduction: Diabetes mellitus has become a health related burden in Indonesia. A continuous, comprehensive, and integrative management of diabetes mellitus is critical, particularly in primary health care services to prevent further complications and reduce health spending.

Objectives: This study aimed at assessing the quality of diabetes care in primary health care services in Indonesia.

Methods: This study is a cross sectional, a mixed quantitative and qualitative, study that obtained data randomly from patients' medical records within period of 2009 to 2014 and focus group discussion (FGD). Diabetes care was measured using National Diabetes Quality Improvement Alliance (NDQIA) indicator, consists of six process indicators (HbA1C examination, LDL-C examination, nephropathy screening, retinopathy screening, foot examination, smoking recording) and three results indicator (HbA1C, LDL-C, BP) in primary health care held by Family Physicians Clinic, Faculty of Medicine, Universitas Indonesia.

Results: Most patients were elderly (mean 60.1 years, SD 9.7). Proportion of the number of diabetic patients who visit the clinic evaluating their health status had decreased, from 80.4% at 2010 to 23.7% at 2014. Proportion of HbA1C examination, LDL-C examination, nephropathy screening, retinopathy screening, foot examination, and smoking recording vary widely

each year, respectively the highest proportion of each process indicator, 33.3%, 51.7%, 20.7%, 41.7%, 82.9%, and 75.9%. As for results indicator, proportion of the value of HbA1C<9% was 60%-100%, LDL-C<130 mg/dl was 41.2%-58.3%, and BP<140/80 mmHg was 33.3%-57.9%. FGD assess that motivation and adherence of medical personnel with standard of diabetes care determine the quality of care.

Conclusion: Number of diabetic patients that visit primary health care to evaluate their health status was limited, and the number of visits decreased over time diagnosed. The quality of diabetes care in primary health care requires improvement, both from the process and results indicator.

Poster Abstract 25
Treatment and control of hypertension among the patients with T2DM chronic kidney disease in Seremban district.

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Introduction: Chronic Kidney disease (CKD) is associated with an increased total mortality and cardiovascular morbidity and mortality in the general population and in patients with Type 2 diabetes (T2DM).

Objectives: Our objective was to determine the treatment and control of hypertension among T2DM with CKD patients managed by primary care.

Methods: We analysed the routinely collected data of T2DM age >18 years old in the National Diabetes Registry database involving 11 public primary care clinics in Seremban District, Negeri Sembilan for the year 2015. Variables: demographic and clinical characteristics, and pharmacological treatments. Estimated glomerular filtration rate (eGFR) was calculated using the Cockcroft-Gault formula. The cut-off value eGFR <60 ml/min/m2 was used in this analysis. Target blood pressure (BP) was taken as <130/80mmHg based on Malaysian CPG Management CKD. Data were analysed using SPSS version 20.

Results: A total of 5555 cases systematically selected audit, unfortunately 1495(26.9%) had missing data and excluded from analysis. Prevalence of Stage 3 CKD was 942 (23.2%). Mean age was 65.6 (S.D 9.7) years, 60.6% were females, 62.5% Malays, 21.3% Chinese and 16.1% Indians. 794 (84.3%) reported to have hypertension and only 21.8% had good controlled BP. Mean SBP 139.7 (S.D 19.5) mmHg and DBP 75.5 (S.D 10.2) mmHg. Mean HbA1c 8.0 (S.D 2.2) %. Increasing age, longer duration of DM and poor glycaemic controlled were associated with poor BP controlled. 794 cases (84.3%) were on antihypertensive drugs. 60.6% were prescribed calcium channel blockers, 58.9% angiotensin-converting enzyme inhibitors, 36.6% on beta blockers, 31.6% on diuretics, 9.8% on angiotensin II receptor blockers and 9.2% on alpha blockers. 26.4% were on monotherapy, 36.6% on two types of antihypertensive drugs and 32.6% on three or more types of antihypertensive.

Conclusion: Hypertension is prevalent among CKD patients with T2DM. Only 21.8% of hypertensive with T2DM and CKD cases in Seremban district primary care clinics achieved good control of BP. Antihypertensive treatments were mainly on two types of antihypertensive. Most commonly prescribed was calcium channel blockers. Prescribing skills of physicians for management of hypertension in T2DM with CKD requires further improvements.

Poster Abstract 26
Mental health assessment among staff working in an institution in Kuantan, Pahang, Malaysia: does designation of workplace determine it?

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Introduction: The prevalence of work-related mental health problem is increasing trends in Malaysia. Among adult population, 12% suffered mental illness such as anxiety, stress, depression and schizophrenia. Majority of them are still working. Mental health assessment among staff is an entry point in providing appropriate mental health care to reduce mental health illness and its related social and behavior problems.

Objective: To compare mental health status among staff in accordance with type of workplace in an institution.

Methods: A cross sectional descriptive study was conducted among 135 participants of "HEALTHY LIFESTYLE CAMPAIGN 2014" workshop" at International Islamic University, Malaysia (IIUM), Kuantan in May 2014. Occupational status of the participants was categorized into security staff (SS) and non-security administrative and supportive staff (Non-SS). Demographic and relevant clinical data were collected using a self-administered questionnaire together with validated Malay version Depression and Anxiety Stress Scales 21 (DASS 21) for mental health assessment. A cross analysis was done to compare mental health status between SS and non-SS.

Results: Among 135 participants, 82 (61%) were Non-SS and 53 (39%) were SS. Most of SS were male (87%) and aged more than 41 years old (59%) while non-SS were female (81%) and aged between 20-40 years old (85%). Prevalence of depression (30% vs 24%), anxiety (51% vs 42%) and stress (28% vs 24%) of SS and Non-SS were not significantly different (p>0.05). Both SS and Non-SS with chronic disease encountered more stress. Non-SS with post traumatic event suffered more depression and stress. Single and divorcees of Non-SS encountered more depression, anxiety and stress (<0.05).

Conclusion: High prevalence of anxiety, depression and stress among the staff from IIUM alarmed healthcare providers to provide timely treatment and to initiate mental health promotion and prevention activities especially among single and divorcees, with chronic diseases and post-traumatic event.

Poster Abstract 27
Mental health status of Myanmar general practitioners and application of mental health assessment tool (DASS-21) among their patients

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Introduction: Daily life of Myanmar general practitioners (GPs) are stressful dealing with variety of patients and solving their physical, mental and health related social problem as first-line care providers in Myanmar. However, there has been no evidence regarding how they provided care to the patients with mental problems and their exhaustion because of doctor's professional life.

Objectives: To assess mental health status of Myanmar GPs and application of mental health assessment tool (DASS-21 questionnaires) among their patients with mental health problems

Methods: A cross sectional descriptive and analytical study was carried out in June, 2014 among 80 Myanmar GPs who attended CME course conducted by Myanmar Medical Association in Yangon. Demographic, academic and practice background, practicing mental health assessment for their patients, application of Depression, Anxiety and Stress Score (DASS-21) in their practices were assessed by using a validated self-administrated questionnaire. DASS-21 was applied to assess the mental health status of the participants. Influence of demographic, academic and practice background on depression, anxiety and stress status of the participants was analysed.

Results: Out of 80 participants, 60% were male and graduated from Medical University (1 and 2) Yangon (69%). Sixty percents were currently engaged in the practices and 61% were solo practices with practicing year ranged from one month to 35 years. Prevalence of depression, anxiety and stress were 38%, 55% and 29% respectively. One-third (32%) did mental health assessment of their patients while 31% referred to specialists. Most of them (63%) were unfamiliar with DASS-21. Depression, anxiety and stress level of the participants were not influenced by their demographic, academic and practices background (p>0.05).

Conclusion: The study pointed out the need of professional care to Myanmar GPs for their work- related depression, anxiety and stress. Mental health care training including assessment tools used in primary care should be provided.

Poster Abstract 28
Prevalence of possible depression among primary healthcare workers

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Introduction: Depression is a common disorder that affects people from all facets of society leading to a decline in personal, social and occupational functioning. Healthcare workers are recognised to have a higher rate of depression compared to the general population. Previous local study reported that the rate of depression among lab technicians in hospital setting ranged from 40 to 60%.

Objectives: We aim to determine the prevalence of possible underlying depression among primary healthcare workers and its associated factors.

Methods: A cross sectional study of 179 primary health care workers was carried out at two primary care centres at a teaching hospital and seven government health clinics under the Kuala Langat Health District. Data collection was done using self-administered questionnaire that included questions on socio-demographic, work profile data and the validated versions of the PHQ-9 for the assessment of possible depression. A total PHQ-9 score of 5-9, 10-14 and more than 15 suggests mild, moderate and severe depression respectively.

Results: The response rate was 92.7% (166/179). The majority of the participants are between 26 to35 years old (52%), of Malay ethnicity (88%), female (82%), and diploma holders (57%). About 38% of the participants were found to have possible depression and with near one third of them having moderate and severe depression. Bivariate analysis showed that being a man (p=0.043) , medical assistance (p=0.048), and working hours more than 10 hours (p=0.019) were significantly associated with possible depression. Logistic regression showed that those worked more than 10 hours per day were 3.2 odds more likely to have depression than those worked less than 10 hours per day (OR 3.2, 95% CI 1.1-8.7, p=0.026).

Conclusion: There was a high prevalence of possible depression among primary healthcare workers at the centres studied and working long hours was a risk factor for depression.

Poster Abstract 29
Prevalence of burnout doctor in government primary health clinic and associated factors in Kuala Lumpur and Putrajaya.

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Introduction: Burnout is a pathological syndrome of emotional exhaustion, depletion and maladaptive detachment developing in response to chronic emotional and interpersonal stressors as a negative consequence of chronic work stress.

Objectives: The aim of this study is to determine the level of burnout among doctors working in Government Primary Health Clinic in Kuala Lumpur and Putrajaya as well as to determine association factors that contributing to doctor's burnout such as socio-demographic and working characteristics of doctors.

Methods: A cross sectional study involving 113 doctors working at Government Health Clinic in Kuala Lumpur and Putrajaya. Universal sampling of all doctors working more than 6 months were included. The Oldenburg Burnout Inventory (OLBI), socio-demographic and working characteristics questionnaire were used. We also collected data on participants' perception of their burnout level. Data analysis was performed using "Statistical Package for Social Science (SPSS) version 17.

Results: The prevalence of burnout among doctors using OLBI in our sample was 74.1%, which is higher than other study reported. While doctors' perception regarding their burnout level was 18.6%. No association were observed between socio-demographic and working characteristics with the level of burnout. However, there is a significance difference between perception of burnout and the level burnout using OLBI. This might be due to the probability that our doctors perceived stress differently from doctors in Western/European countries and the OLBI might not be valid in local settings.

Conclusion: The prevalence of burnout among doctors in Kuala Lumpur and Putrajaya is relatively higher than other countries. Strategies may be needed to prevent burnout such as improve job satisfaction, improving management structures and organizational climate. However, further study is needed to determine the validity of the OLBI.

Poster Abstract 30
Self-prescription among primary care doctors.

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Introduction: The act of self-prescribing among medical students and doctors is common in developed countries as well as developing countries. Commonest reason for self-prescribing is the avoidance of the patient role. There are limited study on primary care doctors who self-prescribe in the Eastern world and less known about behavior of self-prescribing in primary care doctors in Malaysia and possible reasons for doing so.

Objectives: The primary objective is to determine the prevalence of primary care doctors who self-prescribe and the secondary objectives are to determine the commonly prescribed conditions, factors that influencing self-prescription behavior and to assess common reasons for self-prescription.

Methods: A cross sectional study using universal sampling was conducted among primary care practitioners from various parts of Malaysia who were currently involved with post graduate training with the Academy of Family Physician, Malaysia. A 16-item self-administered questionnaire was self-developed and used. This questionnaire consisted of (i) 5 items on demography (ii) 8 items on practice and (iii) 3 items on perception on self-prescribing. Data was analysed using SPSS version 22.

Results: Prevalence of self-prescription amongst primary care practitioners in the post graduate training programme was 96.8%. Self-prescription for acute conditions were fever (n=326, 93%), cough and common cold (n=317, 91%), headache (*n*=308, 88%), sore throat (*n*=291, 3%) and eye problems (*n*=252, 82%). Gastrointestinal diseases (n=98, 28%) and eye, Ear Nose Throat (ENT) problems (*n*=71, 20%) were common self-prescribed chronic conditions. We found no associations between demographic factors and self-prescription. Common reasons for self-prescription were familiar with treatment options (*n*=246, 70%), to save time (*n*=229, 66%) and having the ability to handle the disease (*n*=213, 61%).

Conclusion: Prevalence of self-prescribing is high among primary care practitioners possibly due to the fact that these doctors have the knowledge about the disease or ailment, the skill and ability to self-treat.

Poster Abstract 31

Pilot testing an innovative approach to identify patients' agenda before consultation: The 'Values in Shared Interactions Tool' (VISIT) study

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Introduction: The Values In Shared Interactions Tool (VISIT) is a web-based intervention that was developed to help patients at the University Malaya Medical Center primary care clinic to express their health concerns before seeing their doctors. The list of concerns would then be displayed on the doctor's electronic medical records in real-time prior to the consultation.

Objectives: To explore patients' views on the VISIT website in actual primary care consultations.

Methods: We used a qualitative methodology to explore the views and experiences of the patients in using VISIT. The primary care doctors recruited patients who were on long-term follow-up for chronic conditions and were English-literate. Using a topic guide, patients were interviewed individually about the content, format and usefulness of the website as well as how VISIT had affected their consultation. The interviews were transcribed verbatim and analysed thematically using Nvivo10 software.

Results: Eight patients participated in the pilot study. The patients were all female and their age ranged from 64-77 years old. Most had diabetes, hypertension and hyperlipidemia. Patients identified some benefits of using the tool. First, they felt more relaxed because they had written their concerns down prior to the consultation. Second, the doctor was more prepared for the consultation as they knew beforehand the patient's agenda. Third, the website helped to remind them what to discuss with their doctor. Fourth, VISIT expanded the consultation beyond the usual discussion on the management of their chronic conditions; it allowed them to discuss other health issues which were important to them. However, most patients required assistance in using VISIT; they were either unfamiliar with computers or preferred touchscreen devices.

Conclusion: Patients found the website helpful to identify their health concerns; this facilitated their discussion with the doctors during the consultation. However, low IT-literacy hindered them from using the website independently.

Poster Abstract 32

The development of "E2: Elderly Empowerment": a web based portal to promote social connectedness in the elderly.

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Introduction: Social integration is essential to successful aging because it provides connectedness in systems of norms, control, and trust, access to information and other resources, as well as social support. Having many ties to other people gives people alternative routes to valuable resources such as information, social support, financial connectedness, or cultural connectedness through connections to experts. However, due to current social trends of urbanization and breakdown of the traditional extended family, many elderly including the ones in Malaysia are experiencing increasing social isolation.

Objectives: The objective of the study is to describe the process of developing a web based portal to promote social connectedness in the elderly.

Methods: The development process included four steps: (1) setting up an interdisciplinary task force, (2) exploring the potential needs of elderly users through in-depth interviews and focus group discussion, (3) constructing an elderly-friendly web-based portal, and (4) evaluating the interface and design by elderly experts. A task force including specialists in information and communication technology (ICT), primary care physician, geriatricians and elderly patients worked together to develop a website portal. The web portal design and user interface was developed based on the recommendation for elderly friendly web site.

Results: Five important functionalities were incorporated in the web portal based from the interviews. Elderly found engaging in social activities with friends, staying connected with family members, ability to travel safely, and to be kept current with online information as important in maintaining social connectivity. Many are already using technology like skype, viber and whatsapp to stay connected. Elderly experts were concerned on the security element of the portal.

Conclusion: Taking advantage of an interdisciplinary team and elderly patients experience and expertise, a useable web portal, which incorporates elderly users' expressed needs for social connectivity was constructed.

Poster Abstract 33

The prevalence of home blood pressure monitoring and its associated factors.

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Introduction: Home blood pressure monitoring (HBPM) has been advocated in many hypertensive guidelines worldwide and has been shown to be closely related to cardiovascular outcome. However, the prevalence of practising HBPM and its associated factors remain unclear in Malaysia.

Objectives: To assess the prevalence of home blood pressure monitoring (HBPM) among the hypertensive patients who attended the government health clinic in Malaysia and its associated factors.

Methods: Cross-sectional survey conducted at Klinik Kesihtan Taman Ehsan from 12th May 2015 till 12th June 2015. The survey has been translated into Malay and Mandarin.

Results: The prevalence of patient practiced HBPM is 42.8%. The proportion of patients who was aware of HBPM is higher, 62.3% (208 patients), out of which, only 65.9%(137 patients) of these patients practiced HBPM. Among patient who Practice HMPB, only 0.06% of the patients monitor their blood

pressure at the correct timing. Whereas, for those patients who were not practicing HBPM, 55.0% stated that they do not plan to do so in the future. The main factors associated with HBPM are tertiary education level (p = 0.015) and the knowledge score of HBPM (p < 0.001).

Conclusion: The prevalence of HMBP in this study was similar to other study. Tertiary educational level and knowledge of HBPM were associated with practice of HBPM.

Poster Abstract 34
Reducing patient's waiting time at Klinik Kesihatan Bukit Kuda (KKBK) using Lean management

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Introduction: Primary care face problems with overcrowding, increasing demand from patients and shortage of working staff leading to long waiting time. To overcome these problems, Lean management was introduced to health clinics by the Ministry of Health. Klinik Kesihatan Bukit Kuda (KKBK) was selected to be part of this pilot project. This study was done to reduce waiting time at vital sign counter, consultation room and procedure room in KKBK with new work process created using Lean management.

Method: The study was done from November, 2014 to May, 2015. KKBK, a type 3 clinic was conveniently sampled. 42 patients were selected for data collection using mean waiting time difference calculation. An external Lean consultant was appointed and the clinic staffs were educated regarding Lean principle over series of workshops. Value Stream Mapping (VSM) was used as a tool to comprehensively evaluate the current work process in each station. Wastes and non-value added activities were identified and removed to create an improved work process. Implementation of the redesigned processes was done subsequently. Process improvement was evaluated by calculating the mean waiting time difference between baseline data collected in March and data collected in May post Lean implementation.

Results: Improvement was noted at all stations. Vital sign counter showed 73% reduction in mean waiting time from 8 minutes to 2 minutes, while time waiting for consultation was reduced from 44 minutes to 22 minutes (50%). The waiting time at procedure room improved 49% from 37 minutes to 18 minutes.

Conclusion: This study shows Lean management can be implemented at different stations in health clinic to reduce patient's waiting time despite variations of work processes in each station.

Poster Abstract 35
A description of information search behaviour during the practice of evidence based medicine.

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Introduction: The practice of evidence based medicine (EBM) by doctors is a key clinical activity that requires competence in information search skills. Studies conducted in developed countries indicate that doctors experience problems with search formulation, use single terms, short phrases and encounter search failure during an EBM search. In Malaysia, questionnaire-based studies indicate that many doctors felt they did not have the skills and confidence to conduct an EBM search.

Objectives: The objective of this study is to describe the information search behaviour during the practice of EBM. The research question is 'What are the query patterns in EBM practice?' Study findings have the potential to inform strategies that increase search efficacy and the training of clinicians in EBM.

Methods: Pre-experiment interviews were used to obtain socio-demographic details of searchers. Key logging software was used to log and collect information during the search process. Results were analysed quantitatively. A total of 30 search sessions were observed during rounds at a tertiary teaching hospital in Malaysia.

Results: On average 3.1 queries (SD=2.9) are issued in a search session. The average query length is 4.0 terms (SD=1.5). On average 2.0 (SD=3.8) terms issued in the query were medical terms. Similarly, there was an average of 2.5 (SD=4.0) stop words used as terms in the query. Query operators were not used in all 30 search sessions. Almost 30% of queries issued resulted in no returned results (ineffective queries).

Conclusion: Preliminary results indicate the need to educate users of clinical information to minimize the usage of stop words, ineffective queries and to maximize the usage of query operators in order to obtain more results in a shorter time. Practical implications include the need for a specialised interface for EBM searches. Further experimentation will be conducted to the point of theoretical saturation.

Poster Abstract 36
Are we measuring correctly? Questionnaire translation and validation process.

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Introduction: Most research done using questionnaire as a tool to collect the data. Therefore it has to be of both valid and reliable. We translated a questionnaire called TRUST-Ph scale from English to Malay for measuring patient trust in community pharmacist. Community pharmacist is recognized

as primary care provider in all developed countries. Despite current healthcare systems which limit the role of community pharmacist, we believe there is an increasing demand for community pharmacist as primary reference as they are more accessible. This scale contain of three domains and 30 questions which measure benevolence, technical competency and communication aspect of community pharmacist.

Objectives: Firstly to carry out translation and cross cultural adaption of original TRUST-Ph scale and secondly to determine the validity and reliability of the new mTRUST-Ph scale.

Methods: This is a cross sectional study in 2014 among clients in six community pharmacies. Forward and backward translations were done by four independent translators. Content validity involved 11 experienced community pharmacists. Cognitive debriefing involved five target customers. Psychometrics analysis was done using 203 respondents by purposive sampling.

Results: Assessment of translation process showed that we have achieved semantic, technical and conceptual equivalence of the questionnaire. We have sufficient data to run the exploratory factor analysis (KMO=0.868). We have extracted eight factors for 27 items and decided to retain four factors through parallel analysis. We have achieved simple structure of mTRUST-Ph scale through promax rotation. Four domains extracted were named technical competency, communication, benevolence and confidence. Reliability analysis has shown good cronbach alpha coefficient ranges from 0.67 to 0.81. mTRUST-Ph scale proved to be as good as the original after successfully maintain the good psychometric properties.

Conclusion: New translated Malay version called mTRUST-Ph scale has preserved the good psychometric properties thus, both valid and reliable to be use in Malaysian population.

Poster Abstract 37
Discharge planning for patients with long term care needs: a literature review

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Introduction: Discharging patients with long term care needs from the ward requires planning to ensure a smooth transition to life in the community. A well-implemented discharge planning service can facilitate primary health care providers to provide continuing care for these patients.

Objectives: To review the literature regarding key components of discharge planning prior to discharging patients with long term care needs to the community.

Methods: A literature search was conducted in PubMed using the following MeSH terms "patient discharge" AND "health services needs and demands". Relevant titles were identified by screening through the titles, followed by Poster Abstracts. The full-text articles were obtained for shortlisted Poster Abstracts. Thematic analysis of the results of these articles was done.

Results: From the 176 titles obtained from the above search, 44 papers were identified for review. Prior to discharge, several key components of discharge planning included "planning", "preparing" and "materialising the transition". "Planning" involved evaluating appropriateness of discharge to home, discussing expected discharge date, identifying long term care needs and shared decision-making. "Preparing" involved

giving patients and family an idea of what to expect after discharge and addressing their anxiety and provision of relevant information regarding their illness, treatment, medication, and expected recovery. The information needs to be clear, individualised and consistent across the multidisciplinary team. "Materialising the transition" included coordinating care with community-based healthcare providers, logistic help with finances and required equipment, as well as training caregivers for basic home caregiving.

Conclusion: The above recommendations are useful to guide preparation of patients with long term care needs for discharge. Implementation of these recommendations can facilitate further care for patients after discharge to the community. An audit of Malaysian hospital practices in discharging patients is recommended to measure the quality of care and identify areas for improvement.

Poster Abstract 38
Improving Waiting Time through Re-engineering of Primary Care: A Systematic Review

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Background: Primary care is an important part of a healthcare service worldwide. Long waiting time at primary care clinics is increasingly an issue for many countries, due to growing population and increasing number of patients seeking treatment in primary care.

Objectives: To assess the effectiveness of different type of re-engineering methods in improving waiting time at primary care outpatient department.

Methods: Electronic search was done using the following databases: PubMed, The Cochrane Library, Turning Research into Practice (TRIP) database, US National Library of Medicine database, Open Grey, HighWire, National institute for Health and Care Excellence (NICE), National Institute of Health (NIH) databases from 1990 through 2014. Screening were done at 3 levels to obtain relevant articles. Data were extracted and assessment was conducted based on re-engineering impact on waiting time.

Results: After full-text assessment, 5 articles were finally included. This systematic review on evaluations of re-engineering method used to improve primary care waiting time found that all the re-engineering methods chosen were from quality model and showed positive results. Lean was identified as the best re-engineering method used in reducing waiting time, with the best waiting time improvement result.

Conclusion: This systematic review has contributed to better understanding of methods used in primary care re-engineering. Although re-engineering of primary care appeared to be effective in reducing patient waiting time, the body of evidence is limited and more studies are needed across different settings globally to provide a clearer result.

Poster Abstract 39
LEAN initiative: Improving patient journey at Emergency Department of MOH State Hospital

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Introduction: LEAN initiative was introduced to Green Zone Emergency Department (ED) at Hospital Tengku Ampuan Rahimah (HTAR), Klang aiming to improve waiting time without compromising treatment quality. It is documented that about 400 patients attended ED daily, but only 18% of this number are discharged within 2 hours. This underperformance is due to poor patient's flow and wastes involved in the patient journey process.
Objectives: To improve the time process from arrival until patient left ED or admitted to medical wards.
Methods: This is a quantitative, pre and post-LEAN study conducted on all Green Zone patients attending ED at HTAR. The study was conducted from May to October 2014. Initially, Value Stream Map (VSM) was produced to visualize the flow processes involved. Next, value analysis took place by identifying the value-add and non-value add in each step. In the Kaizen (continuous improvement process) event period, improvement are continuously sought, discussed and executed. The performance indicators used were Length of Stay, Bed Waiting Time, percentage of Arrival to Consultation within 90 minutes and number of Call-Not-Around.
Results: All performance indicators showed a significant reduction in time spent at Green Zone ED. There was 55% improvement achieved in average length of stay from 192 minutes to 88 minutes, in which patients discharged within 2 hours increased from 18% to 70% with 300% improvement achieved. The percentage of Arrival to Consultation within 90 minutes also increased from 82% to 88%. In addition, the average bed waiting time also improved by 20% from 259 minutes to 205 minutes. The number of Call-Not-Around also reduced significantly by 65% from 57 to 20 patients.
Conclusion: Applying LEAN tools and techniques to work process at ED has shown to improve patient's journey, reduce waiting time and thereby decreasing potential for overcrowding and dissatisfaction amongst the patients.

Poster Abstract 40
Process and factors contributing to research participation of primary care doctors: a grounded theory study

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Introduction: The practice of evidence based medicine (EBM) in primary care should be guided by research done in the same setting. However, participation in research by primary care doctors (PCD) is poor.
Objectives: To explore the decision making process and factors contributing to PCDs' participation in research in primary care settings.

Methods: This qualitative study used a grounded theory approach. Five in-depth interviews and four focus group discussions were conducted with a total of 21 PCDs. We used semi-structured open-ended questions in the first few interviews. Subsequently, findings from the interviews were used to generate further questions. All interviews were audio-recorded and transcribed verbatim for analysis. Open line-by-line coding followed by focus coding was used to arrive at a substantive theory. Memoing was used to help generating higher level of concepts and categories.
Results: Multiple factors contributed to the PCDs' decision to participate in research. Inner drive for research and appreciation of primary care research motivated PCDs to seek knowledge and skills to conduct research. However, the key factor that influenced their decision to participate in research was whether the research agenda would fit with their personal goals of life, clinical practice, and organisation culture. The organization culture that support research activities encouraged research participation. PCDs' access to technical support and research funding were other contributing factors. Their earlier research experience also influenced their desire to participate in research.
Conclusion: The key to PCDs' participation in research depend on the alignment of research agenda to their personal goal and social circumstance. Thus, besides providing research support, strategies to encourage PCDs participation in research must take into account these factors.

Poster Abstract 41
Re-engineering Work processes in Clinics

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Introduction: Long waiting time is an important issue that has to be tackle fast as it leads to patient dissatisfaction, which adversely effects patient compliance with treatment regimes and clinical outcomes. In Malaysia, long waiting times and congestion have become persistent problems in our health care setting. Outpatient utilisation rates had increased with a 4.3% annual increment. We need to look and reorganise our work processes so that they will become more effective and efficient. The aim of this study is to improve waiting time by redesigning work processes in health clinics.
Methods: Clinic A which is a type 3 clinic was conveniently sampled. The LEAN methodology was introduced to the selected clinic. A waiting time mean difference sample size calculation was done, where 42 patients were systematically selected for data collection from the identified clinic. Data were collected from 7.30am till 5.00pm, during 5 working days.
Results: Primary data collection prior to process redesign was done in March, to use as benchmark. From this data we found that, on average patient spend 1hour 58minutes waiting, with lead time of 2hours 45minutes. After 1 month of process redesign, in May data were recollected. The waiting time was reduced to 1hour 05minutes, with lead time of 1hour 48minutes after process redesign at Clinic A.
Conclusion: The area of re-engineering of primary care is a relatively new modality in healthcare. It is also a method which

the healthcare providers have little experience and understanding of its implementation in primary care. Long clinic's waiting time can negatively impact both on healthcare personnel and patient. The present study represents a significant step forward in understanding the role of lean in improving primary care waiting time.

Poster Abstract 42

Application of dengue diagnostic tests as point-of-care testing by Myanmar General Practitioners: Did young GPs use more than senior GPs?

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Introduction: Early detection of dengue cases via general practitioners (GPs), major primary care providers is an effective strategy in mitigation of dengue burden in Myanmar. Confirmation of dengue cases using laboratory tests is recommended by W.H.O for clinical management, prevention and control activities. Nevertheless, evidence on dengue diagnostic tests used by Myanmar GPs as point-of-care testing (POCT) has not been founded yet.
Objectives: To compare dengue diagnostic tests used as POCT between young GPs and senior Myanmar GPs
Methods: A cross-sectional descriptive and analytical study was conducted in August, 2015 among 73 GPs in Yangon. A pre-tested questionnaire was used to collect data regarding demo-academic and practice-background, dengue diagnostic tests used for POCT and its reasons. GPs aged under 30 years and currently practiced for 1-5 years as young GPs and their counter-part were defined as senior GPs for inferential analysis.
Results: Young GPs and senior GPs were 35% (25/72) and 24% (17 /72) respectively while others 41% (30/72) were in-active in practice and did not meet with young-senior GPs definition. Dengue diagnostic tests application was still limited in GPs' clinics. NS1-RDT (20.8%) was mostly used followed by Hess's test (19.4%), NS1+IgM/IgG-RDT(18.1%),IgM/IgG-RDT(16.7%),WHO-clinical-criteria+NS1+IgM/IgM-RTD+ Out-break information (16.7%) and WHO-clinical-criteria+NS1+ IgM/IgG-RDT(11.2%). Although both young and senior GPs did not use ELISA tests as POCT, 2.8 % of other GPs used it. Senior GPs used Hess's tests significantly more than young GPs (35% vs 20%). WHO-Clinical-criteria+ outbreak information with RDT tests were more used by young GPs, but it was not statistically significant. Following clinical guideline, confirmation of cases, easy to perform, cost and market availability were reasons given for using the tests.
Conclusion: Low utilization of dengue diagnostic tests highlighted to promote adherence of W.H.O recommendation among Myanmar GPs. POCT training should be arranged. A further study is needed for more valid findings.

Poster Abstract 43

Dengue Diagnostic Test for Point of Care Testing: A Preliminary Study Among Primary Care Physicians in Malaysia

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Introduction: W.H.O recommends using laboratory tests in dengue diagnosis for prevention, clinical management and control activities. Evidences regarding which dengue diagnostic tests used by primary care physicians as point of care testing (POCT) have been limited.This study was done to explore dengue diagnostic tests used by primary care physicians (PCPs) for point of care testing.
Methods: A cross-sectional descriptive and analytical study was conducted in August 2015 among 49 PCPs attending Diploma Family Medicine in Malaysia. Demo-academic and practice-background, choice of the tests for POCT and its selection reasons, dengue cases reporting to local authority, receiving dengue out-break information and its application in case management were explored by using a pre-tested questionnaire. A cross analysis between type of clinics, academic background, duration of practices and types of the tests used was done.
Results: Among 49 PCPs, 37 were medical officers (MOs) from public clinics while 12 were private general practitioners. One-third of participants (17/49) practiced in Selangor, followed by Johor (8), Penang (7), Kuala Lumpur(5), 2 each from Sabah and Perak, one each from Melaka, Pahang, Penang and Sarawak. They graduated from Malaysian public universities (24.5%), private (2.4%) and overseas Medical Universities (53.1%). Duration of practice ranged from 3 to 36years and 56% were in 6-10 years. NS1-RDT(65.3%) was mostly used, followed by NS1+IgM/IgG-RDT(40.8%), IgM/IgG-RDT(38.8%), IgM/IgG ELISA(14.3%), WHO-clinical criteria+NS1+IgM/IgG-RDT(14.3%) and WHO-clinical criteria+NS1+IgM/IgG-RDT+Out-break information(14.3%), NS1+IgM/IgG-ELISA(8.2%) and WHO-clinical criteria+NS1+IgM/IgG-ELISA(4.1%). No significant influence of type of clinics, academic back-ground and duration of practices on use of the tests was noticed. Reasons for selection of the tests were clinical preference, cost of the tests and market availability.
Conclusion: Awareness and adherence of W.H.O recommendation in dengue diagnostic tests used for point of care testing needs to be promoted among PCPs. A further study with adequate sample size should be conducted to get more valid results.

Poster Abstract 44

Prevalence of osteoporosis in men and women infected with the human immunodeficiency virus compared to healthy community dwelling men and women: Preliminary results

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Introduction: In recent years, studies have shown a higher prevalence of low bone mineral density (BMD) in human immunodeficiency virus (HIV)-infected individuals to non HIV-infected individuals. To date, there is a paucity of local data on osteoporosis in HIV-infected people in Malaysia. This study was done to determine the prevalence of osteoporosis in individuals with and without HIV infection

Method: This cross sectional study was conducted from September 2014 to August 2015 on Malaysian HIV-infected individuals, from the Infectious Disease Clinic, University Malaya Medical Centre, who were > 25 years of age, on highly active antiretroviral therapy (HAART) >1 year, and have HIV ribonucleic acid (RNA)<50 copies/ml. Healthy controls were recruited from the community, and were matched for age, gender and ethnicity. Vitamin D levels and BMD using dual X-ray absorptiometry at the lumbar spine and femur were measured.

Results: To date, 136 participants have been recruited: 80 HIV-infected individuals and 56 healthy controls. The mean±standard deviation age for HIV-infected individuals and healthy controls was 42.1±10.3 years (25-75 years) and 38.1±13.1years (25-69 years), respectively. The majority of our participants were male [HIV-infected individuals=62(77.5%);healthy controls=39(69.6%)].The majority were Chinese [HIV-infected individuals=56(70%); healthy controls=29(51.8%)]. Vitamin D deficiency(<50nmol/L) was found in 49(62.8%) of HIV-infected individuals, and 33(60.0%)of healthy controls. Significantly more HIV-infected individuals were diagnosed with osteoporosis than healthy controls [HIV-infected individuals=10(12.5%) versus healthy controls=1(1.8%), p=0.081]. Osteopenia was diagnosed 40(50%) in HIV-infected individuals and 32(57.1%) in healthy controls, but this did not reach statistical significance (p=0.211).

Conclusion: The prevalence of osteoporosis is higher in HIV-infected individuals compared to non-HIV-infected individuals. Therefore, it is important to screen HIV-infected individuals for osteoporosis to reduce the risk of fractures.

Poster Abstract 45

Development and validation of a depression knowledge test for family medicine trainees

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Introduction: Postgraduate family medicine training is an avenue to ensure family physicians' clinical competency in the diagnosis and management of depression. Currently there is no valid assessment tool to assess depression knowledge of family medicine trainees. We plan to develop and validate a depression knowledge test for family medicine trainees.

Method: A 10-item Single Best Answer multiple choice question (MCQ) depression knowledge test was developed. These MCQs were based on four clinical scenarios (an adolescent girl, an adult woman, an elderly man and a postpartum woman). Two similar sets of MCQ (Set A and Set B) were produced; the questions vary in the number, duration and severity of clinical features. A modified Delphi technique was used to validate the clinical vignettes. For the standard setting (Nedelsky method), an expert panel was asked to estimate the MCQ responses that would be chosen by "borderline" final year family medicine trainees, thereafter the pass mark for the MCQ was computed. The actual performance of the trainees was used for triangulation of the standard setting.

Results: The knowledge test has a Flesch-Kincaid Reading Ease score of 63. The clarity of the MCQ was acceptable. The expert panel strongly agreed that final year family medicine trainees should be able to diagnose depression in the four scenarios. The standard setting's pass marks (±SD) and trainees' actual performance for Set A and Set B were 40.8% (±5.6) and 42.1% (±7.7); 55.7% (±15.5) and 46.5% (±16.1), respectively.

Conclusion: The development and validation of this depression knowledge test took into account the clinical relevance and views of experienced family physicians. The family medicine trainees' performance was better than the prior assessment by the expert panel. Further refinement and evaluation of this knowledge test in other group of family medicine trainees is needed.

Poster Abstract 46

Evaluating reflective learning reflectively - A qualitative analysis of students' reports on the benefits of a reflective writing assignment.

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Introduction: Reflection is increasingly regarded as essential to life-long medical education. It follows that medical teachers themselves should serve as reflective role models. Against this background, we report on a thematic analysis of written responses to a question posed to medical students at the end of a reflective writing (RW) assignment.

Method: All third year students (n=120) submitted a reflective essay on their experiences during a Family Medicine posting, as a compulsory and graded assignment. Included was an addendum, posing the question "How has the act of reflecting made the learning process more meaningful to you"? The authors performed a thematic analysis of students' anonymised responses to this question. We subsequently reviewed our findings, to agree a set of themes and to reflect on their implications.

Results: Thematic analysis revealed the predominant response pattern was that the experience of RW made students' learning more meaningful. There was frequent use of stock phrases, including "deep learning", "awareness of a higher purpose" and reflection as a "desirable habit". The metaphor of reflection as "mirror" was employed repeatedly. There were no responses that were negative towards the RW experience and none which questioned the value of the assignment itself. Reflective dialogue between the two authors suggested that despite that the students demonstrated a good intellectual grasp of the subject, the graded nature of the assignment and the manner in which the appended question was worded, may have combined to skew responses towards self-censorship.

Conclusions: Our findings raise challenging questions regarding the manner in which RW is evaluated. In particular, does the grading of assignments advance or inhibit the reflective learning process? We conclude that greater efforts are needed to design evaluation strategies that facilitate open expression of divergent views on RW and its benefits.

Poster Abstract 47
Depression, Anxiety and Stress among subjects of flood prone area in Kota Bharu Kelantan, Malaysia

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Introduction: Floods are most common natural disaster in Malaysia and after the onset of a flood, the survivors are vulnerable to develop depression, anxiety and stress disorder. This study was done to screen subjects of the flood prone area in Kota Bharu 6 months after the severe flood to determine their score using a Depression Anxiety and Stress Scales (DASS-21) and to correlate the scores with the socio-demographic data.

Method: A cross sectional study was conducted in two primary care clinics which were recently affected by the severe flood in Kubang Kerian Kelantan, Malaysia. DASS-21 consist of 3-point Likert scale with 21 items was designed to assess the severity of the main symptoms of depression, anxiety and stress. It has a good reliabilities. Chi-square test or Fisher exact tests were used for the categorical or dichotomous variables. Ethics approval and inform consent were obtained prior to the study.

Results: Three hundred and twenty eight subjects were recruited in the analysis. Out of this, 68.9%, 56.4% and 48.2%, of subjects present some degree of anxiety, stress and depression, respectively. Severe or very severe levels of disturbance were found in 50.5% (anxiety), 22.9% (stress) and 17.7% (depression) of individuals. Those subjects less than 34 years old (79.9%) were more anxious compared to those older than 35 (63.8%) (p=0.001). Those who received secondary education (58.0%) were more prone to have depression compared to those received tertiary education (42.9%) (p=0.008).

Conclusion: Our study shows that one out of two subjects in flood areas in Kelantan suffered from some degree of anxiety, stress and depression. Subjects with younger age and lower education background are at risk of having these disorders. Every effort should be made to identify those high risk groups for further intervention.

Poster Abstract 48
Factors affecting the sleep patterns and behaviour of individuals in an Asian urbanised community

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Introduction: Sleep norms vary between populations, which are affected by multiple factors. This study aimed to determine the sleep time, pattern and behaviour of multi-ethnic Asian subjects in urban Singapore. It also assessed their views, self-perception and factors influencing their sleep.

Method: Standardised questionnaires were assistant-administered to adult patients and accompanying persons who visited two local public polyclinics. The questionnaire, adapted from questions in the National Sleep Foundation Sleep Diary, collected their data on demography, self-reported sleep time, patterns and behaviour, after which Independent-t and x2 tests were used to analyse these categorical and continuous variables grouped under weekdays and weekends. Regression analysis followed to identify key factors affecting their sleep. Subjects with ≥7hours sleep-time were deemed getting adequate sleep.

Results: 350 subjects were recruited: more subjects of Chinese ethnicity, homemakers, housewives and unemployed had adequate sleep. 48.1% of those who slept <7 hours on weekdays tended to sleep ≥7hours on weekends. More subjects who reported no difficulty falling asleep, regular sleep hours and awakening time had sufficient sleep. Those who slept with children, studied, read leisurely, used computer or laptops in their bedrooms, drank caffeinated beverages or smoked tended to have <7hours sleep-time. Common key factors for weekday and weekend sleep adequacy were self-perception of sufficient sleep and perception of 8hours or more as adequate sleep-time.

Conclusion: Sleep-time was influenced by ethnicity, employment status and perception of sleep sufficiency Understanding typical sleep patterns and behaviour in specific community allows design of targeted intervention for sleep disorders.

The effectiveness of group-based behavioural activation interventions (BA) in the treatment of depression: a systematic review and meta-analysis.

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Introduction: Depression is one of the major mental illnesses with increasing trends in our global population and has been scientifically related with worse health outcomes according to many psychological and mental health studies. Group-based behavioural activation will be systematically reviewed and meta-analyzed to summarize the evidences in favor of this treatment effect. Cost utility analysis will also be reviewed.

The study was done to evaluate BA treatment for depression; assess outcomes of symptom control and examine effectiveness of intervention by comparing the Quality Adjusted Life Years (QALYs), and cost of health outcomes using the incremental cost effectiveness ratio (ICER).

Method: Literature database search were selected on group-based BA interventional studies versus care as usual, treatment as usual and waitlist controls. Data on study characteristics, results and costs from randomized controlled trials (RCTs) were collected and analyzed from specialized data extraction form for systematic review, cost utility analysis and meta-analysis.

Results: Fourteen randomized control trials including 1086 subjects were included. A random effects meta-analysis of post-intervention depressive treatment level revealed behavioral activation to be in favor of any care as usual treatment in the form of waitlist, antidepressant medication and cognitive therapies (Standard deviation -6.06 CI -8.28 to -3.85, $p<0.001$, N=419). The study quality was low to moderate and the follow-up times were short.

Conclusion: Systematic review and meta-analysis supported the evidence indicating that behavioral activation is an effective depressive treatment in a group-based environment. Higher quality research with a focus on longer time trend and cost utility analysis is needed to strengthen the existing evidence.

The effectiveness of group behavioral activation in treating subthreshold depression in primary care in Hong Kong

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Introduction: Subthreshold depression is high prevalent and a main risk indicator of major depressive disorder. We aimed to evaluate the effectiveness of group-based behavioral activation (BA) intervention in treating subthreshold depression in Hong Kong primary care settings.

Method: A randomized controlled trial was conducted in January to June 2015 among adults with subthreshold depressive symptoms from general outpatient clinics or family medicine centers in Hong Kong. A two-hour per week, 8-week BA treatment was provided by trained general healthcare workers. The treatment mainly included goal setting, activity scheduling and an involvement of mindfulness practice. The comparison group was care as usual group (CAU) which did not receive any treatment. Assessments were conducted at baseline and post intervention. The outcomes included reduction of depressive symptoms and anxiety symptoms measured by Beck depression inventory and State Trait Anxiety Inventory respectively. Intention to treat analysis was used to analyze the data.

Results: 89 participants were randomized to the BA (n=44) and CAU group (n=45). The mean age of the sample was 52.8 years (SD=12.94). Most participants were female (92.1%), primary or middle school education level (83.1%), and married (77.9%). Data of 84(94.4%) participants was collected at baseline, 77 (86.5%) were assessed at post-intervention stage. After the intervention, significant reduction of depressive symptoms was observed in BA group compared with the CAU group (-2.82±6.88 vs -0.24±4.04; P=0.04). Overall 61.9% (26/42) patients showed improvements in BDI-II while only 38.1% (16/42) showed improvements in CAU group. Marginally significant reduction of anxiety in BA group was also observed compared to CAU group (-2.25±9.83 vs 0.97±4.17; P=0.078).

Conclusion: The 8-week group BA showed its feasibility and effect in reducing subthreshold depressive symptoms of primary care patients.

The impact of recreational play toward the psychological status of the children victims of post-flood disaster

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Introduction: A preliminary study reported that leisure activity is related psychology issue among children victims of the post-flood disaster. Leisure activity is the utmost important part that lost in their daily life. The main reason is that the environmental condition where they are staying (tents and transit houses). The limited spaces and facilities restricted them to perform their leisure activity. Therefore, this study attempts to provide recreational play to alleviate the psychological issues. The main objective of the research is to assess the impact of recreational play towards psychological status for children victims of the post- flood disaster.

Method: The study is using a qualitative approach. Convenient sampling. Data collected using face to face interview guided by semi-structured questionnaire and observation. A further thematic analysis was used. This research is conducted at Camp site Kampung Pahi of Kuala Krai, Kelantan. Victims experiences, including observation of their emotion and behavior during the recreational play also taking into account. There were 30 children involved in recreational activities, but only ten interviewed. The children were male and female (ages ranged of 7 to 12 years old).

Results: All the victims were enjoying the recreational play. One of the victims said, " This recreational able to reduce her sadness. I able to forget what has happened recently. Besides, I can play with friends ". Another victim responded, "Its reduce my stress cause I am happy playing together ". Besides, all the victims responded that the activity should be done again in the future. One of the respondents responded by saying, "I want to play again. Best."

Conclusion: In conclusion, a recreational play is one of the methods to relief psychological issues among children victims of the post-flood disaster. We recommend community, social workers, and health professionals to use recreational play objectively.

Poster Abstract 52
The validity and reliability of the SCOFF (Sick, Control, One stone, Fat, Food) questionnaire in Malaysia.

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Introduction: The prevalence of eating disorders is on the rise. However, eating disorders are difficult to diagnose, as patients tend to present with vague symptoms. The SCOFF (Sick, Control, One stone, Fat, Food) questionnaire is a simple and brief tool that has been used to screen for eating disorders. However, this tool has not been validated in Malaysia. This study was done to validate the SCOFF questionnaire in Malaysia.

Method: This validation study was performed among second year tertiary students of a public university in Malaysia, from June 2014 to November 2014. The SCOFF questionnaire was administered at baseline and two weeks later. To assess for convergent validity, the Eating Attitude Test 26 (EAT-26) was also administered at baseline.

Results: A total of 292 students were approached for this study and all agreed to participate (response rate=100%). The internal consistency of the SCOFF questionnaire was low (Cronbach's alpha = 0.470). At test-retest, kappa scores were 0.211-0.591. The total score of the SCOFF questionnaire significantly correlated with the "dieting domain" (r=0.504, p=0.001) and the "bulimia and food preoccupation domain" (r=0.438, p=0.001) of the EAT-26. The sensitivity of the SCOFF was 77.4%, and the specificity was 60.5%. The positive predictive value was 18.9% and the negative predictive value was 95.8%. Body mass index was significantly associated with the total score of the SCOFF questionnaire.

Conclusion: The SCOFF questionnaire achieved adequate stability and convergent validity. However, it had low reliability, low specificity and low positive predictive value. However, since of the SCOFF questionnaire has only 5 items and is quick to administer, it can still be used to screen for patients with eating disorders. If the SCOFF questionnaire shows that a person is suspected to have an eating disorder, the EAT-26 should be administered before referral to specialist care is made.

Poster Abstract 53
Insomnia and healthcare utilization in primary care

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Introduction: Insomnia is becoming an increasingly common condition in many countries. However, there is currently little research on insomnia in Southeast Asia.

Objectives: The primary aim of this study was to determine the prevalence of insomnia amongst primary care population. The secondary aims were to examine its impact on the healthcare utilization rates and on the prescription of sleep medications. The causes and psychiatric conditions associated with insomnia were also studied.

Methods: This was a cross-sectional study of patients seen at two primary care clinics. A total of 635 patients aged 21 years and older responded to a self-administered questionnaire and whose medical records were subsequently reviewed retrospectively. Respondents with insomnia, depression and anxiety disorders were identified using the Insomnia Severity Index (ISI), the Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder 7-item scale (GAD-7). Healthcare utilization was measured by self-reported doctor visits and the number of documented acute illness visits.

Results: The prevalence of insomnia was 10.4%. Patients who suffered from insomnia also reported consulting a doctor more frequently over a period of six months than those who did not suffer from insomnia [median = 2(IQR=3) vs 1(IQR=2) doctor visits, p<0.001]. The prevalence of anxiety and depression in the insomnia group were higher at 53% and 27.3% compared to 5.8% and 1.9% in the non-insomnia group (p<0.001).

Conclusion: Insomnia is a prevalent condition in primary care. It is associated with a significant increase in self-reported doctor visits as well as a greater prevalence of depression and anxiety

Poster Abstract 54
A qualitative evaluation of the 'Multifaceted Fall Education by Inter-professional Team' (MuFE-IT) intervention with community-living elderly: A pilot study

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Introduction: Falls are common in community-dwelling elderly and are associated with increased risk of fractures and hospitalization, as well as poorer quality of life. MuFE-IT is a fall prevention education intervention developed for community living elderly based on needs assessment, clinical evidence and theories. It consisted of a one-day intensive workshop delivered by a multi-disciplinary team followed by support through telephone calls. This study was done to explore the impact of the MUFE-IT intervention and measures taken by the participants to prevent falls after attending the MuFE-IT intervention.

Method: This qualitative study was conducted with the MUFE-IT participants in Kuala Lumpur, Malaysia, in 2015. The researcher conducted two focus group discussions and five in-depth interviews using a semi-structured interview guide. The interviews were audio recorded, transcribed verbatim, checked and analysed using Weft QDA software. Thematic analysis was used to identify the main themes.

Results: Thirteen out of 17 MuFE-IT participants responded 3-months post-intervention. There was a change in the participants' attitude towards falls prevention. They were more "careful," "compliant" and "motivated" to prevent falls. They also took actions related to fall prevention such as: replacing loose rugs with non-slippery floor mat; wearing proper footwear for indoor and outdoor activities; reviewing their medications; following exercise prescribed in the MuFE-IT booklet; and undergoing cataract surgery to improve the vision. However, a few participants perceived the advice given at the MUFE-IT intervention as "common sense".

Conclusion: The community-dwelling elderly participants were more vigilant about fall prevention and took actions to reduce their fall risks after the MuFE-IT intervention. Further study is needed to formally evaluate the effectiveness of the intervention.

Poster Abstract 55
Self-care practices in elderly with diabetes and its association with diabetes-related distress

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Introduction: Diabetes is highly prevalent among elderly. Elderly diabetic patients may suffer from many complications from diabetes and other chronic diseases. This may lead to distress and interfere with their self-care. The aim of the study was to assess self-care and level of distress among elderly patients with diabetes.

Method: A cross-sectional study involving 248 elderly Type II diabetes patients in primary care clinic. Convenient random sampling method was used. Data on socio-demographic and clinical characteristic (i.e. HbA1c, BMI) was obtained. The Diabetes Self Management Questionnaire (DSMQ) and Diabetes Distress Scale (DDS) were used to measure diabetes related distress and self-care respectively.

Results: The mean age of patients in this study was 69.27(SD 6.32) years. There were more females (52%) and majority of the patients were Chinese (49.2%). The median total stress score was 21(IQR 19-24) with emotional burden subscale being the highest: 7(IQR 6-9). The median total score of self-care practices was 38 (IQR 27-42) with glucose management subscale being the highest: 12(IQR 8.25-14) and physical activity being the lowest: 6(IQR 3-9). Total distress score was found to be inversely and weakly correlated with self-care practices, whereby patients with higher stress score demonstrates poor self-care practices (rs = -0.225, p= <0.001).

Conclusion: Our study demonstrated a moderate level of self-care and lower level of diabetes-related distress. Patient with lower distress score tend to have better self-care practices.

Poster Abstract 56
Sociodemographic risk factors of dementia among elderly bumiputeras in Sarawak

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Introduction: The population in Malaysia is ageing similar to other parts of the world. Thus, the prevalence of dementia will gradually increase. Bumiputera population consists of 74.8% of the total population in Sarawak, the largest state in the whole of Malaysia. However, data regarding mental health among this group of population is limited.

Objective: This study was done to determine the prevalence of dementia and its associated risk factors among the elderly Bumiputera patients in primary care clinics in Sarawak.

Methods: A cross sectional study was done on a group of elderly Bumiputera patients aged 60 years and above attending primary care clinics in Kuching, Sibu and Miri, using a systematic random sampling. Patients with depression were excluded using the Geriatric Depression Scale (GDS). Eligible patients were then assessed with the Mini Mental State Examination (MMSE) to detect for dementia using the cut-off score of 21.

Results: The prevalence of dementia among 521 elderly Bumiputera patients was 24.2% (CI 3.587, 10.090; P<0.001). After controlling for confounding factors, dementia was independently associated with female gender (adjusted OR: 2.390; 95% CI: 1.300, 4.392; P=0.005), no formal education (adjusted OR: 12.227; 95% CI: 6.532, 22.888; P<0.001) and low household income (below median of RM500) (adjusted OR: 4.658; 95% CI: 2.383, 9.107; P<0.001).

Conclusions: The prevalence of dementia among elderly Bumiputera in Sarawak was 24.2%. About 1 in 4 of this population may develop dementia. Thus, dementia awareness and education are an important part of the public health education.

Poster Abstract 57
Types of urinary incontinence, its symptom bother and effect on quality of life among older women in Penampang Health Clinic

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Introduction: Urinary incontinence is a common hidden problem among older women. The magnitude of the problem in Malaysia could be much higher than previously reported due to lack of help-seeking among its sufferers. This paper aims to describe the proportions of types of urinary incontinence and its effect on quality of life among older women in Penampang Health Clinic.

Method: This was a cross-sectional study conducted in a public health clinic. Systematic sampling was carried out to recruit 192 older women with incontinence, aged 60 years and above, for this study. Data was obtained via face-to-face interview, including sociodemographic data and screening questions for type of urinary incontinence. The respondents also completed the Urinary Distress Inventory-6 (UDI-6) and Incontinence Quality of Life Questionnaire (IQOL). Associations between the types of urinary incontinence, UDI-6 scores and IQOL scores were determined using Kruskall-Wallis test.

Results: Mixed urinary incontinence (MUI) is the commonest type of incontinence (52.1%), followed by stress urinary incontinence (SUI) (30.7%) and urge incontinence (UUI) (17.2%). Urinary symptoms bother was the worst for MUI (median UDI-6 score 33.3), followed by UUI (median UDI-6 score 16.7) and SUI (median UDI-6 score 11.0) (p=0.001). Similarly, quality of life was most affected among those with MUI (median I-QOL score 64.8) compared to SUI (median IQOL score 81.8) and UUI (median IQOL score 84.1) (p=0.001).

Conclusion: Mixed urinary incontinence is the commonest type of urinary incontinence among older women in Penampang Health Clinic, and is associated with the worst symptom bother as well as quality of life. Enquiring about

presence of urinary incontinence among older women may be helpful to detect this problem and to institute appropriate treatment measures.

Poster Abstract 58
Diabetes Mellitus (DM) and Periodontal Disease: A preliminary study among medical staff from 3 Public Primary Care Clinics in Kuantan, Malaysia.

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Introduction: Evidences of bilateral relationship between diabetes mellitus (DM) and Periodontal disease (PD) have been increasing and published in oral health practices since 20th century. Nevertheless, awareness of medical staff on relationship between DM and PD and screening PD using self-reported questionnaires has still been limited.
This study was done to assess DM and PD status of medical staff and their perception on DM and PD relationship and screening PD using self-reported questionnaires at health clinics.

Method: A cross-sectional descriptive and analytical study was conducted at 3 public primary care clinics (PPCC), Kuantan, Malaysia in May 2015. Demographic background, history of DM, knowledge and perception on DM-PD relationship; PD screening using self-reported questionnaires (SRQ); effect of PD on glycemic control of DM patients and benefits of screening for PD for general health were assessed by questionnaires. PD status was assessed by PD specialists and diagnosed as healthy gingiva, gingivitis and periodontitis. Relationship between DM and PD status of the participants and their perception of DM-PD relationship was analysed.

Results: Out of 71 (20 Medical doctors (MDs), 16 nurses, 35 paramedical staff), 8.5% had DM while 78% had gingivitis and 16% had Periodontitis. All medical staff with DM had PD. DM-PD relationship was known by 59% of medical staff. Knowledge on screening PD using SRQs was low (27%), There were positive perception to perform PD screening at medical clinics (93%), benefits of PD screening for general health including DM (98.5%) and effect of PD on DM (73%). Existing DM and PD were not influenced on their knowledge and perception regarding bidirectional relationship of DM and PD.

Conclusion: High prevalence of PD among medical staff highlighted to promote oral health among them especially for the staff with DM. Positive perception of medical staff supported to initiate PD screening using SRQs at medical clinics.

Poster Abstract 59
Oral cancer awareness and source of information: A preliminary study among Malaysian Dental Patients

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Introduction: Oral cancer is the 6th most common cancers worldwide. Malaysia ranks at No-14 in the world with the age adjusted death rate 7.72 per 100,000 populations. Although, survival of early detected oral cancer is high, many people present in late stages because of their low awareness on it. This study was done to assess relationship between oral cancer awareness of dental patients and source of oral cancer information they received.

Method: A cross-sectional descriptive and analytical study was conducted among 86 Malaysian dental patients from Poly-clinic Kulliyyah of Dentistry, IIUM in 2014. Awareness on oral cancer in terms of signs and symptoms, risk factors, complications and prevention was assessed using a validated questionnaire. Total awareness score was 18 which was categorized into two groups - low (≤ 9) and high (≥ 10). Socio-demographic background and source of health education information for oral cancer were collected. A cross analysis and ANOVA "F" tests were applied to test null hypothesis of the study.

Results: Range and mean (SD) of oral cancer awareness score were 1, 16 and 9.27 (3.95); and 46.5% were in high awareness group. Sources of oral cancer information were mass media (29.1%), family and friends (7%), oral health education by dentists (9.3%), more than one source (52.3%). The highest mean oral cancer awareness score (10.36) was noticed among the patients who received oral cancer information more than one source followed by OH education by dentist (10), mass media (8), family and friends (6.2). Relationship between the awareness score and the source of information was statistically significant in ANOVA test.

Conclusion: Oral cancer awareness campaign should be promoted via all available sources including encouraging oral health professional to provide more oral cancer education among their patients. A further community based study is required to confirm the preliminary results of the clinic based study.

Poster Abstract 60
Periodontal Health Status of Malaysian Diabetic Children and Adolescent: A Hospital Based Case-Control study in Kuala Lumpur and Kuantan.

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Introduction: Diabetes mellitus (DM) is the major risk factor for periodontal disease (PD). PD includes a spectrum of disorders ranging from gingivitis to periodontitis. If undetected and left untreated the disease can lead to early tooth loss. Assessing PD health is beneficial for keeping good oral health, which affects on glycemic control of the children and adolescent with DM. This study was done to evaluate the periodontal health status of Malaysian diabetic children and adolescents compared to healthy controls.

Method: Periodontal health related parameters were clinically assessed in 32 children and adolescents (10-19 years of age)

with diabetes and 32 non-diabetic control subjects. Age, gender, Body Mass Index (BMI), CDC percentiles and smoking status matching were done and purposive sampling was applied. HbA1C (%) results within 3-6 months before oral health assessment was used to define glycemic control status of the subjects. A cross analysis and Independent sample-t test were applied to infer periodontal health status difference between cases and controls.

Results: Most of the cases were Type-1 DM (68.8%) and diagnosed less than five years (68.2%). The cases had manifested an increased gingival inflammation and calculus significantly compared to controls. Regarding PD health assessment; probing pocket depth (PPD), clinical attachment loss (CAL), gingival index (GI), Modified Turesky Quigley Hein plaque index (TQHI) and bleeding on probing (BOP) were not significantly different between cases and controls; however, higher mean of (SE) GI (0.9±0.82) and PPD (1.81±0.13) were noticed among cases than those of (0.8±0.11 and 1.65 ±0.06) controls.

Conclusion: Periodontal screening & prevention programs at early age for DM children and adolescent should be considered for both oral health and glycemic controls. A further study with controlling; Insulin treatment, types of DM, DM duration, and oral hygiene practice and dietary habits should be conducted for more valid results.

Poster Abstract 61
Is the personal doctor practice valued?

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Introduction: Personalised doctor practice enables relationship between a personal doctor and a patient to grow. It has been associated with positive effects for both patient and doctor. This practice defined as a patient seeing the same doctor for every follow-up visit. It was implemented at Tanglin Health Clinic since June 2014, to increase patient satisfaction and improve adherence to doctor's advice, for better overall disease management.

This study was done to explore patients' perceptions towards personalised doctor practice in primary care.

Method: Tanglin health clinic conducted an interventional study, with baseline and post intervention assessments, on diabetic patients over one year. We used systematic random sampling to select respondents for the assessments, using a self-administered questionnaire to capture patient perceptions. Level of continuity was determined by assessing medical records; the number of visits to the same provider over one year (density) used as a measure of level of continuity of care (high/low). We used STATA version 12 for data analysis.

Results: Almost all responded. Majority perceived that their disease management would improve with a personal doctor. Most would like to continue seeing the same doctor. Conversely, only half patients wanted this personal doctor to be their family doctor.

At baseline, 21.1% of patients reported they received treatment by the same doctor on follow up. One year later, this percentage doubled. In terms of level of continuity, the clinic achieved higher rates compared to the patients' perception one year after implementation initiation.

Conclusion: Patients valued the importance of personalised doctor practice for their long-term healthcare management. However, this does not necessarily translate to wanting a family doctor service.

Poster Abstract 62
General practitioners' own screening behavior predicts the propensity to conduct screening tests for their patients: Findings from a cross-sectional study on prostate cancer screening.

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Introduction: Despite evidence for prostate cancer screening remains controversial, prostate specific antigen (PSA) has been widely used as a screening tool. General practitioners (GPs) who are the frontline healthcare providers play an important role in assisting men to make an informed decision on prostate cancer screening.

This study was done to determine the knowledge and practice of prostate cancer screening among GPs.

Method: A cross-sectional study was conducted among 311 randomly selected full-time private GPs. The adapted questionnaires were distributed to the GPs via postal mail and clinic visits. The main outcomes were: knowledge of prostate cancer risk factors and screening tests; GPs' prostate cancer screening practices; and factors influencing GPs' decision to screen for prostate cancer. Associations between covariates and propensity to screen for prostate cancer were determined using logistic regression.

Results: 65% of the GPs (n=196/302) participated in the survey. GPs overestimated the positive predictive values of PSA (63%), digital rectal examination (DRE) (57%) and combination of PSA and DRE (64%). 49.5% of the respondents would routinely screen asymptomatic men for prostate cancer and 94.9% would use PSA if they intend to screen. Male GPs who would consider having a PSA test done on themselves were 6-times more likely to screen asymptomatic men than GPs who would not have the test (OR = 6.78, 95% CI 1.38-33.32) after adjusting for age and practice duration of practice.

Conclusion: 65% of the GPs (n=196/302) participated in the survey. GPs overestimated the positive predictive values of PSA (63%), digital rectal examination (DRE) (57%) and combination of PSA and DRE (64%). 49.5% of the respondents would routinely screen asymptomatic men for prostate cancer and 94.9% would use PSA if they intend to screen. Male GPs who would consider having a PSA test done on themselves were 6-times more likely to screen asymptomatic men than GPs who would not have the test (OR = 6.78, 95% CI 1.38-33.32) after adjusting for age and practice duration of practice.

Implementation of nutrition screening for older adults improves outcomes and is well-received by patients in Australian general practice settings

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Introduction: Nutrition screening for older adults is feasible to include in routine visits to their General Practitioners.

Objectives: This study aimed to identify the perceptions of older patients related to their experiences when undergoing the nutrition screening process, and to evaluate outcomes post nutrition screening.

Method: Patients aged ≥75 years (n=143) who had participated in an initial nutrition screening were invited for repeat screening between 6 months and one year following the first screening. Those who were malnourished and at risk at baseline were invited to participate in an individual interview at follow-up to identify their perceptions of the Mini Nutritional Assessment Short Form (MNA-SF) and the usefulness of a nutrition resource kit that had been provided. Interviews were audio recorded, transcribed verbatim, coded into topics and analysed thematically using NVivo software version 10. Statistical analyses were performed using SPSS, with significance set at $p < 0.05$.

Results: Seventy-two patients (50.3%) underwent repeat screening. Nutritional status had improved in the group identified to be malnourished/at risk at baseline (p= 0.01), while no significant changes were detected for the well-nourished group (p=0.07). Referral to community services predicted malnutrition risk score at follow-up (p= 0.031). Interviews indicated that the MNA-SF process itself was well-received but that patients did not perceive themselves as being in need of nutrition support.

Conclusion: Implementation of routine identification of malnutrition in older adults attending general practice can be achieved with the use of a rapid screening tool. Further deterioration in nutritional status may then be prevented by following appropriate nutrition care pathways, including referral to community services. The MNA-SF was not perceived by older patients as being harmful, or intrusive, however motivators for older patients to improve their nutritional status warrants further exploration.

What Do Men Understand About Health Screening? Preliminary Results from A Qualitative Study

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Introduction: Despite the benefits and availability of health screening, the uptake remains low, particularly in men. It is established that men have poorer knowledge on screening compared to women. However, men's understanding of health screening remains inadequately explored. This study aimed to explore men's understanding regarding health screening.

Method: This study used a qualitative methodology. Two trained researchers conducted semi-structured in-depth interviews (IDIs) and focus group discussion (FGD) with men who were working in a banking institution in Kuala Lumpur, Malaysia. Purposive sampling was used to capture views of participants from different ethnicity, job position, age and screening status to achieve maximal variation. The interviews were audio-recorded and transcribed verbatim. Two researchers analysed the data independently using thematic approach.

Results: We interviewed 14 men (7 IDIs; 2 FGDs) between July and September 2015. The participants' profile were: age (28 to 64 years old) and education level (5 primary/secondary school, 8 diploma/degree, 1 postgraduate). Three themes emerged from the analysis. Firstly, some men perceived that there was no need for screening as long as they were healthy and practised healthy lifestyle like exercising, eating healthy food and avoid smoking. Secondly, they would seek help from doctor when they had symptoms and considered it as a 'check-up'. They could not differentiate between check-up for screening and for diagnosis. Finally, men knew little about the type of screening tests they should undergo. Most let the doctors decide which tests they should go for. They were familiar with cardiovascular screening but not cancer screening and considered 'more tests is better'.

Conclusion: This study found that men misunderstood the purpose of screening and were unaware of the appropriate tests to go for. Therefore, health education on screening must address these gaps so that uptake of screening in men could be improved.

What interventions can increase participation in CVD risk factor screening? A systematic review and meta-analysis

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Introduction: Cardiovascular disease (CVD) is the leading cause of death globally. However, many individuals are unaware of their CVD risk factors. This study was done to assess the effectiveness of interventions used to increase participation in CVD risk factor screening.

Method: A systematic search was conducted through Pubmed, CINAHL, EMBASE and Cochrane Central Register of Controlled Trials. Additional articles were located through cross-checking of the references list and bibliography citation of studies included and previous review papers. We included studies on interventions with comparators in primary care practices or in community. The target group of screening was general population aged 18 years and above. The outcome measures included uptake rates of participants and screening rate or risk factors recorded by health care providers. The quality of studies was evaluated using Cochrane risk of bias assessment tool. Data were pooled using random-effects model with OpenMetaAnalyst software.

Results: There were 37 studies identified, 29 were included in the meta-analysis. The risk of bias for randomisation was medium and low in 15 randomised controlled trials and high in 9 non-randomised controlled trials and 5 before and after studies. Blinding of participants and personnel were lacking in most studies. The risk of incomplete data and selective reporting were low in majority of the studies. Overall interventions were shown to increase the uptake of CVD risk factors screening (RR=1.65 95%CI:1.49-1.89). The effectiveness of interventions varied with different risk outcomes measured, e.g.waist circumference (RR=23.24, 95%CI:1.16-464.78) , diabetes (RR=1.12, 95% CI:0.97-1.28). Effective interventions that increased screening participation included: sending letter for invitation to screening (RR=1.75 95%CI:1.29-2.38), physician reminders to screen (RR=1.33 95%CI:1.14-1.56), use of a dedicated personnel (RR=1.83 95%CI:1.26-2.67) and providing financial incentives (RR=1.73 95%CI:1.31-2.30) for screening.

Conclusion: Various interventions had been shown to be effective in increasing CVD screening uptake but the effectiveness differed with different risk factors measured.

Poster Abstract 66
Development and validation of the Malay version-Parental Influences on Adolescents' smoking (PIAS) questionnaire

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Introduction: Parents play an important role in influencing adolescent smoking behaviour.
This study aimed to develop and validate a questionnaire that assesses parental influences on adolescent smoking behaviour.
Method: The Parental Influences on Adolescents' smoking (PIAS) questionnaire was developed based on important areas identified through literature review and discussions with three family medicine specialists (one specialist was trained in smoking cessation intervention). Three main domains comprising 12 items in Malay language were constructed: 'anti-smoking attitude' (4 items), 'practice of anti-smoking advice' (5 items), and 'monitoring of adolescent's activities' (3 items). Face validity was performed on 20 16-year-old patients recruited from a primary care clinic. For construct validity, exploratory factor analysis using direct oblimin rotation was done on 76 Form 4 students from a day-school. Items assessing father's and mother's influences were analysed separately. Subsequently, internal consistency for each domain was measured.
Results: All 12 items were easily understood by the teenagers during face validity process. Three-factor solution was identified through Kaiser's criterion, inspection of the screeplot and parallel analysis using Monte Carlo for both Father-PIAS and Mother-PIAS, which matched the conceptualised domains. Both questionnaires showed adequate values for Kaiser-Meyer-Olkin (Father-PIAS: 0.70; Mother-PIAS: 0.72) with significant Bartlett's test of sphericity (p<0.001). Items 9 and 12 were dropped because it loaded weakly into its conceptualised domains. Thus, the final PIAS for each parent contained 10 items. The internal consistency of three domains were good: 'anti-smoking attitude' (4 items; α for father-PIAS-Attitude:

0.72; α for Mother-PIAS-Attitude: 0.68), 'practice of anti-smoking advice' (4 items; for father-PIAS-Advice: 0.88; for Mother-PIAS-Advice: 0.89), and 'monitoring of adolescent's activities' (2 items; α for father-PIAS-Monitor: 0.70; for Mother-PIAS-Monitor: 0.70).

Conclusion: The Malay version-PIAS Questionnaire is a valid and reliable tool to assess parental influences on adolescent smoking behaviour.

Poster Abstract 67
Difficult To Quit Smoking Beyond "Nicotine Dependnece": A Prelimanry Survey Among Adult Male Smokers In Felda Bukit Goh, Kuantan Pahang, Malaysia

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Introduction: The vast majority of smokers want to quit and most make repeated attempts to do so. Although, effective treatment for nicotine dependence (ND) is present now, repeatedly fail to quit is still a common issue among smokers because of beyond nicotine addiction.
This study aims to measure nicotine dependence (ND) level among adult male smokers and the influence of socio-economic (SE) characteristics on ND and failing to quit smoking.
Method: A cross-sectional descriptive and analytical study was conducted in 2015 among 156 current adult male smokers in Kuantan, Malaysia. Socio-demographic and economic status, history of smoking and quitting attempt within 12 months and reasons for failing quit were identified by using a self-administered questionnaire. Level of nicotine dependence was assessed by validated Malay version of Fagerstrom Test for Nicotine Dependence questionnaires. Influence of socio-demographic and economic status on attempt to quit smoking and level of ND was analyzed.
Results: Prevalence of low, moderate and high nicotine dependence level were 69.9%, 28.2% and 1.9% respectively. Among them, 55.1% were tried to quit smoking during **12** months. The most of reasons to fail quit attempt were nicotine addiction (69.8%) followed by uncomfortable/ tension/ not alert (10.5%), peer smoking/ social (10.5%), feel sleepy (7.9%) and desire to eat a lot (1.3%). Married smokers (56.6%) aged 31-40 years old (66%) with secondary education (52.9%), private employee (68.3%), 1000-3000 RM family income per month (58.1%), and low ND score (59.6%) were tried to quit attempt and failed to quit. Smokers with low mean ND score (2.93) were attempted to quit significantly than those with high mean ND score (3.73).
Conclusion: Nicotine dependence as a main reason for failing to quit smoking was confirmed in the study; however, influence of socio-demographic and economic characteristics was highlighted to consider in plan for successful quit smoking.

Effectiveness Of Cardiac Risk Communication On Smoking Cessation In Primary Care: A Pilot Study

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Introduction: National survey in Malaysia found that half of adult men in Malaysia are smokers. However, abstinence rate in primary care practice remains relatively low. This study aims to evaluate the effectiveness of cardiac risk communication in additional to conventional smoking cessation counseling in motivating smokers to quit smoking.

Method: This was a randomized controlled trial conducted for one month between April and May of 2015 at five public and one private primary care clinics in Perak and Negeri Sembilan. Inclusion criteria were adult male smokers with chronic disease (e.g. hypertension and diabetes) aged ≥40 years. Smokers were excluded if they have psychotic disorder, heart disease, and no telephone number. Participants were randomized into two groups, both groups received standard smoking cessation counseling; in addition, the intervention group was presented with a colourful chart (in IPAD) showing his risk of getting cardiovascular disease in 10 years calculated using Edinburgh Cardiac Risk Calculator. The main outcome measures were change in Fagerstromscore of nicotine dependence and change in Prochaska's stages of change in one month.

Results: 134male smokers were enrolled (mean 53.59.5 years), 69 in intervention group, 65 in control group. Outcome data was available for 105 participants (78.4%). Positive change in Proschaska's stages of change was 85.7% in intervention group and 77.6% in control group (p=0.278). Positive change in Fagerstrom score was 78.6% in intervention group and 53.1% in control group (p= 0.006). Only one patient achieved abstinence in this study (he was in control group).

Conclusion: Cardiac risk communication for smoking cessation counseling has potential role in assisting patients in quit smoking in primary care setting. Further study to assess this is warranted.

Factors Associated with Successful Smoking Cessation among Subjects Attending General Outpatient Clinics without History of Chronic Lung Disease

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Introduction: Cigarette smoking is the major cause of preventable death but the quit rate among smoker remains low. Health Care Professionals play an important role in offering smoking cessation when smokers using health care service. It is important to understand the predictors on the success of quitting smoking.

This study was done to identify factors associated with successful quitting so that cessation programs could be tailored to those at highest risk for relapse.

Method: This is a cross sectional survey of Chinese subjects (age≥ 30) with history of smoking, defined as persons who reported smoking at least 100 cigarettes during their lifetime (CDC criteria 2011) attending 5 Kwai-Tsing District general out-patient clinics (GOPC)from April to July 2014. We measured the tobacco use by the World Health Organization Global Adult Tobacco Survey (GATS), respiratory symptoms by Breathlessness, Cough, and Sputum scale (BCSS) questionnaire, and the Health-related quality of life by SF-6D questionnaire. We employed logistic regression analysis to compare demographic and other factors of current smokers with past smoker.

Results: 731 subjects with mean age 62.2 ±11.7 (M: F = 12.3:1) were recruited into the study. 48.3% were current smoker while 51.7% were past smokers. Their accumulative year of smoking was 42.9±12.9 years. 25% subjects attended high school or above. 32% subjects worked full time. Factor associated with being past smoker (vs current smoker) were older age group [OR 1.072, p<0.001], no full time working [OR 1.72 p< 0.026], younger age of first smoking [OR 0.975, p = 0.044] being overweight [OR 1.934, p <0.001)] and with less significant pulmonary symptoms (by BCSS) [OR 0.740, p <0.001).

Conclusion: The younger, working, normal or underweight smokers were more likely to keep their smoking habit, but they were also more likely to have respiratory symptoms.

Are we managing anaemia in pregnancy detected at antenatal booking visit right? An audit at a public primary care clinic in Selangor, Malaysia

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Introduction: The prevalence of anaemia in pregnancy in Malaysia is high, at around 30-60%. An audit at the primary care level allows assessment on the quality of delivery of care of this important topic.

Method: 5 structures, 16 processes and 2 outcome criteria and standards were set based on the management recommendations by the local district health office, the Ministry of Health Perinatal Care Manual , the National Strategic Plan of Action Towards Achieving Millenium Development Goal (MDG) 4 & 5 and previous audits.
Data for this retrospective audit was collected via observation, the antenatal registry and clinic antenatal book of all of the patients booked at the clinic from January 2014 until December 2014.

Results: 351 patients were booked at the clinic between January 2014 and December 2014. 145 (41.3%) were booked at ≤12 weeks of gestation. 116 (33%) had a haemoglobin (Hb) of <11 g/dL. The majority of the patients with anaemia are Malay, primigravida (30.2%), has secondary or tertiary education, working (53.6%) and booked at 12 weeks or more (76.3%). 51.5% of patients with normal Hb at booking was found to have anaemia at 36 weeks. 4 structure, 12 process and 1 outcome criteria were achieved. The criteria that were

not achieved were availability of perinatal care manual, completeness of data entry, booking of pregnant women at ≤12 weeks of gestation, assessment of haemoglobin level at 36 weeks of gestation, haematinics supplementation and Hb ≥ 11 g/dL at 36 weeks of gestation.

Conclusion: Effective management is important to monitor and prevent anaemia in pregnancy. Repeat audit after implementations of recommendations and further studies on this topic in Malaysia are recommended

Poster Abstract 71
Contraception Practices Among High Risk Mothers In Kelantan

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Introduction: Modern family planning practices among high risk mothers in Kelantan were generally poor (29 %), and were not much different from the overall prevalence in Kelantan (38.1%). We need to explore these high risk mothers' knowledge and perception towards family planning. The objective of this study is to determine the proportion of high risk mothers practicing modern contraception, to identify the types of contraception used, to compare the knowledge and attitude towards contraception among users and non users and to identify the associated factors influencing contraception use.

Method: A comparative cross-sectional study using systematic random sampling among high risk mothers who were pregnant in 2010 in Kelantan. Unmarried mothers and mentally unfit were excluded. A validated questionnaire in Malay language was used.(Eigenvalue >1, Cronbach α 0.78)

Results: 364 mothers completed the questionnaire, with a 98.1% response rate. Majority (98.9%) were Malays and Muslims. A total of 215 (59.1%) respondents had lifetime history of practicing contraception, but only 175 (48.1%) are currently practicing contraception. The most popular method were oral contraceptive pills (77.7%), followed by Depo Provera (9.7%), condom (6.8%), intrauterine device (2.8%), bilateral tubal ligation (2.3%) and implants (0.6%). There was no difference in terms of the mean knowledge (p 0.048, 95% CI -0.68,0.85) and attitude score (p 0.029, 95% CI -1.06,1.29) between the users and non users. The logistic regression showed that factors associated with the used of contraception were not exclusively breast feed (OR 2.5) compared to exclusively breast feed; and secondary level of education (OR 10.24) and primary level of education (OR 5.03) compared to those with tertiary level of education.

Conclusion: Nearly half of high risk mothers practice modern contraception and the knowledge or attitude did not influence the practice of contraception.

Poster Abstract 72
Maternal Behavior toward Post-Partum Intrauterine Device (IUD) in Primary Health Care Service in Indonesia

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Introduction: Intrauterine device (IUD) is one of contraceptive choices to prevent pregnancy. IUD utilization in Indonesia was low, around 7.75% in 2013. Many factors affect this situation, including the characteristic of the population and social-cultural factor. This study aimed to determine the behavior of pregnant women towards the IUD and the factors that affect the behaviors.

Method: This study using cross-sectional design with a consecutive sample selection method which involved all pregnant women who had antenatal care at the Ciracas health center for two weeks in early February. Data were collected by questionnaire. Knowledge, attitude, and behavior of the subject of the IUD is divided into two categories, which is good (>50) and poor (<50). Data were analyzed using chi-square test or Fisher (SPSS version 16.0) to see knowledge and attitude' influence on the behavior (p<0.05).

Results: There were 39 subjects who filled out a questionnaire with a mean age 29 years and mean gestational age is 26 weeks. Most highly educated subjects (72%), using national health insurance (JKN) (79.5%), and have been undergoing antenatal care at least 4 times (52.6%). Only 4 subjects (10.2%) having good behavior, the rest behaved badly towards the IUD. The behavior of the subject of the IUD was not influenced by the knowledge (p = 0.309) and attitude (p = 0.284).

Conclusion: Behavior of pregnant women towards postpartum IUD was bad (89.2%). There were factors that influence such behavior still unknown, both demographic as well as knowledge and attitudes.

Keywords: Behavior, Ciracas, postpartum IUD, pregnant woman

Poster Abstract 73
The Roles of Men in Family Planning - A Study of Married Men at UKM Primary Care Clinic

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Introduction: Traditionally, family planning initiatives have concentrated on women despite it being a family matter. In the Asian context, mothers are usually responsible for childcare, while fathers make less effort in child-raising activities. As family dynamics have evolved over the years, fathers' involvement in family planning is crucial in enhancing family wellbeing. This study aimed to identify the role played by Malaysian men in family planning activities and the association of their socioeconomic characteristics with these roles.

Method: This was a cross sectional study carried out in a university primary care clinic. All married male attendees to the clinic age 50 years and below (including clinic staff, patients and people who accompany them) were approached to answer a set of self-administered questionnaires, asking for participant's socio-demographic profile and their involvement in family planning practices. The data were analysed using descriptive and inferential statistics.

Results: 167 participants with varying socioeconomic and demographic backgrounds participated in the study. A high proportion of men participated in discussions regarding previous pregnancies (60.42%), future child planning (89.76%) and desired family size (89.76%). However, discussions on the usage of family planning methods (39.16%) were

significantly low. Factors associated with higher likelihood of men participating in family planning activities were: older age (p<0.001), higher education level (p=0.009), higher monthly income (p<0.001) and longer marriage years (p=0.004).

Conclusion: The level of participation of men varied in discussions of the four family planning activities. The roles taken by men in family planning were associated with older age and higher socioeconomic class. Majority of men needs to be encouraged to play a more active role in the discussion and decision-making of family planning methods regardless of their age and socioeconomic class.

Poster Abstract 74
Views And Experiences Of Children, Parents And Teachers Regarding dietary Intake And Physical Activity In Children: A Qualitative Study

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Introduction: Childhood obesity is a critical global health problem with prevalence rates increasing rapidly worldwide. One in ten school-aged children are overweight and of these, a quarter is obese. In Malaysia, data from the National Health Morbidity Survey III carried out in 2006 showed that the prevalence of overweight children between 7 and 12 years of age was 19.9%.

This study aimed to explore the views and experience on diet and exercise in school-going children, parents and teachers in the context of an Asian country.

Method: A qualitative approach with focus group discussions was deployed. Students, parents and teachers from a private primary school in Kuala Lumpur, Malaysia were invited to participate. Recruitment stopped when data saturation was reached. The audio-recordings were transcribed verbatim, checked and analysed by thematic analysis.

Results: There were three main themes: perceptions and experiences about body weight; knowledge and influencers of healthy eating; and the importance of physical activity and its influencers. Children tended to view themselves as being fat. Obesity was associated with stigma. There appeared to be uncertainty regarding what constituted normal body size. There was uncertainty about what constituted healthy food for children by parents and teachers. Sociocultural factors were acknowledged to be important influencers in childhood nutrition. Although physical activity was seen as healthy, older children and adults perceived scholastic effort to be of greater priority than engaging in physical activity.

Conclusion: Participants viewed body size and nutrition to be important but physical activity was not regarded as a priority. Participants were uncertain as to what constituted normal body size and healthy eating for children.

Poster Abstract 75
Women with malignant breast lumps; Who are they?

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Introduction: In Malaysia, women with breast cancer presented with a large size lump and advanced disease.

The objective of this study was to determine the characteristics of malignant breast lumps among women presented with breast lump in breast clinic.

Method: This was a cross sectional study conducted at a tertiary referral centre for breast diseases in the central region of Malaysia. All women referred for breast lump was invited. A face to face interview was conducted to obtain data on the socio-demography and the women's screening behavior. The morphology and histology of the breast lumps were obtained from the medical records after investigations were completed.

Results: The response rate was 86% (160/188). The mean age of the respondents was 37.14 ± 13.56 years with mostly Malay, married housewives (57.17%, 92.5%). The mean size of the lump was 2.47 ± 2.16 cm. The clinicians found no lump in 14.0% of the respondents; while the 2 commonest sites of lumps were right and left upper outer quadrant. Almost 50% of the breast lumps were benign, 8.9% malignancy; while 34% respondents had no indication for biopsy, and the rest either defaulted or had unsatisfactory biopsy. The size of malignant lumps (4.983 ± 2.784 cm) was significantly larger than the benign lumps (2.76±2.18 cm), p=0.002. After adjusted for age, menopausal status, ethnicity, marital status, larger lump size is related to higher risk of malignancy (AOR:1.46; 95% CI: 1.06-2.00).

Conclusion: Women with breast cancer presented with large lumps. Larger lump size is related to higher risk of malignancy. More effort is required to reduce the size of breast cancer lump at presentation.

Poster Abstract 76
Socioeconomic Inequalities in the Distribution of Diabetes among Malaysian Adults: The National Health and Morbidity Survey (NHMS) II, III & IV

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Introduction: This population-based study aimed to explore the trends of the socioeconomic inequalities in diabetes among Malaysian adults aged 30 years and above from Peninsular Malaysia.

Methods: The socioeconomic trends in diabetes was analysed using the NHMS II, III and IV data sets for the years 1996 (n=15968), 2006 (n=19118) and 2011 (n=10178). Household per-capita income was used as a measure of socioeconomic position and for descriptive purposes was categorised into population-weighted quintiles. As a measure of inequality, the concentration index (C), which quantifies the degree of socioeconomic inequality in a health outcome, was computed.

Results: The findings show that the prevalence of diabetes increased from 11.73% in 1996 to 24.60% in 2011. Among the three major ethnic groups, Indians particularly Indian men had the highest prevalence of diabetes and Chinese the lowest. Indian men also had the highest increase in diabetes (28.07%) while Chinese women had the lowest increase (9.85%). The prevalence of diabetes for all three years decreases with increase in education. The difference in the prevalence of

diabetes of those with no education compared to those with a tertiary education increases across the years from a difference of 7.73% in 1996 to 12.52% in 2011. There appears to be a gradual reverse in the direction of the socioeconomic gradient in diabetes; as in 1996, the poorest quintile had the lowest prevalence and by 2011 the richest quintile had the lowest prevalence. In terms of socioeconomic inequality, diabetes was concentrated among the rich in 1996 [C=0.05, 95%CI (0.03 to 0.08)], equally distributed in 2006 [C=-0.005, 95%CI (-0.02 to 0.01)] and concentrated among the poor in 2011 [C=-0.05, 95%CI (-0.08 to -0.03)]. The change from rich to poor concentration seemed to be more prominent for women than men.

Conclusion: In conclusion, the distribution of diabetes is progressively moving towards burdening the poor.