

Malaysian Family Physician

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Official Journal of the Academy of Family Physicians of Malaysia
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7th ASIA PACIFIC PRIMARY CARE RESEARCH CONFERENCE

27 - 28 JUNE 2019 • PENANG

**7th Asia Pacific Primary
Care research Conference**

27-28 June 2019 • Penang



2019 Volume 14 Supplement 2
PP2089/12/2012 (031677)
ISSN :
1985-207X (Print)
1985-2274 (Electronic)



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THE MALAYSIAN FAMILY PHYSICIAN JOURNAL

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Oral Abstracts

Oral Abstract 1

Roles and Recommendations from Primary Care Physicians' Towards Managing Breast Cancer Survivors In A Shared-Care Model With Specialists In Singapore: A Qualitative Study

Fok R.W.Y.^{1,2}, Low L.L.^{3,4}, Quah J.H.M.^{4,5}, Vasawala F.F.², Low S.G.⁶, Soh L.L.⁶, Ke Y.⁷, Soong Y.L.⁸, Loh K.W.J.¹, Harunal Rashid M.F.¹, Wong G.Y.L.⁷, Ng D.Z.W.⁷, Chan A.^{7,9,10}, Tan N.C.^{11,4}

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Background: Worldwide phenomenal increase in cancer survivors has resulted from improved therapeutics and an aging population. This dramatic change calls to relook new models of care delivery, in particular to involve primary care physicians (PCPs).

Objectives: This study aimed to gather perspectives of PCPs from private and public institutions in Singapore on their current and aspirational role in delivering shared-care services to breast cancer survivors (BCS), and proposed recommendations to empower them to fulfil this enhanced role.

Methods: Eleven focus groups and six in-depth interviews were conducted with 70 PCPs recruited by purposive sampling. All sessions were audio-recorded, transcribed verbatim and coded by three independent researchers. Thematic content data analysis was performed using NVivo 12.

Results: Majority of the participants reported spending less than one-fifth of consultation time to manage survivors' cancer-related problems in view of multiple barriers. PCPs recognized their value to meet the unmet needs of BCS in a patient-centered approach. This will provide comprehensive and continuing care in the community for BCS. PCPs emphasized a need for clear roles differentiation from oncologists, aligning their expertise in managing comorbidities, controlling risk factors and identifying psychosocial issues. PCPs made recommendations to address knowledge gaps, build confidence, trust and enhance communication skills training. To improve care coordination, PCPs suggested the survivorship care plan should include oncologists' contact details, relevant medical and social history. Institution-level changes and appropriate primary care resourcing are necessary to enable a viable shared-care programme.

Conclusion: PCPs are keen to provide patient-centric care and take on shared-care for their breast cancer survivors. The proposed programme should leverage on their key strengths in chronic disease management, health promotion and preventive care. They recommend a multifaceted shared-care model incorporating training, clinical guidelines and improved communication to maximize its feasibility and practical utility.

Oral Abstract 2

The Prevalence of multimorbidity in Singapore: An Epidemiology Study based on Administrative Data

Xie Y¹, Lee SPS¹, Koh HL¹, Lee ES¹

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Background: Multimorbidity, defined as the co-occurrence of multiple chronic conditions, is common in primary care. The worldwide prevalence rates ranged widely from 12.9% to 95.1% due to the lack of consensus in defining chronic conditions, number of conditions included, cut-off number of conditions to define multimorbidity, and data sources.

Objectives: We aimed to determine the prevalence of multimorbidity in Singapore using standardized prevalence rates (SPR) and examine the differences among the various age, gender and ethnic groups.

Methods: A cross-sectional retrospective study was conducted amongst 787,447 primary care patients who consulted National Healthcare Group Polyclinics at least once between 2015 and 2016. We used the modified Fortin list that consisted of 19 chronic conditions and defined multimorbidity as having three or more chronic conditions for at least six months. SPR was obtained using the direct standardization method based on the corresponding age/gender/ethnic groups according to the 2016 Singapore population. Poisson approximation was used to calculate 95% confidence interval (CI) and statistical significance was determined by no overlap of the CI.

Results: The overall SPR for multimorbidity was 17.2% (CI:17.2, 17.3). Stratifying by age-group, the SPRs were 4.0% (CI:3.9, 4.1) for 25-44 years old, 28.5% (CI:28.3, 28.7) for 45-64 years old and 60.9% (CI:60.5, 61.2) for 65-99 years old. As for gender, the SPRs were 18.0% (CI:17.9, 18.9) for males and 16.5% for females (CI:16.4, 16.6) and lastly, the SPRs were 17.6% (CI:17.4, 17.6) for Chinese, 16.8% (CI:16.6, 17.0) for Malays and 17.6% (CI:17.3, 17.8) for Indians.

Conclusion: The SPR of multimorbidity for this study was in the lower range of the worldwide prevalence rate. There were significant differences between different age and gender groups. Finally, the Malays had lower SPR compared to the Chinese and Indians. There was no difference in SPR between Chinese and Indians.

Oral Abstract 3

Impact of Lifestyle on Allostatic Load of the Hong Kong Population

Yu EYT¹, Yeung CHN¹, Tang EHM¹, Wan EYF¹, Lam CLK¹

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Background: Allostatic load measures the overall physiological 'wear-and-tear' from chronic life stress on one's body and the Allostatic-Load-Index (ALI), a composite index of biological markers, has been shown to predict disease in later life. Identifying protective factors which reduce ALI potentially allow prevention of chronic diseases arising from cumulative stress earlier in disease trajectories when conditions are still reversible. However, the impact of modifiable lifestyle factors on allostatic load remains unknown.

Objectives: To evaluate the relative importance of protective lifestyle on allostatic load

Methods: A cross-sectional study of 1,732 people aged 15-84 without hypertension, diabetes, cardiovascular disease or dementia was conducted on data from the governmental Hong Kong Population Health Survey 2014/15. Biomarkers of allostatic load collected and respective increased-risk cutoffs were: systolic blood pressure ≥ 130 mmHg, diastolic blood pressure ≥ 80 mmHg, waist-to-hip ratio ≥ 0.9 (male)/ 0.8 (female), haemoglobin-A1c $\geq 5.7\%$, total-cholesterol to high-density-lipoprotein-cholesterol ratio ≥ 4.5 (male)/ 4.0 (female) and triglyceride ≥ 1.7 mmol/L. ALI was calculated by the sum of biomarkers that fall above increased-risk cutoffs, ranging from 0-6. Protective lifestyle included not-smoking, not-drinking, adequate physical activity (PA) defined by ≥ 150 minutes moderate-intensity or ≥ 75 minutes vigorous PA/week, fruit and vegetable consumption ≥ 5 portions/week and sleep ≥ 6 hours/night. Associations between ALI and protective lifestyle were evaluated by multivariable linear regression, adjusted by age, gender, education level and employment status.

Results: 48% subjects were men; mean age was 38.6 years (standard deviation (SD)=15.7). The mean ALI was 1.65 (SD=1.55). Increasing age, male gender, currently employed and secondary education or below were associated with increased ALI. Among the protective lifestyle, not-smoking (-0.247 , $p=0.017$), adequate PA (-0.146 , $p=0.024$) and adequate sleep (-0.457 , $p<0.001$) had significant impact on ALI after adjusting for confounding socio-demographics.

Conclusion: For the healthy general Hong Kong population, not-smoking, exercising and sleeping enough may reduce allostatic load. While smoking cessation and PA promotion are well-known and popular health promotion strategies, the importance of adequate sleep, an easily overlooked but important modifiable factor, should also be advocated.

Oral Abstract 4

Determinants associated with the intention to undergo cardiovascular disease health checks among men and women

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Background: Cardiovascular disease (CVD) is a major health burden in Malaysia. Undergoing a health check is an important strategy to improve CVD health but this may be influenced by the different health seeking behaviour of men and women. Identifying factors that influence men's and women's intention to undergo CVD health check could help to improve strategies to increase participation in health checks.

Objectives: To identify significant determinants associated with the intention to undergo CVD health checks among men and women.

Methods: This was a cross sectional survey using mall intercept interviews. Malaysians aged >30 years without known CVD were recruited. A validated CVD health check questionnaire was used to assess participants' intention and determinants that influenced their intention to undergo CVD health checks. The nine determinants measured were: Individuals' belief that the course of CVD can be changed for the better, perceptions of self being at risk of CVD, perception of benefits of CVD health checks, perception of drawbacks of CVD health checks, preferred method for CVD prevention, individuals' readiness to know the results of CVD health checks, individuals' readiness to handle outcomes following CVD health checks, external barriers and influence by significant others. The intention was indicated by individuals' degree of likeliness and the likely timeline to undergo health check.

Results: 397 participants were included in this analysis, 60% were women. The mean age was 48 years (SD11.5) for men and 46.5 years (SD10.8) for women. Simultaneous ordinal regression analysis showed that significant determinants to undergo CVD health checks for men were perception of the benefits of CVD health checks and self being at risk of CVD while for women the perception of benefits of CVD health checks, individuals' readiness to handle the outcomes following CVD health checks, external barriers and influence by significant others.

Conclusion: Intervention needs to target men and women differently when engaging them to undergo CVD health checks.

Oral Abstract 5

The ethnic and gender differences in the patterns of multimorbidity in Singapore Primary Care Patients

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Background: Patients with multiple co-occurring chronic diseases, i.e. multimorbidity, are commonly seen in primary care. Care provision is often based on single-disease clinical practice guidelines (CPGs) and may increase the treatment burden of patients. However, emphasis on single-disease care is contrary to family physicians' aim to provide holistic care for such patients. Identifying the common patterns of multimorbidity in primary care can help family physicians develop patient-centred CPGs. We hypothesised that there will be differences between common patterns of multimorbidity among different ethnic/gender groups.

Objectives: We aim to describe the common patterns of multimorbidity of primary care patients stratified by gender and ethnicity.

Methods: We conducted a cross-sectional study on all patients aged 45 years and above who visited National Healthcare Group Polyclinics at least once between 2015 and 2016. We obtained the list of chronic conditions from our electronic database to generate the triads (three co-existing chronic conditions) and their respective prevalence rates. We defined common triads as having a prevalence rate of 1.0% or more. Clinical significance was an absolute difference in the prevalence rates of 10.0% or a relative difference of 300.0% across ethnic/gender groups.

Results: This study included 420,395 patients (Chinese: 77.0%, Malays: 11.3%, Indians: 8.1%; Females: 53.6%). There were 12 common triads in the overall population. Seven of them had clinically significant difference among the groups. For example, the triad with the highest prevalence rate was hyperlipidaemia/hypertension/diabetes at 21.9% and when comparing between the ethnic/gender groups, the Indian females contributed most to this prevalence rate (30.2%), which was significantly higher than the Chinese females (18.9%).

Conclusion: There were clinically significant differences in the common patterns of multimorbidity among the ethnic/gender groups. CPGs targeting the distinct patterns of the different ethnic/gender groups should be developed to help family physicians provide personalised care to patients with multimorbidity.

Short Oral Presentation

Short Oral Abstract 1

PACE-D Training: Coaching healthcare professionals to partner patients in diabetes through Care and Support Planning conversations

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Background: Patient Activation for Care Empowerment in Diabetes (PACE-D) is a novel model of care that integrates the use of care and support planning (CSP) conversations into clinical practice to support diabetes care. Planned for 3000 patients over two years at National University Polyclinics (NUP), it is modelled after the UK National Health Service's (NHS) Year of Care (YoC) programme. Workflow changes at NUP have included the production of patient-friendly "result letters" documenting current investigation results, encouraging patient self-care through their consideration of these results a week before scheduled healthcare provider (HCP) appointments, the facilitation of collaborative patient-HCP discussions to formulate patient-centred goals during the CSP consultation, linkage to relevant social supports, and PACE-D coordinators for project oversight under full-time employment.

YoC-trained trainers adapted UK YoC course material and modules to run a PACE-D CSP practitioner training course in January 2019 in Singapore.

Objectives: To describe the CSP conversation training workshop, trainee feedback, and their experience of the training programme.

Methods: Eleven HCPs were challenged to adopt the skills and attitudes required to relate to results-letter prepared patients in CSP consultations over the four-module, two-day course. Training activities comprised a mixture of videos, surveys, interactive discussions and role plays. Survey results were collected and trainees asked for feedback after each module.

Results: Trainees (n=11, 100%) positively rated both the extent the training helped them to understand the rationale for CSPs (median 9/10) and the extent it helped them to understand the care and support planning process (median 9/10). Collated qualitative comments from participants will be presented.

Conclusion: CSP practitioners may be trained using YoC-derived material adapted for use in the primary care context in Singapore.

Short Oral Abstract 2

Factors Associated With Sexual Intention Towards Pre-Marital Sex Activity Among School-Going Late Adolescents In Kuantan, Pahang

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Background: The consequences of adolescents in early involvement with sexual activity include sexually transmitted diseases, unwanted pregnancy, and unsafe abortion.

Objectives: To identify the socio-demographic and socio-cognitive factors (permissive attitude, social norms, and self-efficacy) associated with sexual intention to engage in premarital sex among school-going late adolescent in Kuantan, Pahang.

Methods: This cross-sectional study was conducted in nine government secondary schools in Kuantan district between February-April 2018. A total of 466 self-administered validated Youth Sexual Intention Questionnaires (YSI-Q) data are collected among unmarried students aged 18-19 years-old. Statistical analyses were done using IBM SPSS version 22.0.

Results: Majority of the participants were females (64.4%), Muslims (68.2%) and Malays (67.4%). Simple logistic regression on socio-cognitive factors showed for every one unit increase in permissive attitude, social norms and self-efficacy scores, there were 1.424, 1.303 and 1.215 times increase risk of having sexual intention, with p-value of 0.001 each and 95% CI of odds ratio(OR) 1.268-1.600, 1.191-1.425 and 1.066-1.386, respectively. Multivariate logistic regression showed that female had lower risk of having sexual intention compared to male (p=0.001, OR=0.163, CI=0.058-0.462), Non-Malays had higher risk compared to Malay students and ever-smokers had higher risk compared to non-smoker students towards having sexual intention with p=0.001, OR=5.110, CI=1.881-13.886 and p=0.019, OR=3.288, CI=1.218-8.875, respectively. In addition, for every unit increase in permissive attitude score, there was 1.236 times increase risk of having sexual intention with p=0.002 and 95% CI of OR=1.084-1.410.

Conclusion: The risk of having sexual intention was found to be higher among males, non-Malay and ever-smoker students; and also among those with higher permissive attitude scores. Therefore, further study and peer education intervention programs are required for school-going students to improve their permissive attitude and to prevent risk behavior that may lead to sexual intention towards pre-marital sex activity.

Keywords: pre-marital sex activity, late adolescent, youth sexual intention

Short Oral Abstract 3

A Study to Prevent Severe Neonatal Jaundice in Port Dickson

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Background: There was a significant increasing numbers of severe neonatal jaundice (SNNJ) in Port Dickson from 1 case in 2014, 14 cases in 2015 and 23 cases in 2016. SNNJ will increase the risk of mortality and morbidity among neonates such as kernicterus, hearing problem and learning disability.

Objectives: To evaluate the effectiveness of neonatal jaundice program in Port Dickson district in improving prevalence of SNNJ and to determine associated factors of neonatal jaundice (NNJ).

Methods: Total of 508 NNJ cases and 39 SNNJ cases from January 2016 until December 2017 were included. They comprised of 281 cases before the program implementation and 266 cases after the program implementation. The programs started on January 2017 consisted of introducing NNJ checklist, training of health care providers and the use of new criteria for TSB venous blood sampling.

Results: There was reduction in SNNJ prevalence from 2016, 1.4 % (23 cases) to 2017 0.8% (16 cases). In 2016, those required phototherapy were 65 cases (23%) and in 2017, 51 cases (20%). For SNNJ cases, patient related factors showing improvement from 17/23 (73%) in 2016 to 8/16 (50%) in 2017. Factors related to health system also showed improvement from 15/23 (65%) in 2016 to 5/16 (31%) in 2017. Clinical factors contributed to NNJ cases includes mother blood group O (30.1%), Gestational Diabetes Mellitus (9.8%), low birth weight (8.2%), assisted delivery (5.3%) and inadequate breastfeeding (4.6%).

Conclusion: The program has shown improvement in SNNJ prevalence in Port Dickson district. It was a comprehensive program that targeted towards patient factors and health care deliveries system.

Short Oral Abstract 4

The Use of Medication Packaging Aids in Improving Adherence and Clinical Outcomes

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Background: Medication adherence may be affected by patient-related factors, including poor management of medications. ConviDose™ is a multi-dose adherence aid to organize a patient's medications in a simple-to-use package, especially for patients with medication administration issues. Since its implementation in National Healthcare Group polyclinics, its impact has not been assessed.

Objectives: This study aimed to evaluate changes in medication adherence, measured by Medication Possession Ratio (MPR), in patients using ConviDose™, versus patients receiving medications with standard packing procedures. The secondary objectives were to determine if the changes in adherence were associated with improved clinical outcomes, and to describe qualitative outcomes such as changes in medication administration issues and satisfaction level towards ConviDose™.

Methods: This retrospective case-control study used data with the index period of April 2012 to February 2017. Prescription records and clinical parameters were collected for ConviDose™ patients and their matched controls. MPR, HbA1c, LDL-C and blood pressure were compared between baseline, 6 months (not applicable to LDL-C) and 12 months after the index period across both groups. Survey data from ConviDose™ patients was analyzed for changes in medication administration issues and satisfaction ratings.

Results: 100 ConviDose™ patients and 100 controls were included. The overall MPR for ConviDose™ patients increased after 6 months (0.37%, IQR 0%-9.95%, p<0.001) and 12 months (0.41%, IQR 0%-8.67%, p<0.001). HbA1c for ConviDose™ patients improved after 6 months (-0.1%, IQR -0.8%-0.3%, p=0.022). Other clinical parameters did not show significant changes. At least 30% of ConviDose™ patients reported no longer forgetting to take their medications per week, while at least 50% were strongly satisfied with the ConviDose™ product and service.

Conclusion: ConviDose™ patients sustained improvements in adherence over one year and had high satisfaction ratings. Therefore, ConviDose™ may be recommended by healthcare professionals to patients with medication administration issues, arising from conventional packing procedures.

Short Oral Abstract 5

Using video recordings in primary care to stimulate consultation recall: the importance of patient and public involvement in research design

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Background: Video recording of primary care consultations has long been used in medicine, generally for education purposes but increasingly for research. It offers a means of generating in-depth understanding of real-time interactions and can be part of a systematic approach to capturing the complex, real world factors that may impact on clinical interventions and the mechanisms that bring about change. There is little literature examining the practical processes or the ethical implications, both key to fully evaluating their potential contribution. Patient and Public Involvement in research (PPI) has been shown to strengthen research design, help define what is ethically acceptable, and increase impact.

Objectives: To identify awareness amongst researchers of the practical challenges and ethical implications of recruiting patients and general practitioners to research involving video-recording.

Methods: A review of the literature on video-recordings for research purposes in the primary care context using Medline, PubMed and PsycINFO. The review covered 2015-2019, the period since the last major review.

Results: 15 articles were included, only two of which reflected on methodological challenges. These centred principally on patient and clinician acceptability.

Conclusion: There is a continuing lack of reporting of the practical processes and ethical implications of video-recording consultations, despite its increasing use in primary care research. The challenges range from protecting patient confidentiality during the recruitment process, often located in practice waiting areas, through to how best to ensure patient autonomy and obtain informed consent within the practice setting, and not least how to address issues of data protection in analysis and dissemination. Addressing such issues should be informed by patients familiar with specific practices, as these vary, in addition to those who can offer a more general overview. Primary care researchers using this method should be engaging with transparent and detailed reporting, including the challenges encountered, so that future research designs can be strengthened.

Short Oral Abstract 6

Medical Publishing in Evidence Based Era: What Predicts a Scientifically Productive Clinician?

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Background: Evidence Based Medicine (EBM) has forced clinicians to incorporate up-to-date information from clinical trials into practice for effective patient care and disease management. Active engagement in medical publishing of applied research can provide a conduit for accelerated translation of basic science to clinical practice.

Objectives: This preliminary investigation was aimed to explore the prevalence and predictors of scientific publication output among clinicians in a Malaysian research hospital.

Methods: A cross-sectional study was conducted among 201 clinicians (medical officers and clinical specialists/consultants) across medical, surgical and its allied departments at the Seberang Jaya Hospital, a cluster-lead research hospital in Northern Malaysia. A self-administered questionnaire that consisted of items on demographics, researching habits, scientific publication output and level of importance of journal selection metrics was utilized. Descriptive, bivariate and multivariate analyses were conducted.

Results: The study participants constituted of 77 (38.3%) men and 124 (61.7%) women. The mean (SD) age of the clinicians was 32 (5) years, ranged between 26-54 years. The publication output of clinicians in our sample was 16.9%. In the multivariate logistic regression model, publication output was significantly higher amongst consultants or clinical specialist (aOR=2.5, 95% CI 1.1-10.0, p=0.023); clinicians previously involved in research (aOR=4.2, 95% CI 1.5-11.4,

p=0.004); clinicians who ever used reference citation manager (aOR=3.2, 95% CI 1.3-7.7, p=0.010); and journal publication speed (aOR=2.9, 95% CI 1.2-7.1, p=0.019).

Conclusion: Socio-demographics, researching habits and journal selection metrics were significantly associated with clinicians' scientific productivity. In line with Malaysia's rigorous advancement of scientific publication volume, these findings enhance our knowledge on potential factors influencing clinicians' choice to publish their scientific work within the scholarly literature, in the quest to tackle disease uncertainties through novel diagnostic and intervention targets for rapid data sharing.

Short Oral Abstract 7

Promoting a community-based shared-care survivorship model for breast cancer patients in Singapore: a nationwide qualitative study among primary care physicians

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Background: Despite acknowledging the limitations of the current oncologist-led cancer survivorship model in Singapore, there is a lack of directive to guide the transition into a shared-care cancer survivorship model. Furthermore, strategies to prepare prospective survivors for this transition are unclear.

Objectives: This qualitative study was designed to elicit perspectives from primary care physicians (PCPs) on the model's design and delivery.

Methods: Eleven focus groups and six in-depth interviews were conducted with 70 PCPs recruited by purposive sampling. All sessions were audio-recorded, transcribed verbatim and coded by three independent researchers. Thematic content data analysis was performed using NVivo 12.

Results: Strategies to maximize patient selection, effectiveness, adoption, implementation and maintenance of a shared-care model were reported. PCPs proposed for shared-care to be initiated among survivors who were previously on regular follow-up in the primary setting to leverage on the existing rapport built. At the institution level, buy-ins from a few representatives as early adopters of the new model would generate a positive momentum of change. Key implementation

strategies included: (1) improving care communication with oncologists through survivorship care plans supported on technological platforms; (2) integrating survivorship care elements into the current family medicine clinic; (3) providing basic cancer survivorship training and operationalizing workflows with referral triggers to ensure the quality of cancer-related care. In achieving sustainability, governmental support in introducing subsidiary schemes was highlighted to be instrumental in facilitating survivors' mobility across healthcare settings for shared-care arrangement.

Conclusion: The target participants of the shared-care model should be selected purposefully and participating PCPs must be trained systematically. Future work should explore how shared-decision making can be utilized in the specialist setting to facilitate this patient selection process. Both outcomes on patient experience and process indicators are crucial in a robust evaluation of the model's feasibility and effectiveness.

[Short Oral Abstract 8: Withdrawn]

[Short Oral Abstract 9: Withdrawn]

Short Oral Abstract 10

Understanding of cardiovascular disease among patients with hypercholesterolemia – a qualitative exploration

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Background: The burden of cardiovascular disease is increasing rapidly in Malaysia but there are limited studies conducted on the understanding of cardiovascular disease among patient who have been identified as at risk of developing cardiovascular disease. Without such an understanding, an early detection and management of the cardiovascular disease within primary care setting would be challenging.

Objectives: The objective of this study was to explore the understanding of cardiovascular disease among patients with hypercholesterolemia.

Methods: A qualitative study design was used. Semi structured interviews were conducted at a Family Health Clinic in Kuantan, Pahang Darul Makmur from May to August 2018. Purposive sampling was applied to recruit 13 patients with total cholesterol level of more than 5.2 mmol/L and low density lipoprotein of more than 4.9mmol/L. Interviews were audio-recorded, transcribed verbatim and then subjected to interpretive thematic analysis using NVIVO 12 software.

Results: Four themes emerged from the analysis: perceived causes of cardiovascular diseases, response and action, manifestation of heart disease and challenges in seeking medical care. Risk factors and typical presentation of heart disease were less recognizable. Personal hurdle, families and

sociocultural factors were identified as the main barriers for uptake of health care services. Participants were heavily influenced by folk medicine to scale down their cholesterol level. Whilst the majority of the participants were unaware of their risk to develop cardiovascular disease, it appears that there was a lack of understanding on cardiovascular disease among the participants.

Conclusion: This study clearly identified gaps and inaccuracies of cardiovascular disease understanding among participants with hypercholesterolemia. Patients at risk need to be educated about the disease through health education, counselling or community program.

Short Oral Abstract 11

Predisposing Factors to Men Have Sex With Men (MSM) in Penang, Malaysia.

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Background: Injecting drug use has been the main driving factor for Malaysia's HIV epidemic in the 1990s. However sexual transmission has been progressively increasing, and is now the main factor which contribute almost 80% of new HIV infections. The rise in sexual transmission of HIV reflects increasing unsafe sexual practices, especially among MSM (Men Having Sex With Men). In the early years, HIV among MSM was masked by the marginalization of the Malaysian's society towards them. However, in recent years the MSM practice has increased tremendously and became a major contributor. Thus, there is a need to understand the predisposing factors to homosexuality among men in Malaysia in order to formulate behavioural interventions.

Objectives: This study aims to determine the predisposing factors and associated socio demographic background towards MSM in Penang.

Methods: This is a descriptive cross-sectional study involving 3 districts in Penang. The study will utilize a snowballing sampling technique. The target population will be all MSM clients 18 years and above who walk in to Klinik Kesihatan or referred by NGO. Data will be collected from the existing MSM until January 2020 through self-administered open and closed structured questionnaires. Data will be analysed by descriptive statistics to verify for any inconsistency

Results: The study generally showed that homosexuality is a result of socialization rather than biological.

Conclusion: Our study may reveal that MSM is a learned behavior. Hence, we can formulate early behavioural interventions to reduce the number of MSM and later reduce the number of HIV cases in line with the National Strategic Plan vision "Ending AIDS".

Short Oral Abstract 12

Development and Validation of the PATIENT-Medication Adherence Instrument (P-MAI) and the HEALTHCARE PROFESSIONAL-Medication Adherence Instrument (H-MAI) in Malaysia

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Background: To date, 52 medication adherence instruments have been developed and validated worldwide. However, these instruments only assessed medication adherence from either the patient's or the healthcare professional's (HCPs) perspectives.

Objectives: To develop and validate the PATIENT-Medication Adherence Instrument (P-MAI) and the HEALTHCARE PROFESSIONAL-Medication Adherence Instrument (H-MAI), so that medication adherence from both the patient's and HCP's perspectives can be assessed.

Methods: The P-MAI-12 and the H-MAI-12 were developed using the nominal group technique and piloted. These instruments were then validated from October-November 2018 at a primary care clinic in Malaysia. Included were patients diagnosed with type 2 diabetes mellitus who understood English, aged ≥ 21 years and taking at least one hypoglycaemic agent. The HCPs recruited were medical officers who had ≥ 3 years of working experience. Patients were randomly recruited, whilst HCPs were approached individually by the researcher. Both instruments were administered twice to the same patients and doctors: at baseline and 2 weeks later. The total score for the PMAI-9 was compared to the total score of the H-MAI-9 to assess for concurrent validity.

Results: A total of 125/158 patients (response rate=79.0%) and 29/33 HCPs (response rate=87.8%) agreed to participate. Exploratory factor analysis found that three items in the P-MAI-12 and the H-MAI-12 had to be removed as their factor loadings were < 0.4 . The P-MAI-9 and the HMAI-9 had two domains ("knowledge and belief" and "adherence") with 9 items. Flesch reading ease was: P-MAI-9=78.7; H-MAI-9=62.6. Both instruments achieved acceptable internal consistency (Cronbach's alpha: P-MAI-9=0.749; H-MAI-9=0.895. The total score of the P-MAI and the H-MAI were not significantly different, indicating that medication adherence assessed from both the patient's and HCP's perspectives were similar.

Conclusion: In Malaysia, the P-MAI-9 and the H-MAI-9 were found to be valid and reliable instruments to assess medication adherence from the patient's and HCP's perspectives, respectively.

Short Oral Abstract 13

Patient Morbidity And Management Patterns in Primary Care Clinics in Singapore

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Background: Primary care is delivered by private GP Clinics and Polyclinics (government multi-doctor practices) in Singapore. There is no published morbidity data on primary care in Singapore based on the International Classification of Primary Care (2nd Edition) (ICPC-2). The main primary care morbidity data are collected by Ministry of Health usually every 4-5 years but do not fully reflect problems encountered in primary care. A more comprehensive morbidity data based on the ICPC-2 is needed.

Objectives: To explore morbidity and disease management patterns in primary-care clinics based on ICPC-2.

Methods: Third-year medical students from Yong Loo Lin School of Medicine in National University of Singapore, collect morbidity and management data in both the GP Practices and Polyclinics during their Family Medicine placement. Students collect data over 2 half-day sessions in each setting from June 2018 to March 2019. ICPC-2 Classification is taught to students before it is used to code for Diagnosis and Reason(s) for Encounter (RFE) seen in the clinics. Supervisors guide the students in analyzing the data before the students present their findings at the end of the posting.

Results: Four groups of students (238) collect data. More than 4 000 patient encounters are recorded. Preliminary data suggest that: Whilst most common problems seen by Primary care doctors are similar, GP Clinics see more acute conditions while polyclinics see more chronic conditions. GP clinics see more young adults (aged 20-39) while polyclinics see more elderly (aged 65 years and above).

Conclusion: The morbidity and management patterns data collected by medical students provide a snapshot of the common problems managed by doctors in primary care in Singapore. Further data collection is needed to confirm these findings in order for policy-makers to plan resource for primary care.

Short Oral Abstract 14

Cross-cultural adaptation and validation of the Satisfaction Questionnaire for Osteoporosis Patients (SQOP) in Malaysia

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Background: The English Satisfaction Questionnaire for Osteoporosis Patients (SQOP) has been validated in Malaysia. However, Malay is the national language of Malaysia and spoken by the majority of Malaysians.

Objectives: To cross-culturally adapt and validate the Malay SQOP among post-menopausal women in Malaysia.

Methods: The SQOP was translated from English to Malay according to international guidelines. The SQOP was then validated from March-October 2018 at a tertiary hospital in Kuala Lumpur. We recruited post-menopausal women ≥ 50 years of age who understood Malay. Participants were

randomized into the control and intervention groups to assess the discriminative validity of the SQOP. The intervention group received an osteoporosis prevention information booklet and a 15-minute counselling session with a pharmacist, whilst the control group received no intervention. We hypothesized that the satisfaction of intervention participants would be higher as they received additional service. All participants were asked to answer the SQOP at baseline and two weeks later.

Results: A total of 230/348 participants were recruited (control group=115; intervention group=115; response rate=66.1%). Exploratory factor analysis extracted five domains which was similar with the English version. Cronbach's α for the domains ranged from 0.121-0.997. The interpersonal relationships domain had the lowest Cronbach α value as patients expressed during data collection that they lacked sufficient prior experiences of communicating with pharmacists to assess items relating to pharmacist communication fairly. At test-retest, Spearman's correlation coefficient values ranged from 0.113-0.680 ($p<0.05$), indicating adequate stable reliability. However, only 14 items showed moderate to good correlation. Intervention participants had a higher total satisfaction score than control participants (intervention=68.4 $\pm$ 6.2 vs. control=58.7 $\pm$ 6.0; $p<0.001$) indicating that the SQOP was able to discriminate between the two groups.

Conclusion: The Malay SQOP was found to be a valid and reliable instrument to assess patient satisfaction regarding osteoporosis screening and prevention services provided in Malaysia.

Short Oral Abstract 15

Outcome Measurements Used In Randomised Controlled Trials Of Teledermatology: A Systematic Mapping Review

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Background: Teledermatology is a useful tool to assess and care for patients with skin disease but evaluations of teledermatology services have been mixed, with randomised controlled trials (RCTs) reporting heterogeneous outcomes. This lack of standardised outcome measurement instruments (OMIs) prompted the establishment of the Core Outcomes Measures in Effectiveness Trials (COMET) initiative to develop evidence-based core outcome sets. A key step when developing a core outcome set is to identify OMIs used.

Objectives: To map outcome measurement instruments used in teledermatology intervention RCTs.

Methods: Studies targeted were teledermatology intervention RCTs published between 01 January 2008 and 31 December 2018. The search was conducted in databases (MEDLINE, EMBASE, CINAHL, PubMed, and Scopus), trial registries, targeted journals, and reference lists of eligible studies.

Results: Sixteen articles from 12 studies were identified and reviewed, coming mainly from the United States of America (64.3%). The cumulative sample of 2993 participants had mean ages between 2.7 to 63 years, with slightly more males (54.3%). Fifty-five OMIs were identified (average of 3.7 per trial). Twenty four OMIs were mapped in the Life Impact COMET Core Area, 17 in the Physiological/clinical COMET Core Area, and

11 in the Resource Use COMET Core Area. Most studies did not provide details of instrument validation (61.8%). Most of the OMIs were mapped in the "Skin and subcutaneous tissue outcomes" COMET taxonomy outcome (34.5%). No specific safety outcomes were measured.

Conclusion: Our review highlights the heterogeneity of OMIs, the lack of OMI validation details, and of safety outcomes measured in existing trials of teledermatology. Awareness of what has been used can help clinicians and researchers make informed decisions when selecting OMIs for future trials. We provide a list of OMIs used in recent teledermatology RCTs as a ready resource of OMIs for clinicians, researchers, and may also inform the future development of a core outcome set.

Short Oral Abstract 16

Do Primary Care Doctors' Personal Health Beliefs and Habits Regarding Smoking Influence Their Clinical Practice?

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Background: Previous studies have shown that doctors' personal health beliefs and habits could influence their clinical practice. However, evidence remains contradictory regarding smoking behaviour.

Objectives: To explore the influence of primary care doctors' (PCD) personal beliefs and habits regarding smoking on their clinical practice.

Methods: This is a qualitative study on PCDs working in Klang Valley, Malaysia. Purposive sampling was used to recruit doctors from diverse backgrounds. In-depth interviews were conducted using a semi-structured topic guide until data saturation was achieved. All interviews were audio-recorded, transcribed verbatim and analysed using thematic approach.

Results: A total of 31 participants including 5 smokers / ex-smokers were interviewed. The main themes that emerged are; awareness of harmful effects of smoking, personal belief and habit of smoking affects clinical practice and practice within professional boundary despite personal smoking habit.

PCDs smoking beliefs and habit influenced their clinical practice. PCDs who were non-smokers believed that smoking is unhealthy and would counsel patients against smoking. PCDs who smoked believed that smoking has adverse effects; however, they differed in clinical practice. Some would not advise patients to stop smoking if patients found it enjoyable, but would advise them to reduce or stop if they suffered from smoking-related complications. Those who had quit smoking would counsel patients on smoking cessation methods based on their personal experience. Some believed that it was their duty to advise patients to stop smoking despite smoking themselves. There were PCDs who would not smoke in front of patients or disclose their habits as it would appear to contravene recommended clinical practice.

Conclusion: PCDs' personal smoking beliefs and behaviour influenced their clinical practice to varying degrees. However, those who smoked appeared to practice within professional boundaries especially if smoking had resulted in physical complications.

Short Oral Abstract 17

Identifying vulnerability in grief: implications for primary care.

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Background: Primary Care services play a key role in giving emotional support to those experiencing loss, whether through bereavement, health changes, divorce etc., and in dealing with associated health problems. Consequences for those most vulnerable in dealing with the grief of loss can vary from severe psychosocial distress through to physical disturbances as extreme as suppression of the immune system and neuro-endocrine dysfunction, resulting in increased risk of depression, generalized anxiety and panic disorder, alcohol abuse, misuse of medications, sudden cardiac events and suicide. Mitigating such negative outcomes is an important issue for public and individual health.

Objective: To identify strategies to improve outcomes for people facing loss.

Methods: A review of contemporary theories on loss and grief.

Results: In a move away from a traditional concern with complicated psychological consequences, recent research demonstrates the majority of people show resilience and satisfactorily adjust to loss. Identifying vulnerability in grief is important to avoid unnecessary interventions that may cause damage, ensure those most in need receive effective help, and avoid wasting resources. The Range of Response to Loss (RRL) theoretical model describes grief as a tension between reflexive 'overwhelming' distress, and instinctive needs to remain in 'control'. The ability to balance these competing reactions is evidence of 'resilient' coping. The validated 9-item Adult Attitude to Grief (AAG) reflects the concepts in the model, categorizing patients into low, medium and high risk of vulnerability. It also identifies specific coping responses, allowing for tailored, effective interventions.

Conclusion: The AAG indicates resilience and vulnerability in loss. In doing so, it enables the identification of effective interventions at an individual level, providing longer-term savings to health, individually and societally. It can contribute to the more effective use of resources in primary care.

Short Oral Abstract 18

The Risk of Fall Associated with Glycemic Control in Community-living Elderly with Diabetes Mellitus

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Background: Fall among elderly contribute to significant mortalities and morbidities. It is evidenced that the risk of fall is higher among older populations, especially in diabetic elderly. Numerous studies reported that diabetic elderly is at higher risk of falls compared to those without diabetes. This might

be explained by diabetes-related complications. Screening for risk of fall is important in primary care clinics but who should we screen? We aim to study the risk of fall in diabetic elderly population so that screening can be directed towards these potential individuals in need.

Objectives: To determine the association of glycemic control, complications of diabetes mellitus and the risk of fall in elderly with diabetes mellitus attending primary care clinics in Seremban, Negeri Sembilan.

Methods: We conducted a cross-sectional study in two government health clinics in Seremban. A systematic random sampling was used to recruit older people of 60 years and above with type 2 diabetes. We collected sociodemographic data, duration of diabetes, medication use, complications of diabetes including hypoglycemia, HbA1c, and assessment of gait and balance for risk of fall using Tinetti's Performance-Oriented Mobility Assessment (POMA) scale. We measured blood pressure sitting and standing and screened for peripheral neuropathy in the feet using 10g monofilaments.

Results: We collected data from 202 subjects. Glycaemia control ($p=0.207$) and the duration of diabetes ($p=0.078$) have no statistic significant association with risk of fall score among elderly patients. Peripheral neuropathy ($p<0.001$) and orthostatic hypotension ($p=0.048$) have statistic significant association with the risk of fall in these subjects.

Conclusion: Poor glycaemia control has no association with increased risk of fall in the older people with diabetes, however, complications of diabetes, peripheral neuropathy and orthostatic hypotension are both associated with risk of fall. Screening for fall risk among elderly patients with established diabetes-related complications such as peripheral neuropathy and orthostatic hypotension is important.

Short Oral Abstract 19

Audiology evaluation among Vector-Control Workers exposed to noise and organophosphate in Penang

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Background: Dengue fever is an endemic disease in Malaysia. In 2018, dengue fever has doubled in Penang from 2615 to 5900 cases. One of the control measures for vector control includes use of ultra-low volume fogging machine which utilize organophosphate and may produce noise exceeding 85dB. Increase in dengue cases has caused upsurge in exposure to these hazards and possibly contribute to occupational related hearing loss.

Objectives: This study aims to assess prevalence of hearing impairment among vector control workers in 3 main districts in Penang; Seberang Perai Utara, Seberang Perai Tengah dan Seberang Perai Selatan and its association with noise and organophosphate exposure.

Methods: This is an analytical cross-sectional study involving 99 vector-control workers in 3 districts in Penang. Universal sampling method was used to include all vector control workers. Data will be collected from January 2018 to April 2019. Audiology assessment was done using Pure Tone Audiometry whilst biological monitoring of organophosphate exposure was done using plasma cholinesterase level. Demographic data

and other related factors are collected using self-administered questionnaire. Data analysis will be done using SPSS Version 22. Continuous variables will be categorized and analyzed using χ^2 test analysis. Multiple logistic regression analysis will be performed to adjust for confounders.

Results: Result obtained from the Pure Tone Audiometry revealed 36.4% having hearing impairment and 16.2 % fulfilled criteria of NIHL by the American College of Occupational and Environmental Medicine criteria. Plasma cholinesterase result is not available yet as the blood sample for this year has not been taken yet.

Conclusion: Our study will reveal the association of sensorineural hearing loss with noise and organophosphate exposure. Identifying magnitude of the problem will allow us to instill awareness among our workers, providing positive attitude towards safe working practice and solidify our Hearing Conservation Programme.

Short Oral Abstract 20

DietLens- an innovative mobile health application engaging patients and facilitating self-care in chronic disease management – a pilot study

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Background:Hyperglycemia,HypertensionandHyperlipidemia significantly contribute to the burden of noncommunicable diseases globally. Diet and exercise are key modifiable lifestyle factors in chronic disease management. We introduce DietLens, an innovative and interactive mobile self-management health application (app) which gathers personal profile, performs lifestyle analytics and proposes lifestyle modifications through interpretation and monitoring of a person's caloric and nutrient intake from images of food and drinks consumed.

Objectives: Describe user experiences of a pilot mobile app DietLens for understanding user motivations together with benefits and challenges encountered.

Methods: Adult employees from a primary care organization in Singapore were invited to use DietLens app for a week voluntarily. Users' demographics and food intake were collected, along with views on motivation in using the app, its technical functionality of recognizing and analyzing the food's nutrition in the images and its design features of presenting actual food consumption coupled with daily recommended intake. Users were asked if they think the app could be applied to patients with chronic diseases.

Results: Over 1/3 of 29 users used the app daily for a week. Two-thirds of users do not prepare their own meals and eat out. Majority of users were motivated in tracking their food consumption in order to control their diet or understand what they eat. Users gave their views on the app's usefulness and their user experience.

Conclusion: DietLens has the potential to engage patients with chronic diseases in innovative research about lifestyle factor tracking and behavioral nudges. A pilot which encouraged users to give feedback, complemented by an agile ability to implement changes will enable DietLens to become a pivotal tool in improving patient's cardiovascular and biochemical outcomes.

Short Oral Abstract 21

Exploring the potential of public involvement in research in Singapore: the perspective of the local public

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Background: Singapore aspires to become a world-class research hub, bridging the gap between basic scientific research and clinical applications. Globally 80% of research is not being implemented and to enhance research impact requires public involvement (PPI) throughout the research process.

Objectives: To explore the potential for PPI in Singapore from the public's perspective.

Methods: 20 semi-structured, qualitative interviews exploring the views of purposively sampled members of the public on the potential for PPI in Singapore, thematically coded.

Results: The public saw the potential of PPI as a positive way to increase impact and implementation of evidence and to build new relationships of trust with the experts. Moreover, the public saw PPI as a strategy for community empowerment and to promote a culture of solidarity and volunteerism.

Factors that may facilitate PPI include strength of the community and social support structures, easy access (confined geography, cheap efficient transport) and a shifting mindset of the country overall. The role of experts and policy makers as drivers of this methodology was highlighted, due to the top-down organisation of the local society.

Conversely, the public perceived that in a Singaporean context PPI will be challenged by low (health) literacy in some communities, a decay in the trust for health institutions coupled to a unquestioning faith in professionals, and practical challenges (time, money and communication). Moreover, there is a lack of understanding of the practical and theoretical aspects of research and of PPI.

Conclusion: To adopt meaningful PPI and facilitate patient engagement in Singapore requires all stakeholders to raise research awareness and to develop inclusive strategies that emphasise intra-cultural respect and communication, as well as putting practical steps in place around accessible information. Researchers and community organisations should consider making taking the lead and, if possible, provide resources and training in the operationalisation of PPI.

Short Oral Abstract 22

Outcomes of the NHGP Teamlet care model on Chronic Disease Management in Singapore

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Background: Attendances to Singapore polyclinics have increased by 30% over 10 years, with Diabetes being amongst the top conditions, leading to an urgent need for re-design of our chronic disease care delivery model. National Healthcare Group Polyclinics (NHGP) piloted a team-based care model in 2014, incorporating key elements of patient empanelment to a healthcare team, proactive team-based care, stratification of chronic diseases and regular review of team-specific outcomes.

Objectives: This study aims to evaluate the effectiveness of the NHGP teamlet care model.

Methods: A retrospective cohort study evaluated 9504 teamlet care (TC) patients from four teamlets who were followed-up for up to 24 months. Outcomes were compared with a propensity score-matched group of 9659 patients who underwent routine care (RC). Clinical, process and hospitalisation outcomes were analysed and adjusted for baseline demographic and clinical characteristics using multilevel mixed effects logistic regression.

Results: On follow-up, TC patients were less likely to have poor diabetes control (9.8%TC vs 10.9%RC, O.R. 0.84, $p=0.012$), and more likely to have diabetes eye (80.3%TC vs 73.7%RC, O.R. 1.48, $p<0.001$) and foot screening (74.0%TC vs 63.0%RC, O.R. 1.69, $p<0.001$). There were fewer emergency department visits for diabetes and hypertension related conditions (5.1 visits per 1000 patients TC vs 9.8 RC, O.R. 0.51, $p<0.001$), fewer family physician visits (3.8TC vs 4.2 RC, O.R. 0.89, $p<0.001$) and increased nurse visits (0.80TC vs 0.55 RC, O.R. 1.46, $p<0.001$).

Conclusion: Our pilot study indicates better clinical and process outcomes for diabetic TC patients. Concurrently, nursing roles in chronic disease management were enhanced with increased nurse visits and reduced family physician visits. These initial findings suggest that the NHGP teamlet care model may provide a sustainable approach to caring for the increasing numbers of patients with chronic diseases. Further evaluation should be conducted to understand its long-term impact.

Short Oral Abstract 23

Bibliometric study to track the impact of the WReN Spider, an instrument to measure health professionals' experience of research

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Background: A range of instruments have been developed to assess health care professionals' research skills. These include the "Wessex Research Network (WReN) Spider" developed and validated in 1997 to assess the research experience of general practitioners.

Objectives: This bibliometric review traces the use and developments of the WReN in the 20 years since it was first validated.

Methods: A literature search to identify all the citations of the original article since 2002 was performed. Papers in English, Chinese and French were included. Papers were classified according to whether they cited, used or reviewed the WReN Spider.

Results: 31 relevant papers were found. The WReN Spider was used in 15 studies, cited in 11 studies and included in 2 systematic reviews. The majority of these studies came from Australia (N=18) and 10 focussed on the research training of Allied Health Professionals. The WReN Spider was applied in 12 studies to assess baseline experience and interest in developing

skills before a training intervention or to measure change before and after training intervention. The WReN Spider was often used on tandem with open ended questions to gain a more detailed understanding of people's research skills, or with additional questions focussing on the research context, culture and team. None of the papers included any sort of re-validation of the WReN spider, although it was used in a context different to the one in which it had been developed in.

Conclusion: The WReN Spider continues to be a feasible instrument to measure the research skills, of health care practitioners. It is frequently enhanced with other questions to look at the wider issues of research success, including environment and collaborators.

Short Oral Abstract 24

Unlysed Hyperkalemia – the Unseen Burden (UHUB)

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Background: Anecdotaly, many patients recalled by Singhealth Polyclinics to the emergency department (ED) for a high potassium $>5.7\text{mmol/L}$, are told their repeat potassium is normal. An audit of 39 patients recalled in July 2016 in two clinics, revealed 4 cases with repeat K >5.0 , which means 35 patients (90%) were recalled unnecessarily. This could lead to a potentially high socioeconomic burden when extrapolated over 2 years.

Objectives: 1) Determine the frequency of false hyperkalemia amongst unlysed specimens. 2) Determine if prolonged transport time affects potassium levels. 3) Form an evidence-based acute decision-making tool in managing patients with hyperkalemia

Methods: All patients with potassium of K $>5.0\text{mmol/L}$ across 7 Singhealth polyclinics between 1 Aug 2015 and 8 Aug 2017 inclusive, were included. Hemolysed specimens were excluded. If repeat potassium within 8 days is $\leq 5.0\text{mmol/L}$, this suggests that the first reading was a case of false hyperkalemia

Results: Out of 21,815 incidences of K $>5.0\text{mmol/L}$, 2495 of 3898 patients who repeated their potassium, had K $<5.0\text{mmol/L}$. This means 64% of these patients likely had a normal potassium to begin with. There was a 50min longer wait time amongst K $\geq 6.0\text{mmol/L}$ compared to K $<5.1\text{mmol/L}$. Significant risk factors for true hyperkalemia, include older age, lower eGFR, on Angiotensin-Converting-Enzyme-inhibitors (ACE-i), or Angiotensin-receptor-blockers (ARB). Having an eGFR of $>60\text{ml/min/1.72m}^2$ inversely correlates with true hyperkalemia.

Conclusion: Every 2 out of 3 patients with K $>5.0\text{mmol/L}$, will have a normal value on repeat. A 50-min delay in processing-time can swing a patient from normokalemia, to severe hyperkalemia necessitating an ED visit. An inhouse renal panel should be considered. Inbuilt into the algorithm for management of hyperkalemia in the polyclinics, should be the statement, "A patient with eGFR $>60\text{ml/min/m}^2$ is unlikely to have true hyperkalemia". These patients should be advised to repeat potassium in the polyclinic rather than the ED to reduce socioeconomic burden.

Short Oral Abstract 25

PACE-D Implementation: Partnering patients in diabetes through Care and Support Planning, lessons from a Tertiary Centre for Primary Care

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Background: Traditional clinic consultations tend to be doctor-centric and do not always address the needs of people living with diabetes. Care and Support Planning (CSP) conversations have been found to improve patient outcomes and experience when integrated into routine care delivery. The Year of Care (YoC) is one programme which has successfully used CSP conversations for diabetes care in the UK. Modelled after YoC, a CSP pilot was introduced from Jan 2018 at the diabetes clinic in National University Hospital (NUH). This entailed sending user-friendly result letters presenting investigation results with agenda-setting elements before scheduled CSP appointments, collaborative conversations between healthcare providers and patients, and patient-directed goal setting and action planning. Drawing from the experience of the YoC pilot at NUH, the use of CSPs was adapted for primary care in Patient Activation and Care Empowerment for Diabetes (PACE-D).

Objectives: To describe the implementation and patient experience of CSP conversations in a specialist diabetes clinic and its extension into primary care.

Methods: Of the 150 participants in the NUH YoC pilot, thirty were purposively sampled for in-depth interviews of their experience. Interviews were transcribed and thematically analysed. This model was extended to NUP as PACE-D which will be evaluated as a pragmatic intervention study for up to 3000 patients over two years.

Results: Participants in NUH found the experience of CSP positive. Themes that emerged include being better prepared for the clinic visit, increased efficiency of consultations, and increased self-efficacy, ownership and motivation towards making positive behavioural modifications. We share the PACE-D study design in this presentation.

Conclusion: Positive patient experience has been observed in a CSP pilot in a tertiary centre and will be extended and evaluated more objectively in a larger patient population in the primary care setting.

Short Oral Abstract 26

Challenges to Developing a Primary Care System in Rural China: Aging Populations and Divergent Perceptions of Healthcare

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Background: In 2016, the Chinese government issued the 13th Five-Year Plan for Health Sector Development (2016–2020) and aimed to complete building primary care system

across the country, with each household registering with a general practitioner.

Objectives: To explore the perceptions of rural residents in relation to health care interventions and the implications for primary care.

Methods: A longitudinal, mixed qualitative methods community study was conducted in a village (72 residents) in Northeast China between 2016 and 2017. Techniques included semi-structure interviews, participant observation and discourse analysis.

Results: The study has two main findings: 1. The village has a severely aging population and 61% of the residents were above 60 years old; 2. Fraudulent health products have a certain degree of popularity in the village. Several factors contribute to the success of these products: a) The products claimed to be developed based on traditional medicine that aligns with the medical knowledge of locals; b) Anxiety about the consequences of insufficient medical resources in the community led to increased involvement with fraudulent health products; c) Feelings of loneliness made some villagers more willing to interact with door-to-door salesmen.

Conclusion: General practitioners should explore rural residents' beliefs and preconceptions of their health and possible treatments. This will allow them to address misconceptions and to identify interventions that are acceptable to the villagers. In addition to improving patient outcomes, doing so offers an opportunity to educate residents about the role of primary care and its sustainability, increase its acceptability, embed it within rural communities, and thus maximizing its potential efficacy.

Short Oral Abstract 27

Research In Ambulatory Care Setting In Malaysia: Where does primary care stand?

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Background: In recent decades, there is decentralizing of clinical care from secondary to primary care in Malaysia. We wish to determine whether this has resulted in a change in the quantity and quality of research conducted in the primary care setting.

Objective: To compare the quantity of publications and their study designs conducted in two ambulatory care settings in Malaysia

Methods: We used the Malaysian Medical Repository (MyMedR, <http://mymedr.afpm.org.my>), a web-based database of Malaysian health and medical publications, to retrieve original clinical research conducted in ambulatory care settings between 1979 to 2018. The study settings were categorised into primary (private, public, university-based primary care clinics) or secondary care setting (hospital outpatient clinics). We searched the word "clinic" (or in Malay, "klinik") in the title/abstract for potential articles and verify the setting by checking the methods section of the full text. The citations were exported to Endnote and statistical analysis was performed using IBM SPSS. The temporal trend of publications and their study designs were compared.

Results: We identified 1058 publications; 559 from primary

care and 569 from secondary care (71 studies were conducted in both settings). the number of publications conducted in primary care setting are 20, 32, 122, 386 for respective 10-year intervals of 1979-1988, 1989-1998, 1999-2008, and 2009-2018. For secondary care the number of publications are 15, 54, 118, 384 for the same 10-year intervals respectively. For the 1999-2018 period, more qualitative research were conducted in primary care vs secondary care (6.5% vs 3.0%, $p=0.013$) while there was no difference in the numbers of clinical trials conducted in the two settings (6.3% vs 8.0%, $p=0.303$).

Conclusion: The quantity of publication appeared to have increased in similar manner in Malaysian primary and secondary ambulatory care, but qualitative study was conducted more commonly in primary care in recent years.

Short Oral Abstract 28

Identifying and addressing ethical and practical challenges when video recording in the primary care consultation for specific medical conditions.

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Background: Video-recording (VR) primary care consultations has been long used for education purposes and more recently for research. Such detailed data can help us understand the complex, real world factors that may impact on clinical interventions and the mechanisms of change. When videos are used to capture condition-specific consultations, rather than all consultations, extra consideration is needed of both the practical processes (identifying relevant consultations, recruiting specific patients, resource use etc.), and the associated ethical dimensions. However, a literature review of video recording in primary care in 2014 noted a lack in the documentation of such potential challenges with implications for fully evaluating its contribution.

Objectives: Identify the degree of reporting of the practical and ethical challenges recruitment to research involving video-recording condition-specific primary care consultations.

Method: A systematic review of literature using Medline, PubMed and PsycINFO, from 2012-2019, using the same search terms and inclusion criteria as the 2014 publication.

Results: Of 22 articles included only three reflected on methodological challenges; one documented possible impact of VR on the consultation, one reflected on resource issues, another on acceptability. Only three studies recorded condition-specific consultations. There was minimal reporting of practical steps taken in recruitment or of the VR process itself, nor of challenges in protecting patient confidentiality during recruitment, ensuring autonomy and obtaining informed consent, or how to address issues of data protection in analysis and dissemination.

Conclusion: The reporting of the practical processes and ethical implications of video-recording condition-specific consultations, despite its increasing use in primary care research, is poor. If primary care researchers discussed the challenges encountered, this would help strengthen future research designs and effective use of resources. This paper reflects on these issues, and possible strategies to address them, including the potential contribution of patient and public involvement in study design.

Short Oral Abstract 29

Challenges arising from the healthcare system in pre pregnancy care to women with diabetes (WD) in Malaysia: The healthcare providers' experience.

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Background: Healthcare providers reported low attendance of pre-pregnancy care (PPC) among women with pre-existing diabetes. Nearly half of PPC provision is still delivered opportunistically.

Objectives: A study was conducted to explore the challenges faced by healthcare providers (HCPs) when providing PPC to women with diabetes. This paper specifically looked at organisational barriers.

Methods: Focus groups were conducted with family physicians, medical officers, nurses, assistant medical officers and certified diabetes educators in four public health clinics (2 urban, 2 rural) in Malaysia from 2016-2017. Healthcare providers were selected if they were actively managing women with diabetes. Seventeen focus groups and six in-depth interviews were conducted using a semi-structured topic guide. The interviews were audio-recorded, transcribed verbatim, and the transcripts were coded and grouped thematically using NVivo 10.0 software.

Results: A total of 28 doctor and 25 non-doctor participated in the interviews. Three major challenges related to healthcare organisation emerged: (1) PPC not part of the existing diabetes care pathway; (2) lack of private space for PPC consultations; and (3) HCPs' heavy workload. There was a lack of emphasis on PPC for women with diabetes (WD); there was no standard guideline, regular training and systematic supervision. In addition, the documentation system was inadequate and varied across clinics. The HCPs also felt that there was a lack of mandate from the policy makers on PPC compared to other health programmes.

Conclusion: This study highlights there is lack in the strategic planning to implement PPC for WD in public health clinics. For PPC to be successfully implemented, policy makers must consider putting in place a clinical guideline, training programme and standard documentation system.

Short Oral Abstract 30

Transition to independent self-management among children with asthma

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Background: Self-management of asthma improves asthma control and reduces exacerbations. Children are expected to independently self-manage asthma, as they get older. However, the transition from parental to independent self-management among children remains unclear.

Objectives: To explore the views of children with asthma and their carers regarding self-management of asthma.

Methods: We used a screening questionnaire to identify children aged 7-12 years, diagnosed with asthma from seven suburban primary schools in Malaysia. Purposive sampling was used to include participants from different ethnicity, gender, age and asthma severity. Informed consent was obtained prior to the focus groups and interviews. We conducted focus groups and supplemented by interviews for participants convenience using a semi-structured topic guide in participants' preferred language (Malay, Mandarin or Tamil). All interviews were audio-recorded, transcribed verbatim, entered into NVivo, and analysed using a grounded theory approach.

Results: A total of 99 participants (46 caregivers, 53 children: 34 Malays, 45 Indians, 20 Chinese) contributed to 22 focus groups and 7 interviews. Carers' view and actions emerged as an important influencer – children mirrored their carers' actions and views particularly when they were younger. Children learnt from their own experiences and gained more confidence to independently self-manage as they got older. External influences such as support from school and healthcare also played a role in the transition. Cultural norms and beliefs influenced children's independence to self-manage asthma either directly or indirectly through surrounding people.

Conclusion: Children gain skills to independently self-manage asthma based on their experiences and influences of surrounding people especially their carers. Thus, interventions to improve self-management of childhood asthma should include children network and incorporate elements based on good understanding of cultural beliefs in the community.

Funding: This study was funded by a research grant from International Primary Care Respiratory Group (IF019-2015) and University of Malaya (BKP019-2015).

Poster Abstracts

Poster Abstract 1

Factors Associated With Successful Fasting During Ramadan Among Type 2 DM Patients: A Retrospective Recall

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Background: Pre-Ramadan fasting advices was usually given to diabetic patients to improve their knowledge and aid in successful fasting during Ramadan. However, it is unclear whether this is contributed to successful fasting. This study is conducted to see if their fasting practice and knowledge on fasting and is associated with successful fasting.

Objectives: This study aims to determine common practice and level of knowledge regarding diabetic care during Ramadan among DM2 Muslim patients during Ramadan and its association with successful fasting.

Methods: A retrospective recall study was conducted in Klinik

Kesihatan Jalan Perak, Penang. A total of 113 patient was enrolled in the study using convenience sampling. A modified questionnaire was used to test for knowledge and practice of patients. Successful fasting was defined as patient fasted as intended without having to break-fast due to any hypo- or hyperglycaemic symptoms or any hospital admissions due to diabetic related complication. Multiple logistic regression was used to test if knowledge and fasting practice is associated with successful fasting.

Results: A total of 70.9% (n=80) of patients were able to fast successfully. There is no association between knowledge and fasting practices with successful fasting in our study. However, increasing age (AOR = 1.05, 95%CI: 1.0002;1.11, p= 0.04) and knowing the name of their diabetic medication (AOR = 8.47, 95%CI: 1.99;36.05, p < 0.001) was significantly associated with successful fasting.

Conclusion: A targeted pre-Ramadan consultation with focus on medication regime during Ramadan can be considered. Nonetheless, a proper pre-Ramadan counseling is still the optimal if resources is not an issue.

Poster Abstract 2

Menopausal Experience Among Postmenopausal Women In Kuantan, Pahang - A Qualitative Study

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Background: Menopause signifies the beginning of a non-reproductive phase from the reproductive period. Menopausal experiences and symptoms vary across the cultures and countries. It is very imperative to understand how menopause both enriches and challenges women's lives.

Objectives: This study explored the experience of menopause among women residing in Kuantan, Pahang

Methods: A qualitative study was conducted among postmenopausal women in Kuantan, Malaysia. Twenty participants were recruited via social media by using purposive sampling. In-depth interview was undertaken from May 2018 to August 2018, and the data were analyzed by using thematic analysis.

Results: Twenty postmenopausal women ranging from 49 to 61 years old participated in the interview. Three themes emerged from the findings which are perception of menopause, self-changes symptoms and help-seeking behavior. Most of them defined menopause as a normal transition process of a women. In dealing with these experiences, the non-pharmacological options were most likely favoured.

Conclusion: The majority of women in this study thought that menopause is a natural process which was characterised by positive and negative experiences. They also lacked of knowledge on menopause and its treatment. Understanding these features and their implications to women's life may aid health care professional in concerting efforts to help their patients' in dealing with menopause.

Poster Abstract 3

Body weight perception and physical activity level among late adolescents in Kuantan, Pahang : A cross-sectional study

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Background: Body weight perception is an important underlying psychological factor associated with body weight. Overemphasis on thinness among adolescents can lead to unhealthy dieting practices, whereas underestimation of body weight may increase risk of the development of obesity. Physical activity thought to be related to body weight perception as misperception of body image can lead to either physical inactivity or physical over activity.

Objectives: This study measured the association between body weight perception and physical activity level as well as relationship between physical activity levels with socio-demographic profile among late adolescents in Kuantan, Pahang.

Methods: A cross-sectional study was conducted from April to October 2018 among 479 adolescents from seven higher learning institutions in Kuantan; aged 17-19 years old. Weight and height were measured and BMI was calculated. A validated, self-administered questionnaires; Figure Rating Scale (FRS) and International Physical Activity Questionnaire (IPAQ) were used. Chi-square test was used to test the relationship between body weight perception and physical activity level. Logistic regression was employed to examine the association among physical activity level and socio-demographic variables.

Results: Majority of the real overweight participants correctly perceived themselves as overweight (69.6%), whilst almost half of actual obese respondents did not see themselves as obese (45.2%). Most of the perceived overweight/obese respondents were practicing high physical activity level (34.9%). Smokers were 60 percent less physically active than non-smoker (aOR 0.39, 95% CI 0.19-0.78). Male gender was 2.46 times more active than female (aOR 2.46, 95% CI 1.55-3.92). No statistical significant association seen between body weight perception and physical activity level (χ^2 0.56, p 0.76).

Conclusion: Study results showed that perceiving weight as being overweight or obese regardless of concordant was not determinant of physical activity level. However, health education in terms of active physical activity and healthy eating habit should be emphasized among late adolescents.

Poster Abstract 4

Prevalence of Depression Among Elderly And Its Predictors; A Cross Sectional Study In Community Felda Bukit Goh, Kuantan, Pahang.

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Background: The world's population is ageing rapidly. Older people are at risk of having mental illnesses particularly

depression but it is often misdiagnosed and undertreated. It affects general wellbeing and daily functions of the patients.

Objectives: To measure the prevalence of depression and its associated factors among elderly living in FELDA Bukit Goh, Kuantan, Pahang.

Methods: A cross sectional study was conducted from June to September 2018. The participants aged more than 60 years were recruited in this study. A total of 259 participants were randomly selected to complete the interviewed-base questionnaire. The questionnaire consisted of four sections which included the sociodemographic, Geriatric Depression Scale-15 (GDS-15), Elderly Cognitive Assessment Questionnaire (ECAQ) and Modified Barthel Index (MBI). Descriptive statistics was used to measure the prevalence and logistic regression to explore the association of depression with the background variables.

Results: Out of 259, the majority were female. It was found that 19.3% of them were having depression. The associated factors were elderly without formal education (aOR: 2.38, 95% CI: 1.07-5.31, cognitive impairment (aOR: 3.68, 95% CI 1.29-10.5), and marked dependence (aOR: 3.17 95% CI: 1.47-6.86).

Conclusion: The prevalence of depression among elderly in FELDA Kuantan was considerably alarming. Thus, physicians managing elderly patients should therefore take the initiative to screen depression at any given opportunity especially among those without formal education, cognitive impairment and marked dependent.

Poster Abstract 5

Effectiveness Of 2016/17 Seasonal Influenza Vaccine In Preventing Laboratory-Confirmed Influenza Infection In Elderlies, New Territories West Cluster, Hong Kong, A Test-Negative Design Case-Control Study

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Background: Seasonal influenza vaccination is one of the most important means of preventing influenza and its complications among the elderlies. The antigenic variability of seasonal influenza viruses requires frequent reassessments of the effectiveness of vaccines designed. More local study is needed to estimate the influenza vaccine effectiveness (IVE) among elderlies.

Objectives: The research objective is to estimate the influenza vaccine effectiveness of 2016/17 influenza vaccine in the community dwelling elderlies in New Territories West Area of Hong Kong (NTWHK).

Methods: Test-negative design study was adopted to estimate the IVE against lab-confirmed influenza hospitalization among elderlies aged over 65. Study included all hospitalized elderlies presenting with influenza-like illness (ILI) with influenza testing done from 3rd Nov 2016 to 24th Oct 2017. Cases were patients who tested positive for influenza A or B virus. Controls were patients with the same symptoms who tested negative for influenza A and B. Multiple logistic regression was used to calculate the adjusted odds ratio of those vaccinated versus unvaccinated.

Results: Data from 12,086 hospitalized elderlies with ILI with influenza test done were collected. 2,605 (21.6%) were

vaccinated while 9,481 (78.4%) were not vaccinated. Adjusted IVE estimates against influenza B was 67% (95% CI: 1 to 89, $p=0.048$). The overall adjusted IVE estimates against influenza A in elderlies was not significant. However, the adjusted IVE estimate against influenza A in group aged 70 to 74 was significant, 36% (95% CI: 3 to 58, $p=0.036$).

Conclusion: Influenza vaccine for 2016-2017 season is effective for elderlies against influenza B and is effective for older individuals aged 70-74 against Influenza A.

Poster Abstract 6

Prevalence And Associated Factors Of Diabetic Foot At Risk Among Type 2 Diabetes Mellitus Patients Attending Primary Health Clinics In Kuantan.

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Background: Foot complications are considered to be a serious consequence of diabetes mellitus, posing a major medical and economic threat. Identifying the extent of this problem and its risk factors will enable health providers to set up a better prevention programs.

Objectives: This study aims to assess the prevalence of diabetic foot at risk and its associated factors among the type 2 diabetes mellitus patients' attending primary health clinics in Kuantan.

Methods: This was a cross-sectional study conducted at four primary health clinics in Kuantan involving 450 study participants who were selected by using universal sampling method. Level of awareness and practice toward diabetic foot care was assessed using validated self-administered questionnaire. Foot examination carried out and foot at risk was classified based on Kings' Classification. Multiple logistic regressions were performed to identify the risk factors for diabetic foot at risk.

Results: The prevalence of diabetic foot at risk was 31.3% (95% CI: 0.27, 0.36) according to Kings Classification (stage 2). Mean age of respondents involved was 56.36 (SD±10.9) years. Multivariate logistic regression analysis identified age (OR 1.04, 95%CI: 1.01-1.06), smoker (OR .911, 95%CI: 1.96-8.63) and duration of diabetes more than 10 years (OR1.77, 95%CI: 1.05-2.98) were risk factors for diabetic foot at risk. However, respondents with good practice score (OR 0.87, 95%CI: 0.774-0.980) have lesser risk of developing diabetic foot at risk. However, level of awareness, race, gender, education level and diabetic control did not show any significant association with diabetic foot at risk.

Conclusion: Based on the result, it can be concluded that the screening for diabetic foot at risk is vital for early detection and intervention to prevent serious complication. A sustainable patient education and compliance towards practice of foot care at primary care level should be emphasized more to ensure good foot care practice implementation.

Poster Abstract 7

Systematic Review of Primary Care Research Activity in Singapore

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Background: Research in primary care provides evidence to improve the patients' health and the quality of service delivered. The primary care setting provides huge opportunity for research, results from studies performed within other settings frequently are not applicable to this unique field. Here in Singapore it remains undetermined what sort of primary care research has taken place and what topics have been studied. The aim of this study is to systematically review the research that has so far been conducted in primary care Singapore.

Objectives: To identify all research conducted within the primary care setting in Singapore and whose results will generate evidence that can be used within the primary care setting.

Methods: Both Medline and Web of Science databases will be systematically searched, from inception to January 2019. The electronic literature will be complemented by hand searching the following non indexed journals: The Singapore Journal and the Singapore Medical Journal. We will include all original work undertaken in primary care/family medicine setting in Singapore. Study eligibility will be determined independently by two people based on titles and abstracts first.

Results and Conclusion: Analysis is underway and findings will be presented, including their implications for future research within primary care. It is anticipated that topics that are identified as lacking in research will be used for future work within the newly established primary care research network in Singapore.

Poster Abstract 8

Assessing the Effectiveness of an Educational Brochure in Increasing the Knowledge, Attitude and Practice of Osteoporosis amongst Singaporean Women Aged 65 Years and above.

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Background: Osteoporosis is associated with significant morbidity and mortality from hip fractures. Bone Mineral Density (BMD) screening gives an opportunity for earlier intervention and lowering the incidence of osteoporosis complications through lifestyle modifications and medication use. However, studies have shown that BMD screening was only performed in 28.2% of patients prior to hip fractures, despite the incidence of hip fractures increasing 1.5 times in men and 5 times in women since the 1960s. Only 58% of the Singaporean population is aware about osteoporosis and only 1 in 10 Singaporeans could site two ways to prevent osteoporosis.

Objectives: We hypothesize that the lack of knowledge of

osteoporosis in our population is one of the significant barriers to osteoporosis screening. Some of the other possible barriers include cost or accessibility of osteoporosis screening and doctor's role in promoting osteoporosis screening.

Methods: In this pilot study, women aged 65 years and above visiting SingHealth polyclinics were recruited and assessed for their knowledge, attitudes and practices of osteoporosis and BMD screening using Osteoporosis Prevention and Awareness Tool (OPAAT) before and after an educational brochure on osteoporosis prevention, diagnosis and treatment.

Results: The study demonstrates the effectiveness of an educational brochure on osteoporosis to improve knowledge of osteoporosis and assesses how this corresponds to a change in the participant's attitudes and practices.

Conclusion: Osteoporosis is an asymptomatic disease that is underdiagnosed in our society and is associated with significant morbidity and mortality from hip fractures. This pilot study was the first step in determining effectiveness of an educational brochure to promote patient knowledge. Similar educational brochures can be made easily available at our clinics to promote public knowledge and understanding of osteoporosis.

Poster Abstract 9

Impact of Parent and Child Factors on Behavioural Problems of Children from Low-income Chinese Families

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Background: Children from low-income families are at increased risk of behavioral problems. However, factors contributing to such problems were not well understood.

Objectives: To determine associated parent and child factors on behavioural problems of children from low-income families in Hong Kong.

Methods: A cross-sectional study was conducted on 217 parent-child pairs recruited from 2 less affluent districts in Hong Kong between March 2016 and October 2017. The parents were invited to complete a face-to-face questionnaire, which collected: 1) Their child's behavioural problems using Strength-and-Difficulties-Questionnaire(SDQ), physical health and special education needs; 2) Their own physical and mental health, stress experience using Depression-Anxiety-Stress-Scale(DASS)-21-Stress-subscale, family harmony using Family-Harmony-Scale-5(FHS-5), parenting style using Parenting-Styles-and-Dimensions-Questionnaire(PSDQ), use of physical punishment using Conflict-Tactics-Scale-for-Parent-and-Child(CTSPC)-physical assault subscale and neglect potential using CTSPC-neglect subscale; 3) Socio-demographic factors including household income, marital and employment status of the parents. Multivariable linear regression with backward selection method was adopted to identify the parental and child factors associated child behavior.

Results: Among the 217 recruited families, 114(53%) lived in poverty while 49(23%) were single-parent. 114(53%) children were boy, mean age was 10.7 years (standard deviation (SD)=2.0). The mean total-difficulty-score (TDS) measured by SDQ was 10.4(SD=6.0). After adjusting for parental and child factor, younger age of the child ($p<0.001$), diagnosis of ADHD

in the child ($p=0.012$), higher parental stress ($p<0.001$), working primary parent ($p=0.039$) and family disharmony ($p=0.042$) were significantly associated with increasing behavioural problems of the studied children.

Conclusion: Parental stress, parent working status and family disharmony were significant modifiable factors associated with behavioral problems of children from low-income Chinese families, while household income, single-parent, parenting style, physical punishment, neglect and physical health of both parent and child were not. Further longitudinal study to confirm whether the relationship is bi-directional will allow design of an optimal intervention strategy for reducing children's problematic behaviour.

Poster Abstract 10

A Comparative Study of Respiratory Health Status among Firefighters, Police Officers and Other Occupations

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Background: Firefighters and traffic police officers are exposed to biomass and air pollution which pose specific occupational hazards to their respiratory health.

Objectives: 1) To compare the respiratory quality of life of the occupational exposed (firefighters and traffic policemen) and occupational unexposed populations in Penang using St George's Respiratory Questionnaire (SGRQ). 2) To determine the independent effect of smoking on their respiratory quality of life. 3) To determine the independent predictors of their SGRQ scores.

Methods: This was a comparative, analytical cross-sectional study conducted from June to September 2018. We recruited male traffic police officers and firefighters (occupation group) from five districts of Penang by convenient sampling. Participants filled up SGRQ. Scores (symptoms, activity, impacts, total) were derived using a scoring calculator. Univariate and multivariate linear regression models were fitted to explore the relationship of the independent predictive factors with participants' respiratory health status.

Results: We recruited 706 participants - 211 firefighters and 198 traffic policemen and 297 general public. The mean ages were 37.5, 41.2 and 37.5 respectively. Firefighters had the highest prevalence of smoking among the three groups. Across all SGRQ domains, smokers had significantly higher SGRQ scores than non-smokers. Regardless of smoking status, the occupation group had significantly higher symptom score than general public group. The difference in the SGRQ total score between "occupation group" and "non-occupation group" by smoking status was not statistically significant. Smoking status, comorbidity status and monthly income were significant independent predictors of SGRQ total score.

Conclusion: There is an addictive effect of smoking and occupational exposure on the respiratory health of traffic policemen and firefighters in Malaysia. Smokers, those with comorbidity, and those with lower monthly income appeared to be at significantly higher risk of poor respiratory health. Preventive measures in both smoking cessation and occupational protective equipment are needed.

Poster Abstract 11

Demographic Characteristic Of Domiciliary Patients Admitted To Hospital Seberang Jaya

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Background: The domiciliary service comprises of medical and rehabilitation services done at the home of patients to ensure uninterrupted care upon early discharge from hospital, render support to the family members in training the caregiver to care the patient at home and reduce repeated admission by providing quality medical care at home and in the community.

Objectives: To explore the views of the Healthcare professionals, caregivers and patients on domiciliary service in Seberang Perai, Penang.

Methods: The study was conducted in Hospital Seberang Jaya, Penang, the healthcentres and home of patients. The records of patients admitted to HSJ from month of June 2014 till December 2018 were traced. The duration of study is from February 2019 till February 2021. This is a retrospective patient record review study.

Results: Between 2014 till 2018, males constituted of 6 patients in 2014, followed by 26 in 2015, 16 in 2016, 9 in 2017, and 7 in 2018. With regard to females, 8 in 2014, 11 in 2015, 4 in 2016, 13 in 2017 and 25 in 2018. There were more male domiciliary patients (64, 51.2%) as compared to females patients (61, 48.8%). Malays and Chinese, depicts up and down trend of admission under domiciliary care from 2014 till 2018. Malays, 7 (50%) in 2014, followed by 21 (57%).

Conclusion: Between 2014 till 2018, the highest number of domiciliary admission was in 2015 (37 patients) while the least was in 2014 (14 patients). Males are consistently of higher cause of admission than females. The most common cause of admission for domiciliary was stroke, while the least common cause were, Cerebral Palsy (spastic quadriplegic), Leech Nyhan Syndrome, Multiple Fractures & Transverse Myelitis.

Poster Abstract 12

Use of a new tool in food allergy to monitor self-efficacy

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Background: Self-efficacy is significantly impaired in food allergy, in both children and their parents. Recently, tools have been developed to assess competence and confidence in managing food allergy (self-efficacy).

Objective: To assess the utility and feasibility of measuring self-efficacy in both parents and food-allergic children.

Methods: The measure of self-efficacy was tested within the context of supervised food challenges (FC). Young people age 8-16 years underwent double-blind, placebo-controlled FC to peanut as part of an oral immunotherapy trial (ClinicalTrials.gov Identifier: NCT02149719) and any allergic reaction was managed according to the British Society of Allergy and Clinical Immunology Allergy Action Plans. Self-Efficacy questionnaires

were completed prior to and approximately one month after FC, by both the child themselves and the parent. The parent form consisted of 10 questions, teenager 9 questions and the child (under 12 years) 4 questions. All questions were scored on a 6 point Likert scale. The higher the score indicating the greatest confidence. Local ethical and regulatory approval was granted, and informed consent was obtained.

Results: Completed questionnaires were analysed from 56 young people and their parents. Children's self-reported self-efficacy improved ($p < 0.0001$), as well as their parent's perception of their child's self-efficacy ($p < 0.0001$). These improvements were not affected by the severity of the allergic reaction ($p > 0.05$).

Conclusion: After a food challenge, the child's confidence and the parent's confidence in the child to manage their allergy improved. In this study a preliminary tool to measure self-efficacy was utilized (a shortened 8 question form has since been validated.) Formal assessment of self-efficacy enables the clinician to have an accurate assessment of the individuals' confidence to manage their food allergy and further education can be tailored to fill any identified gaps.

Poster Abstract 13

Clinical Characteristics, Risk Factors & Aetiology Of Young Stroke in Hospital Seberang Jaya, Penang, Malaysia

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Background: Urbanization is predicted to increase the risk factors for vascular disease and hence lead to a sharp increase in stroke. Stroke was defined as rapidly developing clinical signs of focal, at times, global disturbance of cerebral function lasting for more than 24 hours or leading to death with no apparent cause other than vascular origin. In general Stroke in young includes subjects falling under the age group of 15-45 years. The aetiology may vary with different age groups but certain factors are confined to the young. The present study was undertaken to study the aetiology, risk factors, clinical presentation of stroke in young.

Methods: The study was conducted in Hospital Seberang Jaya (HSJ). National Stroke Registry was used to extract the data of the patients admitted for stroke from 2014 till 2018 (n= 1212)

Results: 111 cases of young adults with stroke admitted to HSJ. The mean age was 39.1 ± 4.75 years. The incidence of stroke in young forming 9.1% of the total stroke patients that was admitted. There were larger proportion of male patients with a ratio of 3:1. Majority of young patients presented with infarct 74(66.7%). Most common risk factor that associated with stroke was hypertension and followed by smoking. Most common symptoms reported was motor deficit in 71(64%) followed by speech disturbance in 62(55.9%) patients. The average duration from the time of symptoms onset to the arrival to ED is 89 minutes.

Conclusion: Hypertension is the most prevalence risk factor among young stroke patients as compared to patients who have smoking as risk factor. More awareness on prevention of hypertension in young or early screening need to be enlightened to the public in primary care settings.

Poster Abstract 14

The effectiveness of “prompt sheet” in initiating discussion of sexual dysfunction among male patients with diabetes in a primary care setting: an open-label control trial

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Background: Erectile dysfunction (ED) prevalence in Malaysia is about 70%. Many men are undiagnosed because discussing ED is considered a taboo and doctors' perceived men as being not receptive on discussing it. Prompt sheet may overcome this miscommunication.

Objectives: This study aims to explore the effectiveness of prompt sheet in initiating discussing of sexual dysfunction in a primary care setting.

Methods: This was an open label control trial done at two government health clinics. All doctors in the participating clinics were given education on management of ED. Patients with diabetes mellitus who came follow-up were approached. Consent was obtained, sociodemographic data recorded and sexual function evaluated using IIEF-5. The intervention group (n=69) received the prompt sheet allowing them to indicate their decision of whether to discuss about sexual dysfunction prior to consultation. The control group (n=65) received usual care. All participants would provide a feedback on whether there was any discussion about sexual dysfunction after the consultation.

Results: 134 participants completed the study. The distribution of ethnicity differ significantly between control and intervention groups. The other base-line characteristic of both groups (age, education level, employment, smoking, marital status and duration of diabetes) were similar. The distribution of ED in both groups was similar. In the intervention group, 59% of participants opted to discuss their sexual problems and among them, 80.5% of them had it discussed during the consultation. Thus, in the intervention group, 47.8% of total participants discussed about sexual dysfunction, compared to 4.6% in the control group (OR 18.4, 95% CI: 5.4 - 66.2, p<0.001). Sub-analysis did not reveal any association between either ethnicity or severity of ED and participant's option to discuss ED.

Conclusion: Prompt sheet can be a tool to cue discussion of sexual dysfunction during consultation and may overcome the barrier of communication regarding problems of sexual dysfunction.

Poster Abstract 15

Understanding female health professionals' decisions to remain, return to, or exit the professional workforce

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Background: The retention of female health professionals in the workforce has been lower than males. Now women's caring responsibilities are not limited to childcare, but often include caregiving for ageing relatives. For this 'sandwich generation' the challenges of continuing their careers might deepen with

the ageing population's increasing healthcare needs.

Objectives: (1) Investigate opportunities and challenges faced by female health professionals when balancing work and caregiving responsibilities, and how they influence their decisions to remain, return, or exit the healthcare workforce (2) Evaluate the effectiveness of available support (3) Identify additional initiatives to support female health professionals' work-life balance

Methods: A sequential mixed-methods approach, involving individual interviews, focus groups and online survey of doctors, nurses and allied health professionals will be used. A structured literature review focusing on Asia-Pacific studies was carried out to inform the interview guide and interviewers. Qualitative data will be analysed using thematic content analysis.

Results: Sixty-four factors were extracted from 74 relevant studies in the literature review and categorised into four domains. Individual characteristics, family and work factors influenced employees' outcomes, which subsequently influenced the decision to remain, return to, or exit the healthcare workforce. Preliminary findings from qualitative data analysis will be presented as well.

Conclusion: The decision to stay, return to, or exit the workforce is a complex and multi-faceted issue. Employee outcomes such as job satisfaction play a strong role, with other factors also contributing towards the decision. Such factors should be taken into consideration in workforce retention and planning in primary care.

Poster Abstract 16

Detecting COPD in high risk primary care patients using PUMA score in Hong Kong – A pilot study

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Background: Chronic obstructive pulmonary disease (COPD) is a common disease that occurs globally and affects the quality of life to many people because of its morbidity and mortality. However, early stages of COPD can lie undetected as may exhibit mild symptoms or is asymptomatic and remain underdiagnosed. Early detection of COPD can help to reduce mortality and health care costs. Currently, there were no opportunistic screening tools for use to detect high risk patients in Hong Kong primary care settings. This study is to validate the PUMA score to detect COPD.

Methods: This was a cross-sectional study of eligible participants were recruited from two outpatient clinics in New Territories East Cluster in Hong Kong. Subjects were recruited if they were ≥ 40 years old and a current/ex-smoker (≥10 packs per year). The PUMA score (7-item score that examined subjects' variables: sex, age, pack-years smoking, dyspnea, sputum, cough and previous use of spirometry) was obtained by the trained research staff and spirometry was conducted by nurse. COPD was defined as subjects who had a post-bronchodilator FEV1/ FVC < 0.70.

Results: Sixty participants were recruited. The completion rate of PUMA score questionnaire and spirometry was 100% (n=60)

and 96.7% (n=58) respectively. The prevalence of COPD was 13.8% (n=8). The AUC of PUMA score questionnaire was 0.733, which indicated a moderate accuracy. According to Youden's index, the best cut-off point of PUMA score questionnaire was ≥ 6 . The sensitivity and specificity value was 0.875 and 0.68 respectively.

Conclusion: The PUMA score questionnaire can be used in the clinical environment to screen participants at high risk in COPD.

Poster Abstract 17

What is the Utility of Posters?

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Background: Poster presentations can be a powerful way of communicating information about our research activities and findings with other conference delegates.

Objectives: To explore conference delegates' views and experiences of poster presentations, and their perceptions of the strengths and weaknesses of posters in comparison with oral presentations. To identify ways to further enhance the educational value of posters.

Methods: A qualitative study using brief semi-structured interviews amongst delegates at an Asia Pacific regional academic primary care conference. Interviews were digitally recorded, transcribed verbatim their content analysed thematically.

Results: 89 interviews were analysed. Majority of respondents were early career researchers (54%), a third of respondents were presenting (poster or oral) at the conference. Many positive attributes of posters were identified. For the conference attendee these included the ability to gain a rapid overview of research activity (for 'bench marking', 'updating', or 'inspiration'), the ability to choose what and when to engage rather than the tightly scheduled oral sessions, to discuss content in a leisurely and detailed fashion with the presenter. For the presenters, posters were considered a 'less threatening' than oral presentations and they valued the networking opportunities created. However, preparation was considered more expensive and arduous than a PowerPoint presentation, and posters were perceived to have lower status. There were many suggestions for incorporating technologies to enhance the impact of posters, including QR codes to access more information, pre-recorded presentations and interactive clarification sessions online.

Conclusion: Posters are a valuable mode of presentation at scientific conferences. They have unique strengths which should be recognised and these need to be highlighted by conference organisers, challenging the belief that posters are somehow inferior to oral presentations. The incorporation of technology with traditional panel display could elevate the utility of posters even further in the future.

