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ORGANISING COMMITTEE

Chairperson: Professor Dr Khoo Ee Ming

Co-Chair: Assoc Prof Dr Goh Lee Gan
Dr Sudhananthan Kanthaswamy

Secretary: Dr Verna Lee Kar Mun

Scientific Committee: Professor CL Teng (Scientific Chairperson)
Dr Verna Lee Kar Mun
Assoc Prof Datin Dr Zailinawati Abu Hassan
Dr Mimi Omar
Dr Tong Seng Fah
Dr Zaiton Ahmad
Assoc Prof Dr Ng Chirk Jenn

Exhibition, Finance, Event Secretariat:
Dr Chen Wei Seng
Dr Kamaliah Mohd Noh
Dr Zaiton Ahmad
Dr Irmi Zarina
Dr Siti Zaleha binti Suleiman
Dr Suhazeli Abdullah

The Organising Committee wishes to thank the following for providing excellent support to make this conference a success:

Jabatan Kesihatan Negeri Melaka (Melaka State Health Department)
- Dato’ Dr Haji Azmi bin Hashim (Director of Health, Melaka state)
- Dr Ghazali Othman (Deputy Director of Health, Public Health Health section)
- Dr R Sukumar
- Dr Suhaimi Md Isa
- En Deel Akhbar Khan (Health Education Unit)
- En Suffian Azmi (ICT Unit)
- En Nordin bin Mohd Simpol (ICT Unit).

Secretariat staff from the Academy of Family Physicians of Malaysia
- Patricia Mary d/o Arockiasamy
- Thilaga d/o Annamalai
- Radiah binte Sadarudin
- Kusmawati binte Mohfudz
- Radhiahaida binte Abdul Ghafar
Message from the Chairperson

It gives me great pleasure to welcome you to the Asia-Pacific Primary Care Research Conference 2009 in our historical city, Melaka, Malaysia.

This conference is organised by The Malaysian Primary Care Research Group (MPCRG) of the Academy of Family Physicians Malaysia (AFPM) in partnership with the Family Medicine Specialist Association (FMSA) of Malaysia, and in collaboration with the Ministry of Health of Malaysia, the College of Family Physicians of Singapore and the Asia-Pacific WONCA.

Research promotes the advancement of science. In primary care, there are plenty of opportunities for primary care research to flourish and mature. Just as our discipline is broad based, our research is also correspondingly wide in its scope, with multitude of areas to research into and different methodology to employ.

We have conducted several workshops locally in Malaysia to promote primary care research. This is the first time we are holding an international primary care research conference. The scientific committee has designed an exciting programme that encompasses three strands, ranging from research methodology for the beginners, biostatistics, to qualitative research and medical writing.

We are very honoured to have eminent international as well as local faculty of experts giving plenary talks, conduct workshops, shares their knowledge, skills and experiences. Their unreserved dedications to promote research are in itself a role for us to follow. We have also posed the highest awards ever in primary care conference here for the best oral and poster original research papers to serve as an impetus for researchers. All accepted abstracts will also be published in our journal, the *Malaysian Family Physician*.

This conference will be an excellent platform for primary care researchers to exchange knowledge and information and to network. We hope this conference will promote more researchers to join us in the path to excellence in science.

We would like to thank our collaborators, Singapore doctors, private institution, and pharmaceutical companies for their support. I would also like to give special thanks to Dato’ Dr Haji Azmi bin Hashim, the Melaka State Health Director, for graciously agreeing to close the ceremony and give away the prizes to the presenters. The local host organizing subcommittee in Melaka benefited tremendously from the strong support from the staff of State Health Department. Lastly, a heartfelt appreciation to the hardworking Organising and Scientific Committees for their dedication and support.

We look forward to meeting you at the conference.

Professor Dr Ee Ming Khoo
Organizing Chairman
Message from the Asia-Pacific WONCA Regional President

My heartiest congratulations to the Academy of Family Physicians of Malaysia for organizing an Asia-Pacific Primary Care Research summit supporting the Research Network in Asia-Pacific Wonca (ReNap).

This research summit will provide a platform for International and local participants speakers to share their expertise, experiences and challenges in Family medicine Research. In the development of Family Medicine, research is indeed most important.

This summit will be a continuation of the research activities of Wonca Asia-Pacific Region which received an impetus from the Kingston Conference in 2003. Several meetings followed focusing on and promoting family medicine research in Phuket in 2004, in Genting in 2005, Bangkok 2006, Singapore 2007, Ho Chi Min City 2008, Melbourne 2008 and mostly recently in Hong Kong in June 2009.

The program promises to be an exciting one embracing research methodology, biostatistics, qualitative research and medical writing to lead by experts from Malaysia, Singapore and Australia.

May I wish the workshop every success. I am sure every participant will have a most enjoyable time in Melaka and further progress will be made in family Medicine research.

Dr Donald Li
Regional President
Asia-Pacific WONCA
Message from the President of the Academy of Family Physicians of Malaysia

On behalf of the Academy of Family Physicians of Malaysia, I wish to congratulate the Organising Committee for holding this Asia-Pacific Primary Care Research Conference. It is commendable that this conference has attracted over 100 participants and over 50 oral and poster presentations from Malaysia and the region. I note the plenary speakers hail from United Kingdom, Australia, Singapore, and Malaysia. I am sure this conference will be a good opportunity for participants to develop further their skills in research and medical writing – they are key elements that will contribute to the elevation of the prestige of family medicine in the eyes of the academic community as well as leading to significant improvement of quality of care in family practice.

I am happy to note the leading role played by the Malaysian Primary Care Research Group, a special interest group within AFPM in organising this conference. Credits, however, should also be given to our sister college in Singapore, the Asia-Pacific WONCA, the Family Medicine Specialists Association of Malaysia and the Family Health Development Division of the Ministry of Health of Malaysia for their active participation. I hope to see more collaboration by the various stakeholders in primary care, both nationally and in the region. It is such synergy that will help family medicine to reclaim its rightful place in the health care system.

Family medicine cannot depend on research done by other disciplines assembled piecemeal to solve its problems. It is a specialty on its own based on a longitudinal relationship with the patient. It is periodic conferences such as these that research methodology and its results are paced and displayed for improving the care of our patients.

Dr Frank EH Tan
President
Academy of Family Physicians of Malaysia
Message from the President of College of Family Physicians of Singapore

Welcome to the Asia-Pacific Primary Care Research Conference. Thank you for participating in this Primary Care Research Conference.

This Conference is of particular significance to the Asia-Pacific region in that this is an attempt to create a sustainable Asia-Pacific Forum for primary care research in the spirit of ReNAP (Research Network for Asia-Pacific) that was initiated in July in Phuket, Thailand in 2004. The critical success factors of sustainability lie in capacity building of doctors in primary care research, developing a forum, and collaborative research. We have great confidence this will be a good start.

It is important to note that the Wonca Asia-Pacific Regional Council has endorsed the setting up of an Asia-Pacific Working Party in Research to carry on the Phuket Research Initiative for 2010-2011. This Conference can be regarded as a first activity of this Working Party.

We are particularly appreciative of the work of the Organizing Committee headed by Prof Khoo Ee Ming and Prof CL Teng and their hardworking Committee to put up this Conference.

On behalf of the College of Family Physicians, Singapore, let me wish the Organising Committee and participants an enjoyable and fruitful conference. May this be the springboard of more research activities to come.

Associate Professor Dr Goh Lee Gan
President
College of Family Physicians of Singapore
Message from the President of Family Medicine Specialist Association of Malaysia

It is a great honour and pleasure for me to welcome you to this inaugural Asia-Pacific Primary Care Research Conference 2009 organised by the Malaysian Primary Care Research Group (MPCRG) of the Academy of Family Physician of Malaysia (AFPM) in partnership with the Family Medicine Specialist Association Malaysia (FMSA), and in collaboration with the Ministry of Health Malaysia, the Singapore College of Family Physician and the Asia-Pacific WONCA (World Organization of Family Doctors).

Research is the major driving factor in further improving health care and should be directed at the clinical decisions that have the greatest impact on the health status of the population. Primary health care research can set the direction for change by identifying what needs to be changed for whom and why in the general population. It can also provide data from experimental projects or development projects within Primary Care Practices on the efficacy, effectiveness and efficiency of possible policy responses to identified needs.

This conference will provide a wonderful platform for the development and dissemination of new knowledge applicable to primary care research, organization, and education to improve the health of individuals, families, and communities in the Asia-Pacific and internationally. At the same time it will also fulfill the objective of nurturing novice researchers and stimulating senior researchers.

I take the opportunity to thank all of my colleagues who make this important conference possible. For the participants, thank you; and we hope you will have a stimulating, enjoyable and memorable experience.

Datin Dr. Zil Falillah Bt. Hj. Mohd Said
President
Family Medicine Specialist Association of Malaysia
The Family Health Development Division of the Ministry of Health is honoured to collaborate with the other local and international bodies in bringing this conference to its realisation. Research in primary health care is essential, especially now when policies are being deliberated which may change the landscape of primary care delivery in Malaysia. Policies are only as good as the evidence that form the basis for their development. As good as international studies have been in guiding policy makers, the feasibility of effectively implementing local policies in the local setting, will need these policies to be based on local research and evidence.

This is why we are happy to participate in the organisation of conferences such as this: where primary health care practitioners have the forum to share their findings, discuss challenges while doing their research, meeting up with others of similar inclination, who may have ideas and experience in overcoming these challenges.

This conference is enriched by the participation of attendees from all over the country, representing our primary care practitioners from the field, as well as international participants who will bring international flavour on primary care practice, as well as the academics who will provide new perspectives in research on primary care in the country, as well as globally. How beneficial this conference is to the participants, is up to you to determine. Your active participation is crucial. Aside from updating your knowledge and acquiring new skills, the networking that you develop here will benefit you immensely when you need help in carrying out the research in your area. The organisers have put together a good mix of scientific work but I urge you to enjoy the social events as well.

A special thanks to the members of the organising committee, without whose commitment, hard work and personal sacrifice, this conference could not have been convened.

I wish you a fruitful conference and I look forward to the outcome in the future where we will need to organise another conference to showcase all the research findings you have completed!

Dr Kamaliah Mohd Noh
Deputy Director
Family Health Development Division
Ministry of Health, Malaysia
### SCIENTIFIC PROGRAMME

**Day 1: 5th December (Saturday)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>0800-0900</td>
<td>Registration</td>
</tr>
<tr>
<td>0900-0930</td>
<td>Opening ceremony</td>
</tr>
<tr>
<td>0930-1030</td>
<td><strong>Plenary 1: Research—Evidence—Clinical Practice: Strengthening the Links</strong>&lt;br&gt;<strong>Speaker:</strong> Professor Nigel Mathers</td>
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<tr>
<td>1030-1100</td>
<td>Tea [put up poster]</td>
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<tr>
<td></td>
<td><strong>Concurrent Workshops</strong></td>
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<tr>
<td></td>
<td>Research Methodology I</td>
</tr>
<tr>
<td></td>
<td><strong>Key resource persons:</strong> AProf Goh Lee Gan, AProf Ng Chink Jenn</td>
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<tr>
<td></td>
<td><strong>Facilitators:</strong> Zainiawati Abu Hassan, Tong Seng Fah</td>
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<tr>
<td></td>
<td>Biostatistics I</td>
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<tr>
<td></td>
<td><strong>Key resource persons:</strong> Dr Wong Kam Cheong, Dr Claire Choo Yuan</td>
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<tr>
<td></td>
<td><strong>Facilitators:</strong> Teng CL Zeaiton Ahmad, Mohd Rosidi Ismail</td>
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<tr>
<td></td>
<td>Qualitative Research &amp; Medical Writing I</td>
</tr>
<tr>
<td></td>
<td><strong>Key resource persons:</strong> AProf Esther Daniel, Professor Khoo Ee Ming</td>
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<tr>
<td></td>
<td><strong>Facilitators:</strong> Verna Lee Kar Mun, Mimi Omar</td>
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<tr>
<td>1100-1230</td>
<td>Identifying and refining research questions</td>
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<td></td>
<td>Introduction to SPSS: data entry, data editing, Descriptive statistics</td>
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<tr>
<td>1230-1400</td>
<td>Lunch [view poster]</td>
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<tr>
<td>1400-1530</td>
<td>Questionnaire design &amp; validation</td>
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<td>Inferential statistics: chi-square, t-test, ANOVA</td>
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<tr>
<td>1530-1700</td>
<td><strong>Free papers: oral presentation</strong></td>
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<td><strong>Judges:</strong> Nigel Mathers, Goh Lee Gan, Lyn Clearhan, Wong Kam Cheong</td>
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<tr>
<td>1700-1830</td>
<td>Tea [view poster]</td>
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<td></td>
<td><strong>Judges:</strong> Nigel Mathers, Goh Lee Gan, Lyn Clearhan, Wong Kam Cheong</td>
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**Day 2: 6th December (Sunday)**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>0800-0900</td>
<td><strong>Plenary 2: The mixed methods: an illustration using the RESPoND Project</strong>&lt;br&gt;<strong>Speaker:</strong> Professor Nigel Mathers</td>
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<tr>
<td></td>
<td><strong>Concurrent Workshops</strong></td>
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<tr>
<td></td>
<td>Research Methodology II</td>
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<tr>
<td></td>
<td><strong>Key resource persons:</strong> AProf Goh Lee Gan, AProf Ng Chink Jenn</td>
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<td></td>
<td><strong>Facilitators:</strong> Zainiawati Abu Hassan, Tong Seng Fah</td>
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<tr>
<td></td>
<td>Biostatistics II</td>
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<tr>
<td></td>
<td><strong>Key resource persons:</strong> Dr Wong Kam Cheong, Dr Claire Choo Yuan</td>
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<td></td>
<td><strong>Facilitators:</strong> Teng CL Zeaiton Ahmad, Mohd Rosidi Ismail</td>
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<tr>
<td></td>
<td>Qualitative Research &amp; Medical Writing II</td>
</tr>
<tr>
<td></td>
<td><strong>Key resource persons:</strong> AProf Lyn Clearhan, Professor Khoo Ee Ming</td>
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<tr>
<td></td>
<td><strong>Facilitators:</strong> Verna Lee Kar Mun, Mimi Omar</td>
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<tr>
<td>0900-1030</td>
<td>Literature search</td>
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<td>Non-parametric statistics</td>
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<tr>
<td>1030-1100</td>
<td>Tea [view poster]</td>
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<tr>
<td>1100-1230</td>
<td>Writing proposal and grant application</td>
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<td>Multivariate analysis, Sample size calculation</td>
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<tr>
<td>1230-1300</td>
<td>Prize Presentation for Best Oral Papers &amp; Posters and Closing Ceremony</td>
</tr>
<tr>
<td>1300-1400</td>
<td>Lunch</td>
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PLENARIES & WORKSHOPS: SYNOPSIS

PLENARIES

Plenary 1: Research–Evidence–Clinical Practice: Strengthening the Links
Plenary 2: The mixed methods: an illustration using the RESPoND Project

WORKSHOPS

Workshop 1: Research Methodology
Workshop 2: Biostatistics
Workshop 3: Part 1. Qualitative Research
Workshop 3: Part 2. Medical Writing

Workshop 1: Research Methodology
This research methodology workshop will guide the beginning researcher from research question, through to proposal writing. Sessions with be conducted in small groups with the guidance of experienced facilitators. Participants are encouraged to bring along tentative research ideas to develop further during the workshop.

Workshop 2: Biostatistics
Biostatistics is often feared by novice researchers who are about to conduct a quantitative study. This workshop will gently guide the participants through the various steps of data analysis. There will be brief lectures followed by hands-on analysis using SPSS. The participants will gain a good understanding of how to select appropriate statistical tests to handle their data and be able to interpret the statistical output. Participants are encouraged to bring along their own computer notebook (preferably preloaded with their own SPSS software). For those without this software, a SPSS trial version is available at this workshop.

Workshop 3: Part 1. Qualitative Research
This workshop will introduce participants to an overview of qualitative approaches which will include sampling techniques. In addition, techniques of collecting qualitative data such as various interview methods and observations will be dealt with. This workshop will give a quick and short overview of the qualitative data analysis process of constant comparison and in developing matrices and rich descriptive accounts. How this comparative process together with peer reviews, member checks and the audit trail help to strengthen reliability and validity of findings will be covered. Simultaneously, technology assisted analysis of qualitative data will also be included. The workshop will be conducted as a demonstration and simultaneously as a participant hands-on analysis of qualitative data using technology. The technology will include Microsoft software and N-vivo.

Workshop 3: Part 2. Medical Writing
Communicating the findings and contributing to the knowledge debate is the desired outcome for any research endeavor. Indeed it has been stated that a research project is not completed until it has been published, yet for many, publication can seem difficult to achieve. The purpose of this 3 hour, highly interactive workshop is to build medical writing skills, improve confidence in the participants’ writing ability and to provide greater insight and understanding of the publishing process. The workshop is divided into two sections of 90 minutes each. In the first section key concepts in medical publishing will be discussed with a focus on the characteristics that might result in an article being accepted for publication or rejected. The nuts and bolts of medical writing will be reviewed and tips for improving the outcome discussed. In the second section, the focus will be on undertaking a short piece of medical writing and highlighting the mistakes and pitfalls for the unwary. The workshop is very suitable for all aspiring medical authors irrespective of level of ability or previous skill level. For those with more experience it will provide the opportunity to practice medical writing skills and share writing tips with others.
PLENARIES & WORKSHOPS: SPEAKERS

Plenary speaker: Professor Nigel J Mathers

Professor of Primary Medical Care, Head of Academic Unit of Primary Medical Care, School of Medicine and Biomedical Sciences, University of Sheffield, United Kingdom
Principal in General Practice, Bluebell Medical Centre, Sheffield
Chair of Clinical and Research, Clinical Innovation and Research Centre, Royal College of General Practitioners, UK.

Workshop speaker: Assoc Professor Goh Lee Gan

Associate Professor, Yong Loo Lin School of Medicine, National University of Singapore
Head, Division of Family Medicine, National University Health System
Prof Goh is the current President of the College of Family Physicians in Singapore and Immediate Past Regional President, Wonca Asia-Pacific Region. He has played a key role in the leadership and education role in Family Medicine and is a regular resource person in the teaching workshops in the Asia-Pacific region.

Workshop speaker: Associate Professor Ng Chirk Jenn

Dr Ng is an Associate Professor in the Department of Primary Care Medicine, Faculty of Medicine, University of Malaya. His research interests focus on clinical decision-making, men’s health, evidence-based practice and research methodology. He conducts regular research workshops and is an active member of the Malaysian Primary Care Research Group. He has recently completed his PhD at the University of Sheffield, UK.

Workshop speaker: Dr Tong Seng Fah

Dr Tong is a Senior Lecture in Family Medicine at the Universiti Kebangsaan Malaysia, Malaysia. He is currently a PhD candidate at the University of Sydney, Australia. Dr. Tong also receives supervision from the Medical Education and Research Development Unit of the University of Malaya.

Workshop speaker: Mohd Roshidi Ismail

Master of Medical Science in Public Health, MMedSc (PH)
Tutor, Department of Social and Preventive Medicine, University of Malaya, Kuala Lumpur, Malaysia. He facilitates research projects at the postgraduate level, especially on aspects of epidemiology and biostatistics.
Workshop speaker: Dr Wong Kam Cheong

Dr. Wong, MBBS (Queensland), BE (NUS), MSc (Statistics), has worked as a statistician and engineer in Singapore and Malaysia. Dr. Wong is currently working as a medical doctor in general practice/ family medicine in New South Wales (Australia) and medical research associate in the Centre for Chronic Disease, School of Medicine, at the University of Queensland (Australia). He has been actively participating in various health research projects – i.e. he is playing the roles of a medical researcher and statistician - and has published several journal papers and two statistics books.

Workshop speaker: Dr Claire Choo Wan Yuen

Dr Claire Choo is a senior lecturer at the Department of Social & Preventive Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur. She has been actively involved in teaching quantitative and qualitative research methodology, biostatistics and epidemiology in both undergraduate and postgraduate levels.

Workshop speaker: Associate Professor Dr Esther Daniel

BScEd (UM)(Hons), MEd (USM), PhD (USM)
Associate Professor at the Department of Mathematics and Science, Faculty of Education, University of Malaya (1996- present)
Areas of expertise: Science Education, Cognition in Science Education, Integration of Technology in Science Education. Qualitative Research Processes

Workshop speaker: Associate Professor Dr Lyn Clearihan

Director, Education and Training, Monash University/Victorian Metropolitan Alliance, General Practice Training Program
General Practitioner, Melbourne, Victoria
Past Editor, Asia Pacific Family Medicine journal.
Below is the list of oral and poster presentations that have been accepted for the conference. In view of the limited time available, only seven abstracts are selected for oral presentations. We used the following method to identify the oral presentations: (1) The Scientific Committee shortlisted 12 abstracts based on the scientific merits; (2) The four judges and three other experienced researchers (none of them are presenters) reviewed the anonymised abstracts and selected seven abstracts each; (3) Top seven abstracts in term of votes qualified for the oral presentations.

### Oral Presentations

1. Shih-Bin SU. The association between *Chlamydia pneumoniae* IgG seropositivity and metabolic syndrome in Taiwanese adults
2. Evelyn Sook Hiang KHOR. Application of linguistic framework in the investigation of medical consultations in a primary care clinic
4. HO Bee Kiau. Usage of glucometer is associated with improved HbA1c and triglyceride levels in diabetic patients in primary care
5. Wilson LOW HH. A randomized controlled trial to evaluate the efficacy of a community-based cardiovascular risk factors intervention strategies (CORFIS trial) in managing hypertension, diabetes mellitus and hyperlipidaemia in primary care setting
6. Jason YAP Soo Kor. Lacteol fort treatment reduces antibiotic associated diarrhoea
7. Benny EFENDIE. Prescribing antibiotic for URTI: is it cost effective?

### Poster Presentations

1. Shayesteh JAHANFAR. Introducing genetic statistics for twin studies: concept and application
2. Tin Myo HAN. Assessment of local linkage between general practitioners and township disease control teams for 3 Diseases (Malaria, TB and HIV/AIDS) in 8 selected townships of Myanmar in 2008
3. Tin Myo HAN. Assessment of counselling services of general practitioners for 3 Diseases (Malaria, TB and HIV/AIDS) in 21 selected townships of Myanmar in 2008
4. Tin Myo HAN. Continuity of care: assessment of local linkage between general practitioners and clinical specialists in 8 selected townships of Myanmar in 2008
5. Shih-Bin SU. Decrease in seroprevalence of hepatitis A after the implementation of nationwide disposable tableware use in Taiwan
6. MAZAPUSPAVINA Md Yasin. Does poor diabetic knowledge relate to poor diabetic control?
7. ANIS SAFURA Ramli. A clinical audit of hypertension management in public primary care setting
8. NORSIAH Ali. Methadone Maintenance Therapy (MMT) in a primary care clinic in Malaysia: empowering the community to fill up gaps in health service
9. ASNIDA Anjang Ab Rahman. Erectile dysfunction in primary care setting, Malaysia
10. LEE Ping Yein. The changing microbiological pattern of urinary tract infection in a Malaysian district hospital
11. CHAN Sook Ching. Views of Malaysian interns and their supervisors on whether their undergraduate clinical skills training adequately prepare them for their internship
13. WITHDRAWN
14. Shan-Kai HUANG. The image study of MRI among cervical herniated intervertebral disc patients at one medical centre in southern Taiwan
15. REDHWAN Ahmed Al-Naggar. Screening mammography: female physicians’ attitudes and practices in Sana’a, Yemen
16. CHEONG Ai Theng. Cardiovascular Risk Factors and Metabolic Control in Type 2 Diabetic Patients: A Cross Sectional Study
17. TENG Cheong Lieng. A survey of Malaysian primary care research publications for the period 1999-2008
18. SALINA Malar Abdullah. Voluntary centre for unmarried mothers and their babies
19. NIK NAIRAN Abdullah. Factors associated with mammography screening among hospital employees in a teaching hospital, Kuala Lumpur
20. HANIZA Mohd Anuar. Urut Melayu for post-stroke patients: a qualitative study
22. GOH Ee Pian. Accuracy of an infrared temporal artery thermometer compared to the oral mercury thermometer
23. SYED ALWI Syed Abdul Rahman. Metabolic syndrome among indigenous Sarawakian adults attending health care centres in Kuching district
24. FAZLINA Mohd Yusoff. Effects of spirometry test on the smoking behaviour among smokers
25. HIZLINDA Tohid. Quit smoking in the perception of teenagers: Why is it so difficult?
26. SITI SALMIAH Awang. The prevalence of iron deficiency and iron deficiency anaemia among army female recruits and the impact of combat training programme on their haematological indices
27. NOOR AZIMAH Muhammad. Patient’s Compliance to Antihypertensive Medication among the Hypertensive patients in a primary care clinic
28. NORWATI Daud. Understanding of cardiovascular disease screening among premenopausal women in Kelantan and Terengganu: a qualitative study
29. IRMI Ismail. Metabolic syndrome in an urban outpatient clinic
30. LEELAVATHI Muthupalaniappan. A case-report on Drug Induced Lupus Erythematosus with the use of herbal medication
31. HARMY Mohd Yusoff. Malaysian Army Cardiovascular Risks and Obesity Study (MACRO) in Melaka, Malaysia
32. TENGKU ALINA Tengku Ismail. Perception of health in relation to cardiovascular disease among premenopausal women in Kelantan and Terengganu, Malaysia
33. TANG Wern Ee. Health literacy and its relationship with self-rated health status and knowledge of chronic diseases among primary care patients in Singapore
34. JUWITA Shaaban. Burden among caregivers of patient with dementia in Hospital Universiti Sains Malaysia
35. MOHD FOZI Kamaruddin. TPC Diabetes Registry, Kangar Health Clinic 2007-2009
36. CHING Siew Mooi. Blood pressure control in a primary health care clinic
37. FAEZAH Hassan. Factors affecting the management of anxiety disorders in primary care: a qualitative study
38. AZNIDA FIRZAH Abdul Aziz. Sleep profile of elderly patients attending an urban primary care clinic: a cross-sectional study
39. ZAILINAWATI Abu Hassan. Malaysia primary care providers’ characteristics and workload: the national primary care survey
40. CHEW Boon How. A report on diabetes control and complication: the Malaysian Diabetes Registry
41. Daniel THURAIPPAH. Findings of the Level 1Quality Improvement Program of the AFPM
42. TONG Seng Fah. Primary care doctors’ intention to engage men in health assessment: weighing the balance between men’s receptivity and medical importance
43. NIK SHERINA Hanafi. Coughs and colds: the influence of the work place on primary care utilization
44. CHEW Boon How. A report on disease control: the Malaysian Diabetes Registry
45. Soe TUN. Factors influencing home delivery in Myanmar
46. JUWITA Shaaban. Perceived barriers for cardiovascular screening among apparently healthy post menopausal women of east coast Peninsular Malaysia
Presentation Prizes & The Rajakumar Research Award

The panel of judges for the oral and poster presentations consists of:

1. Professor Nigel Mathers (Chair)
2. Associate Professor Goh Lee Gan
3. Associate Professor Lyn Clearihan
4. Dr Wong Kam Cheong

Criteria for the assessment of oral presentation

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<tr>
<th>Item</th>
<th>Description</th>
<th>Score</th>
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<tr>
<td>1</td>
<td>Research question</td>
<td>Out of 10</td>
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<tr>
<td></td>
<td>Originality of research idea, relevance to primary care, adequacy of literature review</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Conduct of study</td>
<td>Out of 20</td>
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Criteria for the assessment of poster presentation

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Presentation Prizes

There will be six prizes: three for oral presentations, and three for poster presentations. The Grand Prize for the Oral Presentation is cash award of US$1000, the rest of the prizes are US$500 each. The Grand prize (The Rajakumar Research Award) is donated by Mr Tan Khai Hee of Hai-O Enterprise.

The Rajakumar Research Award

This research award is given to the Best Oral Presenter in the Asia-Pacific Primary Care Research Conference. It is named in honour of Dr MK Rajakumar (1932-2008), a renowned Malaysian doctor who had served with distinction as the family doctor to his patients, and as the leader of primary care in Malaysia and internationally. Dr MK Rajakumar’s contribution to medicine and the society was wide-ranging. What is unique, however, was that he produced highly respected scholarly works, not within the confine of the university, but in between his busy practice in a poor neighbourhood in Kuala Lumpur. It is hoped that this award will inspire family physicians in Malaysia and the region to emulate Dr MK Rajakumar’s passion for learning and research, while maintaining high standard of care for their patients.
ORAL PRESENTATION

Oral Presentation 01

The association between *Chlamydia pneumoniae* IgG seropositivity and metabolic syndrome in Taiwanese adults
Shih-Bin SU1, How-Ran GUO2

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2Department of Occupational and Environmental Medicine, National Cheng Kung University Hospital, Tainan, Taiwan

**Background:** Both *Chlamydia pneumoniae* (Cp) infection and metabolic syndrome (MeS) have been identified as risk factors for atherosclerosis and cardiovascular disease (CVD), but the association between Cp infection and MeS has not been extensively studied.

**Objectives:** We conducted this cross-sectional study to assess the association of chronic Cp infection and components of the MeS.

**Methods:** We recruited participants from Taiwanese adults who received annual health examination at a medical facility. We measured anti-Cp IgG antibodies (Cp-IgG) by enzyme-linked immunosorbent assay and defined Cp-IgG seropositivity using 20 RU/ml as the cut-off. Participants were classified as having MeS if they possessed three or more of the five components of MeS.

**Results:** In the 3633 study participants, the overall Cp-IgG seropositive rate was 45.5%. Male gender, older age, white collar jobs, smoking, diabetes mellitus, and hypertension were associated with a higher Cp-IgG seropositive rate (p<0.05). Participants with MeS had a higher Cp-IgG seropositive rate (62.8% vs. 37.2%, p<0.001). Multiple logistic regression revealed that positive Cp-IgG (odds ratio [OR]=1.4, 95% confidence interval [CI]: 1.1-1.9) and male gender (OR=5.0, 95% CI: 3.3-7.6) were independent predictors for MeS.

**Conclusion:** There is a positive association between Cp infection and MeS, which supports the role of infection in the pathogenesis of atherosclerosis and CVD.

**Keywords:** *Chlamydia pneumoniae*, metabolic syndrome, atherosclerosis, cardiovascular disease

Oral Presentation 02

Application of linguistic framework in the investigation of medical consultations in a primary care clinic
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**Background:** Researchers, especially those from the health professions interested in investigating the communicative behaviours of doctors and their patients during consultation have often shied away from using traditional linguistic frameworks like Conversational Analysis in their investigations. This is because methods which used linguistic frameworks are often deemed unsuitable in meeting the objectives of researchers from the health professions. As pointed out by Frankel (2001), one of the main shortcomings of methods which use linguistic frameworks is that it often entails the need to capture minute details of consultations which meant that time consuming detailed transcription are required in order to carry out analysis. This in turn also limits the number of consultations which can be analysed especially for researchers who need to analyse large samples. In addition, researchers who want to produce results which are statistically valid and reliable often find that they are unable to do so using traditional linguistic frameworks. Thus, researchers in the health professions have developed other types of frameworks to investigate doctor-patient interactions. One of these approaches is the use of the Interaction Analysis Systems (IAS) which are systems that allow the "...methodic identification, categorization and quantification of the salient features of doctor-patient communication (Ong, De Haes, Hoos & lames, 1995, p.905). While some of these like the Roter Interactional Analysis Scale (RIAS) were developed from social behavioral frameworks, others like the Verbal Response
Mode (VRM) developed by Stiles and Putnam (1992) was developed from linguistic framework. This tool has shown remarkable stability in different medical contexts and also in different countries (Stiles, 1996) and allows quantification of the verbal exchanges in medical consultation which therefore allows one to measure the consultative paradigm (doctor or patient-centred) of the medical consultation.

Objectives: The objectives of this study are:

a. to illustrate the application of linguistic knowledge in the development of an analytical tool (the VRM) in the analysis of doctor-patient interactions during medical consultations.

b. To demonstrate the usefulness and limitations of the VRM in determining the consultative paradigm of doctor-patient interactions in primary care medical consultations.

Methods: 98 audio recordings of medical consultations from the primary care clinic of a Malaysian public hospital were transcribed and later analysed using the VRM. Analysis of the consultations were categorized into three main categories – history taking, medical examination and conclusion segments. Findings on the verbal exchanges present in these segments were quantified and then classified to identify the consultative paradigm of the interaction.

Results: Although findings from this study showed that although overall, 47% of the verbal exchanges used in primary care consultations are patient-centred, qualitative analysis of the data showed that patients are seldom given opportunities to provide an account of their illness. In addition, explanations provided by doctors seldom contained information which would help educate patients on their problem or help them to make informed decision.

Conclusion: Application of linguistic frameworks in the development of analytical tools to study doctor-patient interactions during consultations in order to produce quantifiable, generalisable results have their limitations. It is argued that the use of such analytical tools to study interactions in consultations should be complemented with qualitative linguistic analysis to further understand interaction in medical consultations.

Keywords: doctor-patient communication, Verbal Response Mode (VRM), primary care consultations, doctor-centred consultations, patient-centred consultations

Oral Presentation 03

Community-based multi-faceted intervention improved the self-efficacy of diabetic patients

VKM LEE,1 SF TONG,2 WHH LOW,3 I MASTURA,3 AS RAMLI,4 CL TENG1 on behalf of CORFIS Study.*

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*CORFIS Study: Community-Based Multiple Risk Factors Intervention Strategy To Prevent Cardiovascular And Chronic Kidney Diseases

Introduction: In the CORFIS study, various evidence-based interventional strategies and system changes are introduced to produce improved outcomes for patients with cardiovascular risk factors. To achieve the study objective, the patients must develop self-efficacy, i.e. incorporate healthy lifestyle changes into their daily lives.

Method: Diabetes Management Self-Efficacy Scale (DMSES), a 15-item scale developed by van der Bijl et al, was administered to patients in the intervention arm of CORFIS study at two time points: baseline and six months after intervention. Each item was scored by patients on an 11-point scale (0-10), in ascending order of self-efficacy. Missing data in some variables were replaced by mean values.

Results: Data from 230 diabetic patients who completed 6-month follow-up in the CORFIS study were analysed. The DMSES-15 scores at baseline and 6-month had Cronbach alpha values of 0.9. The mean score of DMSES-15 at baseline was 88 points (SD=27) and at 6-month was 125 points (SD=17). The increased in self-efficacy mean score of 37 points (SD=30) was statistically significant (t=19.0, p<0.001).
Conclusion: The structured education by nurses, dietician and pharmacist, including the provision of equipments that promote self-care (e.g. automated BP set, pedometer, glucometer) working in concert the participating general practitioners (focusing on the evidence-based drug management) in this community-based intervention study has succeeded in bringing about the improvement in their self-efficacy.

Keywords: Diabetes mellitus, multifaceted intervention, self-efficacy

Acknowledgement: We wish to thank Dr Jan van der Bijl (University of Utrecht, Netherlands), Prof Jackie Stuart (University of Warwick, UK) and Prof Lillie Shortridge-Baggett (Pace University, USA) for allowing us to use the DMSES-15.

Oral Presentation 04

Usage of glucometer is associated with improved HbA1c and triglyceride levels in diabetic patients in primary care

I MASTURA,1 CL TENG,2 BK HO,3 O MIMI,4 K ZAINAB,5 H RUZIATON6

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Background: It is now well-recognized that strict glycaemic control can improve the outcome in type 2 diabetes mellitus. Self-monitoring of blood glucose (SMBG) has become a more popular practice, especially in developed countries as a tool for attaining target glycaemic control. However, its effectiveness is not widely evaluated. In developing countries SMBG is neither popular nor is its cost-effectiveness ascertained. Our previous study showed that 15.3% of diabetic patients in primary care clinics were doing SMBG and 32.9% of those not currently doing SMBG were reported keen to start self-monitoring at home. It is uncertain if the introduction of SMBG can lead to better glycaemic control in the local setting.

Objectives: To determine the difference in diabetes control between patients who monitor their own blood glucose and patients who have their blood glucose monitoring in the primary care health clinics.

Methods: This was a randomized controlled trial conducted in five public primary care clinics in two states in Malaysia. Type 2 diabetes patients aged between 35-65 years not currently performing SMBG (but keen to use glucometer) were randomized to receive a free glucometer or usual care. Diabetic patients in the intervention arm were provided with free glucometer (plus two teaching sessions focusing on glucometer use). The patients were advised to monitor their blood glucose regularly and to keep the record in their logbook. If the test result was above the set target value, he/she would be advised to adjust the dose of OHA/insulin accordingly. Both groups of patients received diabetic care from the resident Family Medicine Specialists and the diabetic educational session, all treatment was based on the Malaysian CPG on type 2 diabetes mellitus.

Results: 105 type 2 diabetes patients were randomized; 58 patients were given glucometer. There was no difference in socio-demographic, clinical and laboratory data at baseline (including HbA1c). After six months, HbA1c and triglyceride (TG) level show statistical significant improvement among the patients randomized to received glucometer: change in HbA1c 1.3% (p=0.01), change in TG 0.7 mmol/L (p=0.029). The percentage of diabetic patients achieving HbA1c <7% at baseline was similar at baseline. Six months later, the percentage of diabetic patients reaching this treatment target was 14.0% in control group and 32.1% in the intervention group (p<0.036, OR=2.9, 95%CI 1.04 to 8.17).

Conclusion: The usage of glucometer has resulted in improved glycaemic control and, interestingly, in triglyceride level as well. It is possible a greater level of empowerment in the intervention group has produced greater level of achievement in glycaemic treatment target.

Keywords: Diabetes mellitus, self-monitoring of blood glucose, randomized controlled trial, primary care

Acknowledgment: This study was funded by the International Medical University (IMU). The glucometer in this study was sponsored by Johnson & Johnson Malaysia but it did not influence the study protocol or the interpretation of the data.
Oral Presentation 05

A Randomized Controlled Trial to evaluate the efficacy of a Community-based Cardiovascular Risk Factors Intervention Strategies (CORFIS Trial) in managing hypertension, diabetes mellitus and hyperlipidaemia in Primary care setting

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Introduction: It is common knowledge that uncontrolled hypertension, diabetes mellitus and hyperlipidaemia leads to the development of severe cardiovascular and renal complications. Hypertension, diabetes mellitus and hyperlipidaemia are not just highly prevalent in the Malaysia community but they are also poorly managed and controlled, contributing to adverse health impact and expenditure to the country. This paper examines the efficacy of a chronic disease management strategy known as CORFIS in the treatment of hypertension, diabetes mellitus and hyperlipidaemia.

Method: 75 General Practices / Primary Health Care Centres were targeted for enrolment into the study and were randomly selected to provide either CORFIS Care (chronic disease management programme) or conventional care for 6 months. 750 patients who were diagnosed of hypertension, diabetes mellitus and hyperlipidaemia currently treated for one or more of these conditions were enrolled into the study; n=500 in intervention care versus n=250 in control. Patients with hypertension were analysed (intention-to-treat) as a subgroup. Main outcome measures were the proportion of hypertensive patients achieve target blood pressure of <140/90 mmHg (for those without diabetes mellitus and chronic kidney diseases) and <130/80 mmHg (for those with diabetes mellitus and chronic kidney diseases). Target glycaemic control for patients with diabetes subgroup were HbA1c <7% or FBG of 4.4-6.1 mmol/L. A subgroup of hyperlipidaemic patients were treated with target LDL level of <4.1 mmol/L (0-1 CV risk factor); LDL <3.4 mmol/L (>2 CV risk factors); LDL <2.6 mmol/L if there were presence of diabetes or coronary artery disease. All intervention patients were receiving chronic disease management package (CORFIS) whilst the control arm were receiving usual care from their doctors only.

Results: Predefine clinical and laboratory measures in baseline were generally the same in both groups. Significant reduction in systolic blood pressure (Intervention Arm median -9.0mmHg; -60 to 50 versus Control Arm median -2mmHg; -50 to 48) after the 6 months study [p=0.0029]. Similar findings were found in diastolic blood pressure reduction (Intervention Arm median -6.0mmHg; -53 to 30 versus Control Arm median 0.0mmHg; -42 to 30) [p<0.001]. 68% of hypertensive patients achieve blood pressure control in the intervention group compared to 58% in control [p<0.0281]. More hypertensive patients with uncontrolled BP achieve target control in the intervention arm (57%) compared to control (34%) [p<0.001]; no difference in target outcome measures between 2 study groups who has already achieved good BP, LDL and glycaemic control at baseline. The HbA1c (median: 6.7% vs 7.3%) and fasting glucose (median: 6.5mmol/l vs 7.1 mmol) values were significantly reduced in intervention diabetic patients as compared to control arm patients after 6 months of CORFIS intervention. There were more diabetic patients in the intervention arm (58%) than the control arm patients (42%) who achieved glycaemic target (HbA1c ≤ 7%) after 6 months of intervention (p=0.004). LDL-level among hyperlipidaemic patients were reduced by -0.3 in the intervention compared to -0.1 in control (p=0.011). 50% of uncontrolled LDL patients in CORFIS arm at baseline achieve treatment target compared to 32% in control arm (p=0.027). The proportion of diabetic patients in the intervention arm who complied with medication increase 6% after 6 months of intervention, but control arm reported 18% decreased at 6 month. No difference was found in anti-hypertensive and anti-hyperlipidaemic medication adherence between both groups.

Conclusion: The CORFIS (Chronic Disease Management programme) intervention is much superior in treating hypertension, diabetes and hyperlipidaemia compared to usual care in terms of reduction in BP reading, achieving LDL target and glycaemic control.
Oral Presentation 06

Lacteol fort treatment reduces antibiotic associated diarrhoea
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Background: It is known that a course of antibiotic is a risk factor in the development of gastrointestinal symptoms of abdominal pain, bloating and loose stools. A common side effect is antibiotic-associated diarrhoea (AAD) defined as otherwise unexplained diarrhoea that occurs in association with the administration of antibiotics. The extent and effect of probiotics in the prevention of AAD has not been evaluated in Singapore.

Objectives: We investigated the effect of Lacteol fort (LF), a heat inactivated lactobacillus preparation, on antibiotic associated bowel disturbances in a primary care population.

Methods: A case control method was used. Consecutive patients were either assigned to treatment group (A) or control group (B). Over one year, 184 consecutive patients receiving antibiotic treatment from a primary care clinic were recruited: 96 patients (group B) (29% male, mean age 38 years) did not receive LF; 88 patients (group A) (43% male, mean age 36.4 years) received 2 LF capsules bd for one week during antibiotic treatment. From the same centre, 141 consecutive healthy subjects (Group C) who came for health screening (23% male, mean age 39.7 years) were also enrolled in the study. All subjects completed a structured questionnaire and kept a bowel diary for two weeks from the start of treatment.

Results: More patients who received antibiotic treatment reported loose stools $\geq 1$ day than subjects who did not receive antibiotics (A 63.5%, B 53.4%, C 46.1%, $p=0.04$) but diarrhoea was less among those who were prescribed antibiotics and LF (group B). The number of days with loose stools was significantly greater in patients not receiving LF than healthy controls (A 2.39 days, C 1.53 days, $p=0.03$). LF did not reduce the risk of developing bloating, flatus and abdominal pain among patients given antibiotics.

Conclusion: Lacteol fort appears to reduce the risks of antibiotic associated diarrhoea but does not reduce bloating, flatus and abdominal pain.

Keywords: Lacteol fort, antibiotic associated diarrhoea, probiotics
Oral Presentation 07

Prescribing antibiotic for URTI: Is it cost effective?

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4School of Medicine and Health Sciences, Monash University Malaysia Campus, Kuala Lumpur, Malaysia.
5Final year of Bachelor of Medicine and Bachelor of Surgery programme, International Medical University, Kuala Lumpur, Malaysia.

Introduction: Upper respiratory tract infection (URTI) is mostly viral in nature. However, antibiotic is commonly prescribed both in public and private clinics throughout the country.

Objectives: This research aimed to investigate whether antibiotic use in URTI treatment is cost-effective.

Methods: Adult patients (age ≥16 years) presenting with upper respiratory tract symptoms from public and private primary care clinics were followed up until symptoms resolved or up to 28 days. The participating doctors were advised to manage their patients in the usual way. The clinical details of patients were collected at recruitment and by patient diary (reminders given by text messaging and telephone call). Cost of treatment being compared consists of drug acquisition cost, consultation cost, loss of productivity, and cost of treatment for adverse reactions. Effectiveness of treatment is measured in term of duration of symptom-free day. We calculated cost-effectiveness ratio by dividing the total cost of treatment by the duration of symptom-free day.

Results: A total of 503 patients with URTI were enrolled (74.8% from private clinics). Antibiotic prescribing rate was 67.8% (80.9% in private clinics, 29.1% in public clinics). Antihistamines and antibiotics contributed 49% and 23% of the total drug cost of RM 9,239.70 respectively. The incidence of adverse drug reactions is higher in antibiotic-treated group (71 vs 34 cases). Total treatment cost was significantly higher in antibiotic-treated group (101.13 ± 83.16 vs 78.04 ± 70.59, P<0.001). On the other hand, the antibiotic-treated group has a slightly longer duration of symptom-free day (24.92 ± 2.92 vs 23.84 ± 4.76, P=0.126). Calculated cost-effectiveness ratios of antibiotic-treated group and non-antibiotic-treated group were RM 4.06 per day and RM 3.27 per day respectively. The incremental cost-effectiveness ratio between these two groups was 21.38, which means that it costs RM 21.38 for 1 extra symptom-free day with antibiotic treatment.

Conclusion: Antibiotic was the second higher contributor of total drug cost for URTI treatment in our study. It was also associated with more side effects. Antibiotic use in the treatment of URTI is not cost-effective.

Keywords: Antibiotic, upper respiratory tract infections, cost effectiveness analysis
POSTER PRESENTATIONS

Poster 01

Introducing genetic statistics for twin studies: concept and application
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Background: Twin research is a growing part of genetic epidemiology science which utilizes various statistical softwares to analyze genetic and environmental influence of a trait.

Objective: The objective of this study was to compare the Falconer’s model of genetic analysis with Maximum Likelihood analysis using MX software.

Methods: Data on reproductive health variables were collected from 266 of monozygotic (MZ) and dyzygotic (DZ) twins. Basic genetic analysis ran using old fashion heritability estimate (Falconer’s formula) and then the findings were compared with heritability calculations using path analysis and maximum likelihood analysis. Correlations between MZ and DZ were drawn using scatter graphs and Cumulative Distribution Function (CDF) plot was used to identify the suitability of basic genetic analysis.

Results: Finding suggests that new method of genetic analysis using the maximum likelihood principal is superior to that of the classic statistical analysis as small variations between MZ and DZ twins are taken into consideration. Graphical analysis is employed in order to show this difference.

Conclusion: Maximum likelihood analysis is a valid and reliable statistical technique used for twin analysis. This paper intends to introduce the superiority of this method and limitation of old methods. Concept of genetic analysis using twin data is introduced and assumptions are discussed. MX is suitable software to get the heritability estimations using the modern analysis.

Poster 02

Assessment of local linkage between General Practitioners and Township Disease control teams for 3Diseases (Malaria, TB and HIV/AIDS) in 8 selected Townships of Myanmar in 2008
Tin Myo HAN, Win ZAW, Tin AYE, Myint ZAW, Yu PA.
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Background: Malaria, TB and HIV/AIDS are top priority public health problems in Myanmar. GPs have been actively participating in care and preventive activities of these priority diseases coordinating with township disease control teams, under guidance of Myanmar Medical Association since 1987.

Objectives: To assess the local linkage between General Practitioners and township disease control teams for 3Ds (Malaria, TB and HIV/AIDS)

Methods: A cross-sectional descriptive and analytical study, using pre-tested semi-structured self administered questionnaires, was conducted among 163 GPs practicing in 8 selected townships of Myanmar from June to October 2008.

Results: In the study, 52% of GPs received training from township disease control teams for Malaria, TB and HIV/AIDS care and prevention in 2007. Sixty percent of them referred malaria patients to township Vector Borne Disease Control (VBDC) teams; out of which, 52% of them never received counter-referral from the teams. There was significant difference between trained and untrained GPs for referral ($\chi^2 = 6.07, p=0.01$) and received counter-referral ($\chi^2 = 4.02, p=0.04$) from the VBDC teams. Regarding TB, 85% of studied GPs referred to township TB teams; out of which, only 50% of them received
counter-referral from the TB teams. There was significant difference in continuity of care of TB patients between trained and untrained GPs; trained GPs referred more to ($\chi^2 = 7.35, p= 0.001$) and received counter-referral more ($\chi^2 = 9.53, p= 0.00$) from township TB teams. Regarding HIV/AIDS, 76% of studied GPs referred to township HIV/AIDS teams; out of which, only 38% of them received counter-referral from the teams. Although there was significant difference between trained GPs and untrained GPs for receiving counter-referral from township HIV/AIDS teams ($\chi^2 = 15.66, p= 0.00$), it was not different for referral by GPs involved in the study ($\chi^2 = 2.85, p= 0.09$).

**Conclusion:** This study showed that 50% of GPs were linked with townships disease control teams for care and prevention of 3Ds (Malaria, TB and HIV/AIDS) in Myanmar. Variations existed among these diseases regarding local linkage for continuing care of patients. Much emphasis is needed to understand factors influencing the local linkage. Establishing strong local link is essential for the continuity of care of patients to assist quality health care.

**Keywords:** GPs, Malaria, TB, HIV/AIDS, local linkage, Myanmar.

**Poster 03**

Assessment of counselling services of General Practitioners for 3 Diseases (Malaria, TB and HIV/AIDS) in 21 selected Townships of Myanmar in 2008

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**Background:** Malaria, TB and HIV/AIDS are top priority public health problems in Myanmar. Counselling is an effective service to obtain more understanding about diseases and promote better doctor-patient relationship for adherence. Myanmar Medical Association, Disease Control teams and International Non Governmental Organizations have been providing counselling training among the GPs regarding Malaria, TB and HIV/AIDS for more than one decade. Aim is to improve health seeking behavior of clients by upgrading individual based effective counselling services of GPs, major primary care providers in private health sector of Myanmar.

**Objectives:** To assess the counselling services provided by General Practitioners and their constraints for 3 Diseases; (Malaria, TB and HIV/AIDS)

**Methods:** A cross-sectional descriptive and analytical study using pre-tested semi-structured self administered questionnaires was conducted among 125 GPs practicing in 21 selected townships of Myanmar from June to October 2008.

**Results:** Sixty-two percent of GPs from studied townships received counselling training from Myanmar Medical Association, International Non Governmental Organizations, disease control teams and colleagues. Twenty-five percent of them use separate rooms for counselling. There was significant difference between locations of GPs and the existence of separated counselling rooms ($\chi^2 = 7.72, p= 0.02$) - more separated counselling room present in cities rather than in district townships. They practised counselling services as part of clinical practices (78%) and separate consultation (2.4%). Only 13% of them kept counselling records. They counselled about prevention and treatment of malaria (54%), about Directly Observed Treatment Short Course (DOTS) for tuberculosis (73%) and about prevention and treatment of HIV/AIDS (69%). Constraints for counselling were: time limitation (77%), lack of separate rooms for counselling (77%), patients’ factors (5%), insufficient technical training and lack of relevant follow up action (2%). Suggestions to conduct effective counselling are: to provide more training (67%), to give technical and material support (26%). Sixty-two percent of GPs felt that that counselling is essential and additionally a better doctor-patient relationship is achieved.

**Conclusion:** Advanced counselling training on Malaria, TB and HIV/AIDS should be provided for GPs. Technical and logistic support for both counsellors and clients may also be pivotal. Follow up constructive supervision by technical experts should be planned to evaluate effectiveness of counselling.

**Keywords:** GPs, counselling services, Malaria, TB, HIV/AIDS, Myanmar
Poster 04

Continuity of care: Assessment of local linkage between General Practitioners and clinical specialists in 8 selected Townships of Myanmar in 2008
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General Practitioners’ Society (Central), Myanmar Medical Association, Myanmar. Email: tin.drtinmyohan.han3@gmail.com

Background: Continuity of care to patients is an important criterion as well as an essential element of today’s general practice. In Myanmar, GPs are main primary health care providers in private sector. However, most of the clinical specialists are working in both government hospitals and part time in private polyclinics and specialist clinics. Myanmar Medical Association is trying to get better understanding and communication between GPs and clinical specialists as a professional body to support continuity of care of patients.

Objectives: To assess the linkage between GPs and clinical specialists for continuity of care of patients in 8 district townships of Myanmar

Methods: A cross-sectional descriptive and analytical study using pre tested semi-structured self administered questionnaires was conducted among 160 GPs practiced in 8 selected townships in Myanmar over a period of 4 months (from June to October 2008).

Results: In the study, 52% of GPs were trained GPs as they refreshed their clinical acumen with local clinical specialists by attending Strengthening Continuing Medical Education Course (SCME) in 2007. Regarding local linkage, percents of GPs referred to physicians, surgeons, O&G specialists and paediatricians were (93%), (88%), (90%) and (94%) respectively. Referral places were: government hospitals (97%), private hospitals (50%) and poly-clinics (50%). Counter-referral rates from physicians, surgeons, O&G specialists and paediatricians were (61%), (58%), (51%) and (50%) respectively. There were no significant differences between trained GPs and untrained GPs regarding referral to physicians ($\chi^2 = 0.57$, $p=0.45$), surgeons ($\chi^2 = 0.03$, $p=0.85$), O&G specialists ($\chi^2 = 2.18$, $p=0.13$) and paediatricians ($\chi^2 = 1.22$, $p=0.72$). Nevertheless, there were significant differences between trained GPs and untrained GPs for receiving counter-referral from surgeon ($\chi^2 = 4.01$, $p=0.04$), O&G specialists ($\chi^2 = 4.78$, $p=0.02$), paediatricians ($\chi^2 = 6.41$, $p=0.01$) except physicians ($\chi^2 = 2.82$, $p=0.09$).

Conclusion: This study revealed the present situation of local linkage between GPs and clinical specialists regarding continuity of care of patients in Myanmar. Proper referral system should be initiated between GPs and clinical specialists. SCME training should be extended for GPs.

Keywords: GPs, linkage, physician, surgeon, O&G specialists, paediatrician, referral, Myanmar

Poster 05

Decrease in seroprevalence of hepatitis A after the implementation of nationwide disposable tableware use in Taiwan
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Background and Objective: Taiwan is an endemic area of viral hepatitis, including hepatitis A, which is transmitted mainly from the fecal-oral route. In order to reduce the transmission through food intake, the government implemented a policy of nationwide disposal tableware use in public eating places in 1982. The objective of this study is to evaluate changes in the seroprevalence of hepatitis A after the implementation.

Methods: We recruited workers of an industrial park during their annual health examinations in 2005 and measured their anti-hepatitis A virus IgG titer using microparticle enzyme immunoassay. We compared the seroprevalence among different birth cohorts within the study population and also analyzed data from previous studies.
Results: The overall sero-positive rate was 22.0% in the 11,777 participants. The rate was much lower among those who were covered by the program since birth (born after 1982) in comparison with those who were not (2.7% vs. 25.3%, p < 0.001). From the analyses of data from previous studies, we found the age-specific rates were similar in cohorts born in or after 1982 across studies conducted in different time periods but decreased with the calendar year in cohorts born before 1982. In particular, the age-specific seroprevalence dropped to less than one third in a three-year period among those who were born around 1982.

Conclusions: Data from both the current and previous studies in different time periods supported the effectiveness of disposal tableware in preventing the transmission of hepatitis A.

Keywords: hepatitis A, disposable tableware, public health, communicable diseases, tropical medicine

Poster 06

Does poor diabetic knowledge relate to poor diabetic control?

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Background: Diabetes Mellitus is a chronic progressive disease that holds challenged to health professionals and individuals in achieving good control. Knowledgeable diabetic patients with concern to glycaemic test and its control, were more likely to perform self care activities which subsequently facilitate better glycaemic control. In contrast, majority of diabetics were reported unaware of the glycaemic tests and its targeted control.

Objectives: To evaluate patient’s awareness and understanding of role of HbA1c and its targeted control with reference to standard in relation to their diabetic control.

Methods: A one month cross sectional study, interviewer administered questionnaire was carried out at family practice clinic PPUM (Pusat Perubatan University Malaya) in 2006. 69 follow-up diabetics were questioned for: i) awareness and understanding of role of HbA1c. ii) understanding of diabetic control target with reference to standard (Malaysian Diabetes Clinical Practice Guidelines 2004). Data were analyzed with Statistical Package for the Social Sciences (SPSS) version 13.5.

Results: The mean age was 63.56 years (SD±10.1), male/female ratio of 1:2.13 (22:47) and duration of having diabetes was 10.36 years (SD±8.23). Minority of patients (39.1%;22) were aware and understood the role of HbA1c and 30.4% (21) understood the diabetic control with reference to standards. Correspondingly, only minimal of patients (14:20.3%) had good diabetes control (HbA1c < 6.5%). In view of sample limitation, the study however was unable to demonstrate significant relationship between patient’s awareness, understanding of role of HbA1c and understanding of diabetic control target with their diabetic control.

Conclusion: This study showed that indigent understanding of diabetic tests and its control targets may relate with poor diabetic control. Hence, patient education with sufficient information is the keystone. It is a great duty of health professionals to embark on patients education in detail with regards to glycaemic tests and its targeted control in order to embrace on self management and compliance to recuperate overall diabetic control.

Keywords: diabetic control, HbA1c, awareness
A clinical audit of hypertension management in public primary care setting

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Background: Uncontrolled hypertension is the biggest single risk factor for death worldwide, causing strokes, heart attacks and chronic kidney disease. Despite the availability of evidence-based clinical guidelines, hypertension control rates at the primary care level is suboptimal as recommendations made by these guidelines were inadequately translated into clinical practice.

Objectives: To assess the adequacy of hypertension management in public primary care setting in relation to the recommendations made by the current clinical practice guidelines.

Methods: A clinical audit of hypertension management was carried out in two public primary care clinics in Selangor in May – June 2009. Medical records of hypertensive patients who attended the clinics within the study period of 7 weeks were conveniently selected and reviewed retrospectively. Patients who have co-existing Diabetes Mellitus were excluded. Two structure, 15 process and 1 outcome criterion were assessed. Adequacy standards of 100% for both structure criteria and 50% for each of the process and outcome criterion were set in collaboration with the local district health office. Data were analysed using the SPSS software version 16.0.

Results: A total of 400 hypertensive patients were included. Mean age was 59.5 years (SD ± 10.9, range 28 to 95 years), of which 52.8% were females and 47.2% were males. Adequacy standards were achieved in only two of the process criteria (3-6 monthly BP monitoring: 80% and FBS done at least once in the last year: 65%). Adequacy standards were not achieved in both of the structure criteria (hypertension registry and use of multidisciplinary team) and all the other process criteria (recording of smoking status, waist circumference, family history of premature CVD and fundoscopy; monitoring of lipid profile, renal profile, ECG, urinalysis for protein and microalbumin; and advice on diet, exercise and smoking cessation) with the adequacy percentage varying from 0.8 – 35.2%. Adequacy standard was also not achieved in the outcome criterion (average BP of <140/90mmHg over 1 year: 41.5%).

Conclusion: This audit shows that the adequacy standards of hypertension management in these primary care clinics were suboptimal. Although BP was found to be diligently monitored every 3-6 months, cardiovascular risks were not adequately assessed in the majority of the patients audited. The clinical practice guidelines recommended that management of hypertension should not be based on the blood pressure per se, but on the global cardiovascular risks stratification. Remedial measures were discussed with the local district health office and a re-audit will be done following implementation of remedial actions.

Keywords: clinical audit, hypertension, management, primary care
Methadone Maintenance Therapy (MMT) in a primary care clinic in Malaysia
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Introduction: Methadone Maintenance Therapy (MMT) for opiate dependence was first started in Malaysia in 2005. Handling patients with opiate dependency especially in a primary care clinic is very challenging as they are marginalized people with multiple needs and mostly require life long rehabilitation. Outsourcing and building partnership with community were the approach used to solve the problem of limited human resource in the clinic. The responsibilities were shared among the clinic staff, clinic advisory panel members and various local government & non government agencies.

Result: There were 143 patients recruited from November 2006 until March 2009. Retention rate in the program was high (1st batch patients: 6 mth ~98.4%, 1 yr ~96.8%, 2 yrs ~95.2%, 2nd batch patients: 6 mth ~95.6%, 1 yr ~91.3%. 3rd batch patients: 6 mth ~96.2%). Increasing trend was seen in the World Health Organization Quality Of Life score (WHOQOL) in all four domains done at baseline, 1 year and 2 years in the program respectively (Physical: 49.6%, 62.4%, 69%, Psychological: 48.1%, 63.2%, 71.2%, Social: 52%, 64%, 73% and environmental: 54.2%, 63.3%, 71.3%). After joining the program, there were no new bloods borne viruses infection (HIV, Hepatitis B & Hepatitis C) noted among uninfected patients at baseline. Very minimal number of patients (2.1%, n=3) were involved in new drug related offences while in the MMT program.

Conclusion: Fulfilling psychosocial needs of patients on Methadone Maintenance Therapy is an important component in rehabilitation. In primary care setting, this gap in health service can be filled by empowering the community to share the task together.

Keywords: Methadone Maintenance Therapy, psychosocial needs, primary care clinic, community

Erectile dysfunction in primary care setting, Malaysia
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Background: Erectile dysfunction is a common but underreported conditions. There have been many population based prevalence studies done throughout the world including in Malaysia. However, the prevalence of ED among patients visiting out-patients clinic is not fully investigated. Primary care doctors are often the first health provider whom patient can discuss about erectile dysfunction.

Objectives: The objective of this study was to investigate the prevalence and risk factors (socio-demographic, medical disease and lifestyle) for erectile dysfunction (ED) among men attending primary care clinics in Petaling district, and to assess their health seeking behaviour.

Methods: A total of 1435 men aged 40-76 years participated in this cross-sectional study, giving a response rate of 85%. The data was collected by either self administered questionnaire (for those who can read/write in English or Malay) or face-to face interview plus self-administered on IIEF-5 (for those who cannot read/write in English or Malay). Simple physical examination was performed on all the participants. The questionnaire was bilingual, in both English and Malay. ED was assessed using IIEF-5 (in 4 languages). The socio-demographic, medical diseases and lifestyle exposures were compared between those who had ED and those who did not, and the risk factors were examined. The significance of association and its precision was determined by the 95% Confidence Interval and the magnitude was determined by the crude odds ratio. In the multivariate analysis, logistic regression was used to evaluate factors that were associated with ED. Data on health seeking behavior was also analysed.
Results: The prevalence of ED (mild to severe) in the primary care population was 64.5% (95% CI: 66.9, 71.9). The factors associated with ED were increasing age, ethnicity, unemployed, diabetes mellitus, hypertension and heart disease. Despite the high prevalence of ED, most patients do not seek treatment. ED is not often discussed between patient and his doctor.

Conclusion: ED is a common problem, and is rapidly increasing because of an aging population, and increased risk factors. As the prevalence of ED is high in primary care settings, effort is needed to screen ED in patients for further management.

Keywords: Erectile dysfunction, primary care

Poster 10

The changing microbiological pattern of urinary tract infection in a Malaysian district hospital

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Background: The change in microbiological pattern and antibiotic sensitivity poses a great challenge in treating patients with urinary tract infection (UTI).

Objectives: To study the changing microbiological pattern of UTI and the antimicrobial susceptibility of uropathogens in a district hospital in Malaysia.

Methods: Data on urine culture and sensitivity were collected from Serian Hospital, Sarawak, Malaysia. The study included 519 samples from July 2001 to June 2003 and another 1892 samples from June 2005 to May 2008. SPSS version 17.0 was used for data management.

Results: Significant growth was reported in 18.7% and 23.7% of urine isolates in the “2001-2003” and “2005-2008” series, respectively. In the “2005-2008” series, gram negative bacilli caused 71.5% of the infections, of which Escherichia coli (81.9%) was the most prevalent pathogen. This was followed by Klebsiella spp (5.9%) Pseudomonas aeruginosa (5.0%), and Proteus mirabilis (3.1%). This pattern was similar to the “2001-2003” series except for Pseudomonas aeruginosa (11.8%) in the “2001-2003” series. In the “2005-2008” series, Staphylococcus aureus and Staphylococcus epidermidis accounted for 59.4% and 38.3% of gram positive organism, respectively. This demonstrated a change of pattern compared to the “2001-2003” series where Staphylococcus epidermidis infection (58.6%) had a higher prevalence followed by Staphlococcus aureus (37.6%).

For antibiotic sensitivity in the “2005-2008” series, high resistance rates to ampicillin (79.5%), co-trimoxazole (55.9%) and tetracycline (53.2%) were observed for E. coli. Similar pattern was recorded in the “2001-2008” series. Klebsiella spp showed high resistant to ampicillin in both series. Interestingly, Pseudomonas isolates showed no resistance to ampicillin, co-trimoxazole, tetracycline and gentamicin over time. In the “2001-2003” series, Proteus spp. shown no resistant to any of the tested antibiotics. In the “2005-2008” series, however, Proteus spp. showed resistance to ampicillin (50%), co-trimoxazole(40%) and tetracycline (30%). For gram positive organisms, Staph. epidermidis and Staph. aureus exhibited increasing resistance to most antimicrobials, including ceftriaxone.

Conclusion: E. coli remained the commonest causative organism in UTI. Gram positive cocci had also established an increasingly important role in UTI. Our results demonstrated that most of the uropathogens isolated showed increasing resistance to various classes of antimicrobial agents which were commonly prescribed for UTI in a district hospital. Continuous surveillance of antibiotic sensitivity and judicious use of antibiotics are therefore critical even in a district hospital setting.

Keywords: district hospital, urinary tract infection, microbiological pattern, resistant
Poster 11

Views of Malaysian interns and their supervisors on whether their undergraduate clinical skills training adequately prepare them for their internship

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Background: Primary care physicians are involved in the undergraduate teaching of clinical and procedural skills especially communication skills. Little is known whether the current training adequately equip our Malaysian doctors for their internship.

Objectives: To determine the views of Malaysian interns and their supervisors on the adequacy of their undergraduate skills training and their suggestions for improvement.

Methods: Two sets of pre-tested questionnaires sent through the hospital directors to all interns and their supervisors covered demographic questionnaire (age, gender, ethnicity, which university the house officer graduated, type of medical curriculum and for supervisors – years of supervising house officers and qualifications) and their views and suggestions on clinical skills training (communication, history taking, physical examination, patient management and procedures). SPSS version 11.0 was used for data analysis and Chi-square tests were applied to variables to determine any significant association (p-value <0.05).

Results: 22 out of 32 hospitals participated, 521 (350 HOs, 171 supervisors) completed questionnaires were analysed. Skills found adequate were: communication (interviewing patient and communicating with staff/colleagues), history taking, physical examination and procedures (BP measurement, blood sugar measurement, taking blood, setting IV line, male and female catheterization). Interns and their supervisors (to lesser extent) also found adequate: skills in diagnosis (98%, 69%), patient management- non pharmacological (92%, 52%), drug management in acute conditions (90%, 54%), management of chronic conditions (94%, 67%), procedures - fundoscopy (91%, 53%), taking pap smear (86%, 59%), basic CPR in adult resuscitation (97%, 53%) respectively. The majority of the supervisors in contrast to the HOs felt the following training was grossly inadequate to poor in: communication skills - breaking bad news (77% supervisors versus 13% HOs), dealing with angry patients (75%, 20%), giving information to patients (59%, 3%) and in communicating with patients’ family (53%, 7%). Similarly training in all other aspects of adult resuscitation (intubation, defibrillation, use of drugs) and all aspects of child resuscitation were found to be inadequate. Suggestions included more practice/clinical; exposure and more student assessments (e.g. OSCE) in clinical skills

Conclusion: This study suggests that there are deficiencies in undergraduate clinical skills training in communication skills (certain aspects) and CPR. The deficiencies were not fully recognized by interns themselves. More in depth studies are needed.

Keywords: Undergraduate clinical skills training, views of interns and supervisors

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Antibiotic prescribing in acute respiratory and urinary tract infections in Malaysian primary care settings: differences in evidence-based practice

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Background: Generally, antibiotics are over-prescribed for acute infections in primary care. Where they are indicated, the choice of drug is often inappropriate and differs from the recommendations of evidence-based guidelines.

Objective: To examine the antibiotic prescribing rates and the choices of antibiotic for acute respiratory tract infections (URTI) and urinary tract infections (UTI) in public and private primary care clinics in Malaysia.

Methods: Primary care encounter forms were completed by randomly selected clinics in public and private primary care clinics in Malaysia. Encounter forms that contained information consistent with URTI or UTI in the diagnosis and symptoms sections were extracted for further analysis. The antibiotics prescribed in these encounters were compared with the Malaysian National Antibiotic Guideline 2008 (penicillin V is preferred for URTI, while trimethoprim/co-trimoxazole are preferred for UTI).

Results: 1180 URTI and 105 UTI encounters were analysed. Antibiotic prescribing rates for URTI was 33.4%, and it was significantly higher at the private clinics compared to the public clinics (46.2% vs 27.5%, \( \chi^2=40.3, p<0.001 \)). Antibiotic prescribing rates for UTI was 57.1%, and the rates were not significantly different between the private and the public clinics. In the 394 URTI encounters where antibiotics were prescribed, the antibiotics chosen were mostly penicillins (47.7%) or macrolides (37.6%). However, Penicillin V was only prescribed in 4 patients with URTI. In the 60 UTI encounters, the main choices of antibiotics were amoxycillin or co-trimoxazole, which were prescribed in 21.7% and 38.3% respectively.

Conclusion: There is low adherence to evidence-based guideline for URTI (which is predominantly viral in nature) in two aspects: antibiotic prescribing is excessive and low usage of penicillin V, especially in the private clinics. In contrast, antibiotic prescribing for UTI is generally appropriate.

Keywords: primary care, upper respiratory tract infection, urinary tract infection, antibiotics, guideline

Poster 13: WITHDRAWN
Poster 14

The image study of MRI among cervical herniated intervertebral disc patients at one medical centre in Southern Taiwan

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Objective: Old age could cause cervical disc degeneration or posterior longitudinal ligament calcification. If the head suffers from pressure for a long time and the action of rapid lateral flexion or the neck twist, it is very possible to cause cervical disc herniation. Herniated Cervical Disc, clinically, is a very common spinal disease. Lots of patients are diagnosed in Family medicine clinic and then transferred to the therapy of Neurosurgery department or Rehabilitation department. In Taiwan, based on image study’s discussion, we can’t find lots of documents for reference. Therefore, this research focus on MRI analysis of the situation to provide clinical people with some references for diagnosis and therapy.

Methods: We used retrospective study in this research, based on the data from a Taiwan southern medical center. The data period is from 2006.1.1 to 2006.12.31 and the target research people are those who were willing to take MRI. Cases’ resource is from clinic, emergency, or patients in the hospital. Total are 680 cases. We also used personal data feedback to get personal information, including age, gender, and MRI examination report. The report has the content of herniation type (including herniation and bulging), the herniation direction (including central, paracentral, subarticular and foraminal), the compressed structures due to herniation (including spinal cord, sac, spinal canal, lateral recess, and neural foramen), and if having the formation of spurs. Finally, we collected 519 herniated cervical disc patients into the research.

Result: Among 519 patients, male is 309 (59.5%) and female is 210 (40.5%). Most common is happening between 45 and 55 (147 cases, 28.3%). Mainly, the multiple discs’ herniation is more common, total is 400 cases (77.1%). And C5-6 is the most common level, the total is 363 cases (69.9%). Central type is the most common herniation direction (289 cases, 55.7%). As for herniation type, herniation is more common than bulging. The former is 453 cases (87.3%) and the later is 187 cases (36.0%). The most common is herniation lonely or bulging lonely, total is 392 cases (75.5%). The herniated cervical disc cases have more protrusion than extrusion. Protrusion is 294 cases (56.6%) and extrusion is 290 cases (55.9%). As for compressed structure, neural foramen is the most common (309 cases, 59.5%). The next common is sac (308 cases, 59.3%). Moreover, among 519 cases, with total 3633 discs, herniation type is 1026 (28.2%), more than bulging type. The most common herniation direction and compressed structures are central type (551 cases, 15.2%) and neural foramen respectively (580 cases, 16.0%). Finally, among 519 cases, the incidence rate is 73.2% for the cases combined with the formation of spurs. The C5-6 is the most common, total is 311 cases (59.9%).

Conclusion: Past researches in Taiwan mainly focus on the discussion of structure, clinical symptom, risk factors or situation of surgical therapy and the relationship with surgery. Simple discussion of image study is not common. This research uses the discovery of image study and the recognition and definition of cervical disc herniation. Not only discuss but also prove the previous concept and agreement. Further, it studied the abnormal structures that have relative relationship. In the research, the cervical disc herniation happens often among old people. Male is more common. The multiple discs herniation is also more common, and C5-6 is the most common level. Among herniated cervical disc patients, the herniation type is more common in herniation than bulging. Moreover, the herniated cervical disc cases have more herniation type and normally have the formation of spurs. The cause to make this situation happen should be further discussed to find out if it has any relationship with occupational factors or other risk factors.

Key words: herniated cervical disc, bulging, protrusion, neural foramen, lateral recess
Poster 15

Screening mammography: female physicians’ attitudes and practices in Sana’a, Yemen

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Background: Breast cancer is the most common cancer in women worldwide and its incidence having increased significantly in recent decades. However, mortality rate of breast cancer has fallen because of the role of early detection and the advances in its treatment. Breast self-examination (BSE), clinical breast examination (CBE), and mammography are the most commonly used methods of breast cancer screening. The three methods recommended for detection of breast cancer are BSE, CBE by a health care professional, and mammography, the third being the most effective.

Objectives: To determine attitude and practice of Yemeni female physician regarding mammogram screening.

Methods: Cross-sectional study was conducted at the main hospitals in Sana’a, Yemen. Study sample was composed of all female physicians who work on duty during the questionnaires distribution. Those who agreed to participate were given the questionnaire to complete. Descriptive statistics were used to analyze socio-demographic variables and variables related to general health. A student t test was used to determine differences between groups. The overall significance level was set at 0.05.

Results: Participants in this study were 105 female physicians with the mean age of 32.13 years (SD = 7.17). Thirty-four (36.5%) of the respondents do not send asymptomatic women for screening. For those who do not send asymptomatic women for mammogram screening, 58% (25) due to high cost, 6.9% (3) due to the high risk of radiation, 11.6% (5) is not available. Twenty-five (26.8%) of the participants sent the patients on regular basis of high-risk or had family history of breast cancer. Whereas twenty-five (24.7%) of the participants sent the patient for mammogram every year regardless of the patient history or symptoms. Although most physicians (36.5%) do not refer patients for mammography, seventy seven (74%) indicated they will refer patients for screening mammography on personal request of the patients.

Conclusion: This study shows a low percentage of physicians that refer patients for routine mammography, the major reason given the high cost of the procedure.

Keywords: Breast cancer, Mammography, Attitudes and Practices, Yemen

Poster 16

Cardiovascular risk factors and metabolic control in type 2 diabetic patients: a cross-sectional study

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Background: Type 2 diabetes mellitus is a metabolic disease which contributes to high level of morbidity and mortality worldwide. The total number of people with diabetes in the world is projected to rise to 366 million in 2030. In Malaysia, the prevalence of diabetes is progressively increased from 6.3% in 1986, 8.2% in 1996 to 14.9% in 2006. This disease burden is not primarily due to diabetes alone but its complications of cardiovascular disease. In order to delay the development of cardiovascular complications, the management of diabetes would be aimed to achieve an optimal control of multiple, modifiable cardiovascular risk factors along with metabolic control.

Objectives: The objective of this study is to assess the multiple cardiovascular risk factors and metabolic control in type 2 diabetic patients.
Methods: This is a cross sectional study carried out in a public health clinic in Selangor, Malaysia from 7th May 2009 to 21st May 2009. All type 2 diabetic patients who aged 18 and above, were being followed-up for more than 6 months and consented were recruited in the study. The demographic data was obtained through face to face interview. Height, weight and blood pressure of the patients were taken during the day of data collection. The co-morbidities and laboratory results were obtained from the medical records. The cardiovascular risk factors studied were: i) age (male>45, female>55); ii) gender (male); iii) smoking status iv) BMI ≥23.0kg/m²; v) Dyslipidemia; vi) Hypertension. This study was approved by Medical Ethics Committee, University Putra Malaysia and Ministry of Health, Malaysia.

Results: 200 patients were consented and recruited. The mean age was 58.6 (SD=10.5) with 79.0% of the patients >50 years old. Majority was female (62.5%). There were 48.5% of Chinese, 26.5% of Malay and 24.5% of Indians. 87.5% of the patients had BMI ≥23.0. 11.5% were smokers. 64.0% had co-morbid of hypertension and 50.5% had dyslipidemia. 11.5% of patients had BP <130/80 mmHg and 23.3% of 172 patients had fasting blood sugar < 6.1mmol/L. More than half of the patients did not have HbA1c, LDL and HDL results available. 72.5% of the patients had 3 or more other cardiovascular risk factors. Those age 60 and above had significantly better fasting blood glucose control than those age less than 60 ($\chi^2$=9.132, p=0.003).

Conclusion: Majority of the diabetic patients has multiple cardiovascular risk factors (3 or more risk factors) and had not achieved the recommended goals in metabolic control. There is an urgent need to implement more aggressive therapeutic strategies to improve on the metabolic control and reduce the cardiovascular risk factors in type 2 diabetic patients.

Keywords: cardiovascular risks, metabolic control, diabetes mellitus

Poster 17

A survey of Malaysian primary care research publications for the period 1999-2008

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Background: In Malaysia, research and publication culture in primary care is weaker than other disciplines. However, recently more family physicians are joining the academia in the medical schools but the research productivity of the Malaysian family physicians remains relatively unknown.

Objective: To document the time trend, study designs of primary care research publications from Malaysia and the contributions from family physicians.

Methods: Biomedical and health-related publications from Malaysia were retrieved from PubMed, internet searches (Google, online databases) and contact with authors. Keywords such as “family medicine”, “primary care” and “community” were used. “Primary care research” was defined as original clinical research conducted in a primary care setting (community, private general practice clinics and public primary care clinics). Only full journal articles and case reports were included (letters, conference abstracts, and editorials were excluded). The names of authors were examined to determine if they were family physicians.

Results: 9926 Malaysian biomedical and health-related research publications were identified, 724 (7.3%) were primary care research, which showed a gradual increase in number of publications but not in proportion of all publications over the 10-year study period (35/580 [6.0%] in 1999 to 83/1504 [5.5%] in 2008). The study designs of primary care research were: 8 clinical trials, 8 cohort studies, 10 case control studies, 686 cross-sectional and descriptive studies, and 12 case reports. About a quarter (172, 23.8%) of primary care research were published by family physicians. Only 23 primary care researches were conducted in private general practice clinics.
Conclusion: Malaysian primary care research publications have shown some increase in number in the past decade but they are still a small fraction of all biomedical publication in this country. Most of these research outputs came from non-primary care colleagues. Greater effort is needed to encourage primary care researchers to publish and to undertake analytical observational and interventional studies. Private general practice clinics that are providing nearly half of all primary care consultations in this country are underused as a research setting.

Keywords: primary care, primary care research, family medicine, publication, Malaysia

Poster 18

Voluntary centre for unmarried mothers and their babies
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Background: There is no shelter home for unmarried mothers in the states of Johor and Malacca. These mothers are sent to homes for the elderly, mentally disabled or private centres. To address this social problem, a general practitioner set up ‘Persatuan Kebajikan Tiram’ 20 years ago to provide a safe environment for unwed mothers and their babies.

Objectives: To review and publicise the activities conducted at this centre as well as to highlight the difficulties faced in managing the centre.

Methods: Admission records of all residents admitted from September 2007 to July 2008 were reviewed.

Results: During the study period, there were a total of 22 admissions consisting of 17 Malays, 1 Indian and 4 foreigners (Indonesians). Their ages ranged from 13 to 28 years old with an average age of 20.8 years. Three of the residents were multiparous. Five residents were referred by the Welfare Department while one was brought by a taxi driver who found the resident in a drain. Although 12 residents bonded with their babies, 5 babies were abandoned and 1 baby died due to prematurity. Some babies were adopted. Six mothers ran away from the home. The difficulties faced in managing the centre were the high maintenance and treatment costs, unsupportive family members, runaway mothers with abandoned babies without identification papers, space constraint resulting in inability to house mothers during confinement and harassment from male partners.

Conclusion: Unmarried mothers and abandoned babies is a growing social problems. They deserve more support from their family the community. This social problem needs more serious attention from the academic community, government agencies and other support groups.

Keywords: Unmarried mother, abandon child
Factors associated with mammography screening among hospital employees in a teaching hospital, Kuala Lumpur

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**Background:** Breast cancer is the leading cause of cancer among women in Malaysia. Of the total cancer cases registered in the National Cancer Registry for 2006, 16.5% were female breast cancer cases. The overall age standardized rate was 39.3 per 100,000 population in 2006. In University Malaya Medical Centre, diagnosed breast cancer cases increased six fold from 1993 to 2003. An estimated of 50% of breast cancer cases were diagnosed in the late stages which resulted in poor survival rates. Hospital employees play an important role in encouraging women in the general population to attend screening. Hence, the rationale of the study was to determine the hospital employees’ health seeking behaviour in relation to mammography screening uptake. Free mammography screening was recommended by attending physician at the wellness clinic in University Malaya Medical Centre, to all female employees aged 40 and above regardless of any risk factors.

**Objectives:** The objectives of this study were to determine the prevalence, characteristics and factors associated with mammography screening among hospital employees.

**Methods:** This cross-sectional study was carried out on a universal sampling of 707 female employees aged 40 and above who were currently working in University Malaya Medical Centre, a teaching hospital in Kuala Lumpur. The period of the study was from June 2007 until November 2007. Employees who were diagnosed with breast cancer or had undergone breast surgery were excluded from the study. Ethical approval was received from hospital’s ethical committee. The pretested self-administered questionnaires in Bahasa Malaysia were mailed to all eligible employees. Independent variables were socio-demographic factors such as age, ethnicity, marital status, highest education level, occupation, history of breastfeeding (ever breastfed), family history of breast cancer, presence of medical illness and physician recommendation at wellness clinic. Outcome variable was ever had mammography screening.

**Results:** The response rate was 75.5%. The prevalence of mammography screening was 80.3% (95%CI: 76.8%, 83.5%). Most employees who ever had mammography screening were Malays and within the age of 45-49 years age, were married and worked as nurses. In the multivariate analysis, employees who had physician recommendation had significantly higher odds of ever had mammography compared to those who did not have recommendation, adjusted odds ratio of 21.25 (95% CI: 12.71, 36.56).

**Conclusion:** Consistent physician’s recommendation and opportunistic screening are recommended for the hospital employees and general population.

**Keywords:** ever had mammography screening, hospital employees, physician recommendation
Method: We adopted a qualitative study design. We carried out a total of 17 semi-structured in-depth interviews with post-stroke patients who were undergoing urut Melayu treatment at one of the three integrated hospitals. We solicited information from their accompanying carers whenever necessary. The two urut Melayu practitioners at the hospital were also interviewed. All the interviews were carried out in Malay by the authors, at the Traditional and Complementary Unit of the relevant hospital. The interviews were audio-taped, transcribed and coded into categories through a constant comparison method of data analysis. Illustrative quotations were identified to supplement the narrative descriptions of the themes.

Results: We identified four broad categories namely (i) patients’ post-stroke history, (ii) characteristics of urut Melayu for post-stroke, (iii) patients’ assessment of urut Melayu and (iv) patients’ assessment of other forms of post-stroke treatment.

Conclusion: Post-stroke patients reported positive physical and psychological outcomes following urut Melayu. There were also improvements on their activities of daily living. This study revealed that urut Melayu has specific unique characteristics not found in other similar treatments such as physiotherapy and acupuncture.

Keywords: Massage, Malay, urut Melayu, traditional Malay massage, qualitative, practitioners, post-stroke

Post 21

Prevalence and associated factors for optimal cardiovascular screening activities among apparently healthy school teachers in Kota Bharu, Kelantan
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Introduction: Cardiovascular disease is in rising trend in Malaysia. Screening for modifiable traditional risk factor related to cardiovascular disease is important for prevention and early detection of cardiovascular disease. Based on National health and morbidity survey (NHMS 2006) hypertension, hypercholesterolemia, diabetes (independent risk factor for CVD), smoking and obesity had a steady increase in its prevalence. The awareness of the people regarding hypertension, hypercholesterolemia and diabetes are relatively low based on findings in NHMS 2006. More than half of the Malaysian population led a physically inactive lifestyle.

Objective: This study is to determine the prevalence of optimal cardiovascular screening activities and associated factors for optimal cardiovascular screening activities among apparently healthy school teachers in Kota Bharu.

Methods: This is a cross sectional study which was conducted at 14 government secondary school in Kota Bharu. The questionnaire was a self-administered questionnaire which required responses on socio-demographic data, associated factors for cardiovascular screening activities and the last section comprised questions related to 8 cardiovascular screening activities.

Results: The prevalence of optimal cardiovascular screening activities was 29.3% (95% CI: 24.52, 34.08). Simple Logistic Regression showed that race (P=0.290), seeking treatment (P=0.290), health consultation (P=0.160), increasing age (P=0.026), accessibility to health center (P=0.212), periodic screening (P= 0.002), presence family history of CVD (P=0.008), asymptomatic for CVD (P=0.085) and utilization of health facilities (P=0.037) were significant associated factors. However, only health consultation (P=0.160), increasing age (P=0.026), accessibility to health center (P=0.212), periodic screening (P= 0.002), presence family history of CVD (P=0.008), asymptomatic of CVD (P=0.085) and utilization of health facilities (P=0.037) were significant by General Logistic Regression.

Conclusion: The prevalence of optimal cardiovascular screening activities was 34.3%. Health consultation, increasing age, accessibility to health center, periodic screening, presence of family history of CVD, asymptomatic of CVD and utilization of health facilities were the significant associated factors of optimal cardiovascular screening activities among apparently healthy secondary school teacher in Kota Bharu.

Keyword: Cardiovascular screening, teacher
Poster 22

Accuracy of an infrared temporal artery thermometer compared to the oral mercury thermometer
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Background: Many types of thermometers have been promoted in clinical practice and home use citing ease of use as the main criterion. Their performance in comparison with the standard oral mercury thermometer is generally known among the health practitioners.

Objective: To assess the validity and reliability of a forehead thermometer as compared to the oral mercury thermometer.

Methods: A cross-sectional survey was carried out among 200 patients (78 febrile and 122 afebrile patients), from inpatients in Hospital Tuanku Jaafar Seremban. An average of 3 readings from the forehead thermometer is compared with the reading obtained by the oral mercury thermometer. The data will then be analysed through 3 methods; the Pearson correlation, sensitivity and specificity table, and the limits of agreement as recommended by Bland and Altman, to assess the accuracy of the forehead thermometer as compared to the standard used in this research, the oral mercury thermometer. The febrile cut-off point agreed upon was ≥38°C.

Results: There is also a relatively strong linear correlation of the temperature measured by the forehead thermometer and the temperature measured by the oral mercury thermometer (r = 0.805; p<0.001). Sensitivity of the forehead thermometer is 89.7% and specificity is 88.5%. Positive predictive value is 83.3%. Bland and Altman scatter plot shows that 92.5% of the difference (between oral and forehead temperatures) lies within the limits of agreements (-1.4 to 1.4).

Conclusion: The forehead thermometer (Microlife FR 1DM1) is a reliable alternative to the oral mercury thermometer for yielding information on body temperature. It is easy to use, non-invasive and has a fast recording time. However, it use may be limited by its high cost (about RM200 per unit).

Keywords: fever, thermometer

Poster 23

Metabolic syndrome among indigenous Sarawakian adults attending health care centres in Kuching District
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Background: Prevalence of metabolic syndrome is increasing dramatically because of the rising number of people who are obese and inactive. Subjects with the metabolic syndrome are at increased risk for diabetes and cardiovascular disease (CVD).

Objectives: To estimate the prevalence of metabolic syndrome among healthy indigenous Sarawakian adults attending primary health care centers in Kuching District, Sarawak.

Methods: A cross sectional study was carried out on respondents attending primary health care centres in Kuching District, Sarawak for routine examination. Convenience samples of 227 healthy indigenous Sarawakian adults aged from 20–45 years were recruited for this study. Those who were having chronic diseases like diabetes, hypertension, hypercholesterolemia, heart disease and asthma was excluded from the study. The National Cholesterol Education Program
Adult Treatment Panel III criteria of metabolic syndrome were used for this study. Measurements of body mass index (BMI), waist circumference, fasting blood glucose and fasting plasma lipids and blood pressure were taken for analysis using SPSS version 16.0.

**Results:** From 227 respondents in this study 51.6% were female and 48.4% were male. The mean age and standard deviation (SD) of the respondents was 32.65±5.48 years, males were significantly older than females (33.9 and 29.5 years respectively). The mean BMI among the respondents was 29.4±5.3. Majority of the respondent were obese (36.8%) while 32.4% were overweight and only 30.8% had normal BMI. The prevalence of metabolic syndrome in this study was 23.5%. The five biochemical indices for diagnosing metabolic syndrome according to NCEP-ATP III criteria in this study showed that Low HDL-C was the highest prevalence (49.8%), followed by central obesity (28.8%) which was significantly more prevalent among females than males (45.9% vs. 23.3% respectively). High TG was prevalent among 23.5% while 21.3% of the respondents were suffering from high blood pressure and 18.2% from impaired fasting blood glucose.

**Conclusion:** The prevalence of metabolic syndrome is high among healthy indigenous Sarawakian adults attending primary health care centres in Kuching, Sarawak.

Poster 24

**Effects of spirometry test on the smoking behaviour among smokers**

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**Objectives:** To assess the effects of spirometry test and knowledge of lung age on the smoking behaviour among smokers.

**Method:** This was a randomized clinical trial conducted at the Klinik Kesihatan Bandar Baru Bangi, Selangor from February 2008 till June 2008. A total of 240 smokers who met the selection criteria were randomized into two groups. The intervention group comprised of 120 smokers who underwent spirometry test and given knowledge on their lung age. The control group comprised of 120 smokers who were given counseling as in usual care. The smokers were followed up at one month.

**Main outcomes measure:** The main outcomes were improved in stage of change towards smoking, decreased in the number of cigarettes smoked and self reported quit smoking rate.

**Results:** 110 smokers from the intervention group and 113 smokers from the control group completed the study given the respond rate of 88.75%. The results were analyzed as intention to treat. The improvement in the smokers' stage of change was significantly higher in the intervention group compare to the control group at one month. (81.8% compare to 69.9% respectively; p=0.042). The median different in the number of cigarettes smoked by smokers was significantly greater for the intervention group than the control group (4 compare to 3 cigarettes respectively; p=0.002) However, the study found that there were no significant different in self reported quit smoking rate at one month in intervention and control group (20% and 13.6% respectively; p=0.212)

**Conclusion:** Spirometry test and knowledge of smokers lung age effectively improved the smokers' stage of change and decreased the number of cigarettes smoked at one month. However, the intervention did not have significant quit smoking rate at the short duration of one month.

**Keywords:** spirometry test, smoking, behavioural change
Poster 25

Quit smoking in the perception of teenagers: Why is it so difficult?

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Background: The smoking prevalence among teenagers in Malaysia has increased despite many anti-smoking programs organised by the government.

Objective: To identify barriers for quitting smoking from the perception of teenagers.

Methods: Semi-structured qualitative interviews with 11 teenagers were held, involving 1 Focus Group Interview (FGI) and 2 In-Depth Interviews (IDI). All interviews were audio-recorded and the recorded conversations were transcribed into text. The transcriptions of the interviews were then analysed using NVivo7 to identify main themes and categories.

Results: In general, majority of the participants strongly believed in 'being in control' over their decision to quit smoking and thought that smoking cessation programmes available had minimal impact on them. Six main themes were identified as barriers related to teenagers that may contribute to their difficulty in quitting. They were (1) addiction and perceived dependence; (2) adolescents' personality and characteristic; (3) misconception about smoking and quitting; (4) low self efficacy or self control; (5) poor knowledge in methods to quit; and (6) peer and environmental factors.

Conclusion: Barriers for teenagers to quit smoking are not confined to personal factor alone. Environmental factors and addiction are also important. By identifying barriers perceived by the teenagers, more comprehensive strategies should be implemented.

Keywords: teenagers, smoking, quit, barriers, qualitative, anti-smoking programmes

Acknowledgement: This study was sponsored by Universiti Kebangsaan Malaysia (UKM-GUP-TKS-07-12-097).

Poster 26

The prevalence of iron deficiency and iron deficiency anaemia among army female recruits and the impact of combat training programme on their haematological indices level

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Introduction: Iron deficiency is the most prevalent micronutrient deficiency disease in the world. Malaysian Armed Forces has received growing increase in women enrolling into the profession and the special needs of these women should be addressed.

Objectives: To determine the prevalence of iron deficiency and iron deficiency anaemia among army female recruits and the impact of army combat training on their haematological indices.

Methods: A cross sectional prospective study involving 155 recruits was done from 15th November 2008 to 30th April 2009. Venous blood sample for haemoglobin, serum ferritin was taken before and at the end of 16 weeks of army combat training. Those who were anaemic received treatment.
Result: Prevalence of iron deficiency before training was 5.9% and iron deficiency anaemia was 21.9%. After 16 weeks of training, among the non anaemic group, 15.4% had iron deficiency and 12.8% had iron deficiency anaemia. Among the 'anaemic and treated' group, 9.1% had iron deficiency and 12.1% had iron deficiency anaemia. The combat training had an impact on the haematological indices (p<0.005).

Conclusion: These data indicate that female recruits experience diminished iron status following training and iron supplementation may prove to be beneficial in preventing decline in iron status of recruits.

Keywords: anaemia, iron deficiency, female, army

Poster 27

Patient’s compliance to antihypertensive medication among the hypertensive patients in a primary care clinic
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Background: Patients’ compliance to treatment is the cornerstone of any management plan. This is particularly important especially in chronic diseases such as hypertension with the obvious intention of preventing or perhaps slowing down the complications of the disease.

Objectives: The primary objective of this study was to assess patient’s compliance to antihypertensive medication among the hypertensive patients. Secondly this study also looked into the type of therapy that the patients used either conventional, alternative or combination of both therapies.

Methods: This was a cross sectional study on hypertensive patients aged above 18 years, in a primary care clinic, Kuala Lumpur. The data collection was done in the last week of April 2009 and involved all the consented patients attended the hypertensive clinic. Patients who were pregnant or illiterate were excluded from this study. The patients were asked to answer a set of self administered questionnaire which contained patients’ socio demographic profile and an adapted version of Hill-Bone compliance to hypertensive therapy scale. The patients were also asked to state on their therapy used to control their blood pressure.

Results: A total of 341 patients were included in the study. The male to female ratio was 1:1.15 with Malay predominance (50.4%). More than half of the respondents (63.4%) were noncompliant to antihypertensive medication. About a third (111, 32.6%) of the patients admitted of using combination therapy of conventional and alternative therapy. None of them admitted using alternative therapy alone. The combination therapy patients were found to significantly associated with noncompliance to antihypertensive medications (p=0.001).

Conclusion: Despite the advancement in our medical therapy; patients’ compliance remains an important issue to be addressed. This is particularly so with the emerging popularity of alternative treatment in the community which had actually affected their treatment adherence and in this study their compliance to antihypertensive medication.

Keywords: Hypertension, compliance, Hill-Bone compliance scale
Poster 28

Understanding of cardiovascular disease screening among premenopausal women in Kelantan and Terengganu: A qualitative study

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Background: Wellness clinic (well adult clinic) which incorporates cardiovascular screening has been introduced in all health clinics in Malaysia since the late 1990s under the seventh Malaysian Plan. However, the understanding of cardiovascular disease screening especially among women is not known.

Objectives: The aim of the study was to explore the understanding of cardiovascular disease screening among premenopausal women.

Methods: A qualitative study by using 3 focus group discussions was undertaken among premenopausal women in the state of Kelantan and Terengganu, Malaysia between May and July 2009. Each group consisted of between six to 10 respondents. Each interview lasted between one to two hours and guided by specific themes. Interviews were then recorded, transcribed and analysed.

Results: Respondents were aware that heart disease is one of the serious diseases that can affect women. They seemed to have the knowledge of the factors that can cause cardiovascular diseases especially high cholesterol, hypertension, diabetes and obesity. They also perceived that screening for these risk factors should start after the age of forty years old or at least before menopause. However, they could not relate that cardiovascular screening actually refers to screening for the risk factors for cardiovascular diseases. Despite that, they knew the methods for screening for these risk factors. Majority of these women never had any voluntary screening during asymptomatic period because they perceived themselves as healthy.

Conclusion: There is a mismatch between the understanding of cardiovascular disease and cardiovascular disease screening among premenopausal women.

Keywords: cardiovascular screening, premenopausal, qualitative, understanding

Poster 29

Metabolic syndrome in an urban outpatient clinic.

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Background: Metabolic syndrome is now a major public health problem. It is a clustering of metabolic abnormalities that can potentially develop into cardiovascular diseases. Limited information is available about metabolic syndrome in Asian population. This study was done to find out on the prevalence of metabolic syndrome in an outpatient population and other associated characteristics.

Objectives: To determine the prevalence of metabolic syndrome among the patients in an urban outpatient clinic; to determine the socio-demographic characteristics and their association to metabolic syndrome; to determine the cardiovascular related characteristics and their association to metabolic syndrome.
Methods: This was a cross sectional study done at an urban, hospital based outpatient clinic from 1st March to 30th June 2005. The sample size was calculated at 250. It was a convenient sampling done once a week. The samples were systematically randomized to every 5th person on the day of sampling. Inclusion criteria were walk in patients and aged above 18. Exclusion criteria were pregnant women and psychiatric disorders. Patients’ consents for participation were taken. Background data and blood for fasting blood glucose and lipid profile were taken. If the fasting glucose was less than 6.1 mmol/L, patients were subjected to oral glucose tolerance test. Metabolic Syndrome was diagnosed using ATPIII criteria. Data were analysed using SPSS 10.0.

Results: Total sample was 250 with response rate of 73.2%. The major proportion of participants were females (55.8%), aged 51 to 60, Malays (39.2%), overweight (44.2%), semi-skilled workers (30.9%), non smokers (82.7%) and physically inactive (80.6%). The prevalence of metabolic syndrome was 56.4%. The significant socio-demographic associations with Metabolic Syndrome were older age (OR 1.39, 95%CI: 1.00 to 1.92, p=0.016), higher body mass index (OR 2.39, 95%CI: 1.20 to 4.76, p<0.001), abnormal waist circumference WC (OR 15.86, 95%CI: 7.59 to 33.11, p<0.001). The significant cardiovascular related characteristics were diabetes, Hypertension, impaired fasting sugar, high Triglyceride level (TG), abnormal High density Lipoprotein level and blood pressure >130/85, p<0.001. Further regression analysis done showed high TG level, abnormal WC, abnormal sugar profile were the 3 stronger association to predict Metabolic syndrome in this population.

Conclusion: Prevalence of Metabolic Syndrome in this urban, hospital based outpatient clinic was high. High TG level, abnormal WC and abnormal sugar profile were seen to predict metabolic syndrome better. The health provider managing urban outpatients may need to address specific group of patients according to the significant socio-demographic and cardiovascular risks found during their consultations for earlier disease identification.

Keywords: Metabolic syndrome, ATPIII criteria

Poster 30

A case-report on drug-induced lupus erythematosus with the use of herbal medication
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Background: Drug-induced lupus erythematosus (DILE) is defined as development of lupus like symptoms after a drug exposure in patient without prior history of systemic lupus erythematosus (SLE), which resolves rapidly with cessation of the offending drug. At present, there are no formal criteria available for the diagnosis except for the presence of several features that commonly seen during the exposure period. These include; fever, musculoskeletal involvement, serositis and positive results of both antinuclear antibody (ANA) and antihistone antibody

A 24 year old lady presented with four days history of fever, non-pruritic skin rash, ankle pain and swelling. The rash initially started on the extremities and later became generalized. She had consumed herbal medication, five days before the onset of symptoms. Examinations revealed generalized erythematous maculo-papular lesions of varying sizes, which were more concentrated on the face, dorsum of hands and feet. Lesions on the face had a malar distribution. Diagnosis of drug induce lupus secondary to herbal medication was made and medication was withheld. Fever, skin lesions and painful ankle oedema subsided and patient had complete recovery within two weeks.

Results: Initial full blood count investigation was normal except for a raised eosinophils level (3.1 x 10^9/L). Urine analysis revealed presence of protein of 1+. Erythrocyte sedimentation rate (ESR) was raised (30mm/hr). ANA was positive with a homogeneous titer of 1: 640. Anti double stranded DNA (EIA) was positive. Serum C3 complement was minimally raised, (154; normal 79-152) and C4 was low 12.1 (Normal 16-38). Rheumatoid factor was negative. Liver function test was normal. The investigations revealed negative results for RPR, antihistone antibody, Anticardiolipin for IgG and IgM, SSA/ Ro 52, SSa/ Ro60 and SSa/ La test. Urine protein creatinine index was normal.
Conclusion: This case highlights the importance of a detailed drug history regarding herbal or over the counter medications in patients presenting with lupus like symptoms. This is essential as drug induced lupus has rapid recovery on removing the offending drug as opposed to systemic lupus erythematous.

Keywords: Drug-induced lupus erythematosus (DILE), herbal medication

Poster 31

Malaysian Army Cardiovascular Risks and Obesity Study (MACRO) in Melaka, Malaysia.
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Background: Cardiovascular risk factors Abstract: Body mass index currently is part of the health indicator in Malaysia Armed Force health service. This study was undertaken to investigate the prevalence of overweight and obesity among male soldiers in Melaka and its association with cardiovascular risk factors. A few studies in Malaysia indicated that the prevalence of overweight and obesity seemed to be increasing in the general population recently.

Methods: A cross sectional study was performed on 392 Malaysian Army personnel aged more than 20 years old between January and Jun 2008. Anthropometric measurements, blood pressure and a brief medical history were obtained in a pre-set questionnaire. Serum lipid profile and fasting plasma sugar were requested for all the subjects.

Results: The results showed that the prevalence of overweight and obesity in Malaysian male soldiers were 30.1% and 15.6% respectively. There were high prevalence of other CVD risks such smoking (75.5%), hypertension (20.7%), hypercholesterolemia (29.3%), high LDL-C (8.9%) and low HDL-C (25.3%). The mean value of age, blood pressure in overweight and obese personnel was significantly higher than those of non-overweight personnel. Age, body fat composition, smoking and frequency of exercise were significantly correlated with obese army personnel. No significant different in means of cardiovascular risk factors among combat and non-combat personnel except for systolic blood pressure (114.27±16.36, 117.67±14.29; p=0.029).

Conclusion: In conclusion, the prevalence of overweight and obesity among male soldiers in Malacca was high and positively correlated with other cardiovascular risk factors. This study will give a benefit for the Malaysian Armed Force Health Service directorate to plan a comprehensive preventive program for the soldiers in the future. There is a need to achieve an ideal body weight together with a reduction in the co-existent risk factors for cardiovascular diseases.

Keywords: Overweight, obesity, army personnel

Poster 32

Perception of health in relation to cardiovascular disease among premenopausal women in Kelantan and Terengganu, Malaysia
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Background: Cardiovascular disease (CVD) is the leading cause of death among women. Heart attack symptoms in women may be atypical and differ from men, more severe, have a higher mortality and higher risk for a second attack. Despite all this, many women still believed that CVD is a greater threat to men’s health.

Objectives: To explore how premenopausal women in Kelantan and Terengganu perceived their health in relation to cardiovascular disease.
Methods: A qualitative research was conducted from February to July 2009 in the district of Machang in Kelantan and Kerteh and Setiu in Terengganu. A total of 23 women aged 35 years and above, premenopausal, no medical illness and willing to cooperate were conveniently selected to be the respondents. Two focus group discussions (FGD) were conducted in Terengganu and one in Kelantan by a trained moderator. Interviewer guide was developed to facilitate the discussion. All the discussions were audio recorded and transcribed verbatim. Analysis was done using NVIVO Version 2.0.

Results: Health was being perceived by the respondents as having both the internal and external elements, internally it relates to one’s happiness and spirituality whereas externally it relates to physical ill health. All of them believed that they can stay healthy by doing exercise and controlling their diet. However, those in younger age group also claimed that taking ‘jamu’ (traditional supplement), vitamins and practising sauna bath were also helpful. Most of the respondents claimed that hypertension and diabetes are the most common diseases among women but cancer is the number one killer and the one that they feared most. They understood CVD as coronary heart disease and having heart attack. Chest pain, epigastric pain and shortness of breath were the symptoms that they related to CVD. They knew that they can prevent the disease by doing exercise, practice healthy diet and handling stress. However, many of them believed that women are less susceptible to get CVD compared to men.

Conclusion: Perceived susceptibility and severity of CVD and the benefits of preventive action are clearly influencing the women’s idea of looking after their cardiovascular health. Obviously, more education on CVD is needed to make them understand about the disease and their risk to get it.

Keywords: Qualitative research, health, cardiovascular disease, premenopausal women

Poster 33

Health literacy and its relationship with self-rated health status and knowledge of chronic diseases among primary care patients in Singapore

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Background: Health literacy refers to the capacity to obtain and understand basic health information and services to make appropriate health decisions. Limited health literacy has been independently associated with poorer understanding of chronic diseases, increased hospitalizations, higher healthcare costs and worse self-rated health in Western countries.

Objectives: This study investigates health literacy in English-speaking patients attending public primary care clinics in Singapore and its relationship with socio-demographic factors, self-rated health status and knowledge of 3 common chronic conditions: asthma, diabetes and hypertension.

Methods: A cross-sectional, anonymous, interviewer-administered survey was conducted in three polyclinics in Singapore over a four week period in 2008. Participants were adult patients who could speak and read English and had no cognitive or hearing impairment. Health literacy was assessed using two health literacy instruments: the Newest Vital Sign (NVS), a nutrition label with 6 questions, and the Health Literacy Test for Singapore (HTLS), an adaptation of the abbreviated version of the Test of Functional Health Literacy in Adults (S-TOFHLA) comprising a comprehension and a numeracy section. Participants were asked their language preferences, if they or their family members had asthma, diabetes or hypertension, to rate their health and tested on their knowledge of three common chronic conditions: asthma, diabetes and hypertension. Statistical analysis was carried out with SPSS version 15. Multivariate analyses was performed to examine the association between socio-demographic factors, language preference, presence of chronic disease, self-rated health status, knowledge of chronic diseases and health literacy scores.
Results: Of the 302 English-speaking participants, 231 (76.5%) scored >4 (out of a total possible score of 6) on the NVS and, 267 (88.4%) scored >75% on the HLTS indicating adequate health literacy. On multivariate analysis, younger age and larger housing type was significantly associated with adequate health literacy (p<0.005). Respondents with adequate health literacy were more likely than those with limited literacy to report good or excellent health status (adjusted OR 1.98, 95%CI 1.10–3.56). Higher health literacy scores were associated with higher scores on the chronic disease knowledge test (p<0.005).

Conclusion: Most English-speaking patients attending the polyclinics in Singapore have adequate health literacy. Adequate health literacy in these patients is significantly associated with younger age, higher socio-economic status, better self-rated health status and better knowledge of chronic diseases.

Keywords: Health literacy, self-rated health, knowledge, chronic disease, primary care

Poster 34

Burden among caregivers of patient with dementia in Hospital Universiti Sains Malaysia
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Background: Dementia have been linked to numerous negative outcomes in caregivers, including psychological disturbances, physical health problems, relationship changes and social activity restrictions. Caring for relatives with dementia is assumed to be more difficult and burdensome than caring for loved ones with other chronic conditions and disabilities.

Objectives: To determine the degree of burden among caregivers of dementia patient and factors associated with higher burden.

Methods: A cross-sectional study involved caregivers of dementia patients attending Family Medicine Clinic (KRK), Physician Clinic and Psychiatric clinic, HUSM from January 2008 to January 2009. The level of burden was assessed by Malay version Zarit Burden Interview and assessment of depression with Malay version Brief PHQ-9.

Results: A total of 150 caregivers, 69.3% experienced mild burden, 28.0% experienced moderate burden and 2.7% experienced severe burden. 17.3% of caregivers scored 5 or more on PHQ-9 suggest of possible depression. Level of education (p=0.001) and caregiver responsibilities (p<0.001) were significantly associated with caregiver burden. Primary level of education experienced more burden than those of secondary (p=0.012) and tertiary level of education (p=0.001). Caregiving full time (p<0.001) and sharing care with siblings (p<0.001) experienced more burden than those who were responsible for financial support, transport and other.

Conclusion: Burden among caregivers is common. Factors related to caregivers burden such as caregiver level of education and type of responsibility. Those who provide fulltime and sharing care experience more burdens. Screening of depression among the caregivers is also important. Early recognition of caregiver burden and depression are essential as the family is the most important support in care of elderly.

Keywords: caregiver burden, dementia, depression
Poster 35

TPC Diabetes Registry, Kangar Health Clinic 2007-2009
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Background: Teleprimarycare (TPC), an electronic medical record (EMR) was first deployed at Kangar Health Clinic in October 2006 and beginning first quarter 2007, this clinic is fully computerized. Diabetes Mellitus is a common chronic disease in Malaysia affecting 14.9% of the adult population in 2006, hence developing EMR based diabetes registry is very important for the better management of this disease. Currently, Diabetes Registry Malaysia - An Audit of Diabetes of Control and Management (DRM-ADCM) is the standard format for diabetes registry dataset and has been implemented since 2008. However, this registry which requires an online input data of individual patients entered once a year has its own limitations in registering highly prevalent disease.

Objective: To describe the available data in TPC database in concordance with data requirement of DRM-ADCM and to evaluate status of diabetes control at Kangar Health Clinic from 2007 till September 2009.

Methods: Data extracted from TPC Microsoft SQL database and later analyzed using Microsoft Office Excel, Access and SPSS. Registered active patient defined as patient’s registered visit record at least once during a calendar year with diagnosis of Type 2 Diabetes Mellitus (ICD-10 code = E11; TPC code = 6296).

Result: There were 3,256 active patients in year 2007, 3,113 in 2008 and 3,005 in 2009 (Jan – Sept). More than 60% of active patients were female, 86% were Malay ethnic and between 50-59 years old were the highest age group. Total number of physical examination and blood investigations performed had increased over the years around 60 to 80% of patients. In 2009, 80.0% of patients received pharmacotherapy for diabetes treatment, 65.6% were on antihypertensive agents and 53.8% had antihyperlipidaemic agents. The control of diabetes by HbA1c < 6.5% had improved from 14.7% (2007) to 26.1% (2008) and 23.5% (2009). LDL Cholesterol < 2.6 mg/dl improved from 28.8% (2007) to 35.3 (2008) and 32.8 (2009). However other target parameters like BMI, BP and FBS, 2HPP, triglyceride and HDL Cholesterol were not better. Performing and recording ECG and fundoscopy were poor so do other co-morbidities and complications evaluation but improving trend over the years. It was noted Chinese ethnicity had better HbA1c control less than 6.5% at 30.3% as compare to Malay and Indian at 20.3% and 20.7% respectively.

Conclusion: Available TPC database is able to fulfill the requirements of diabetes registry dataset and overall diabetes control at Kangar Health Clinic had shown some improvement.

Poster 36

Blood pressure control in a primary health care clinic
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Background and objectives: Hypertension is a very common disease seen in primary care setting and it is known that it is difficult to achieve treatment goal among hypertensive patients. This cross-sectional study describes the blood pressure (BP) profile of hypertensive patients and examines the predictors for poor blood pressure control in a hospital based primary health care clinic in Malaysia.

Methods: Screening was done among patients who attended the primary Care centre from 1st June 2009 to 31st July 2009. Only eligible patients who are willing to join the study will be preceded to a face to face interview. Measurement for subject’s blood pressure, weight, height and abdominal circumference were obtained. According to the WHO (2007), a good BP control is defined <140/90 in a simple hypertension, <130/80 for those patient with underlying diabetes without proteinuria and <125/75 for those diabetic patient with proteinuria.
**Result:** A total of 428 subjects participated in this study. The response rate was 68%. Results from the study show 57.5% of the surveyed patients had achieved blood pressure of $<140/90$. 49.7% patients consume only one type of antihypertensive agent and half of these managed to achieve the stage I pressure control and 48% of the patients were CCB. Compared to those hypertensive with underlying diabetes, only 20.1% manage to achieved optimal blood pressure $<130/80$. Among these 143 diabetic patients, 30.8% (44 patients) had microalbuminuria and only 10.9% achieved an optimal blood pressure control $<125/75$. The mean of systolic and diastolic blood pressure of the surveyed patient were $137 \pm 14$ mmHg and $82 \pm 8$ mmHg respectively. The subsequences finding had show that the predictors for poor blood pressure control are patients with Metabolic syndrome ($p$-value 0.000, CI: 1.48-3.53) and without a home blood pressure monitor. ($p$-value 0.006, CI: 0.36-0.85).

**Conclusion:** Hypertension is still a sub-optimally treated despite of the availability of the effective drugs. Every effort should be made to lower blood pressure by using a multi-factorial approach and intervention.

**Keywords:** blood pressure, control, primary health care clinic

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**Poster 37**

**Factors affecting the management of anxiety disorders in primary care: a qualitative study.**

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**Background:** Anxiety disorders are highly prevalent in primary care. However, only half to two-thirds of these episodes are identified during clinical consultation. If these disorders are missed, the impact is considerable not only towards the patient, but also to the primary care service itself and the society. Unfortunately, factors affecting the management of anxiety disorders in primary care are not fully understood. Previous studies have looked into anxiety disorder from different angles, but none of them have specifically explored the factors influencing its management. Hence, this project is undertaken to find the buried clues to this unanswered question.

**Objectives:** To explore factors affecting the doctors’ management of anxiety disorders in a primary care setting.

**Methods:** Prospective qualitative study using focus group discussions (FGDs) and semi-structured in-depth interviews (IDIs). All sessions were audio-recorded digitally, transcribed in full and analyzed to look for emerging themes. Thirty three doctors working in the Primary Care Clinic, University Malaya Medical Centre (UMMC), Kuala Lumpur, Malaysia from 13th November 2006 until 12th January 2007 participated in this study.

**Results:** Two categories of factors were identified. The first is uncertainty in clinical practice during the diagnostic and treatment process. This includes ambiguity of patient's presentations, difficulties in making diagnosis, time constraint, the complexity of the disorders themselves, lack of availability of diagnostic tools, perception of having limited role and confidence in managing anxiety disorder themselves as compared to the psychiatrist and certain drugs issues. The second factor is other forces influencing their practices, such as lack of knowledge, negative doctors’ attitudes, perception of anxiety disorders as less important compared to other medical conditions, doctor’s pre-occupation with physical illnesses, some particular patients’ and organisational factors, medico-legal issues, social stigma and the patient’s preference towards alternative treatment.

**Conclusion:** This study revealed several barriers faced by the primary care doctors in managing anxiety disorders which need to be overcome in order to provide an optimum care to their patients with this debilitating condition.

**Keywords:** Anxiety disorders, primary care, general practice, family medicine.
Poster 38

Sleep profile of elderly patients attending an urban primary care clinic: a cross sectional study

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Background: The altered sleep patterns affecting the elderly are often dismissed as a natural ageing process. Most patients regard this problem as trivial and rarely discuss the matter or seek help from their primary care providers.

Objectives: To determine the sleep profile and the associated factors affecting sleep of elderly patients attending an urban primary care clinic.

Methods: Patients were assessed by using self administered Pittsburgh Sleep Quality Index (PSQI), HADs and sleep hygiene questionnaires. An inquiry on psychotropic medication usage to aid sleep was also included. Descriptive statistic plus correlation tests were used for analysis.

Results: 123 respondents were studied. The mean age of the respondents was 69.15 ± 5.32 years. The prevalence of poor sleep quality was 47.2%, 71.3% had poor sleep hygiene and 23.9% had psychological distress. Psychotropic drug usage was 6.5%. Poor sleep quality was significantly associated with older age (p<0.05), heart diseases (p=0.036, OR 2.5, 95% CI 1.05, 6.36), inadequate sleep (p<0.01, OR 0.23, 95% CI 0.09, 0.56) and psychological distress (p=0.02). Sleep hygiene contributed 10% of sleep disturbance. Sleep components were mildly affected with most frequent disturbances found in using bathroom, waking up from sleep in the middle of night and difficulty falling asleep. Among common inadequate sleep hygiene practices were absence of specific rituals prior to sleep, lengthy daytime naps, exercising before bedtime, checking for time whenever awaken from sleep and lack of sun exposure.

Conclusion: Sleep disturbance among the elderly should be actively screened and sleep hygiene education should be included as part of intervention.

Keywords: sleep profile, elderly, primary care

Poster 39

Malaysia primary care providers' characteristics and workload: the national primary care survey

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Background: Primary care delivery in Malaysia comprised of a publicly run sector including the health centres and the privately own general practice. An understanding of the characteristics and workload would facilitate the planning of our health care system.

Objective: To describe the characteristics and workload of primary care doctors in Malaysia.

Methods: It was a cross-sectional study at 100 public health centers and 114 private primary care clinics which were randomly selected, using self-administered questionnaire on all practicing doctors to collect data on demographic, numbers of patients seen and working hours per week, in a typical working week.
Results: A total of 254 doctors responded, 207 (60.5%) doctors from 82 public clinics and 44 general practitioners (GP) from 38 private clinics. There were more female doctors who responded (162, 63.8%); although in private practice more male doctors responded (31, 70.5%). Comparing doctors in the public and the private clinics: mean age 35 years vs. 49 years (p<0.05); possession of post-graduate qualifications 29 (13.9%) vs 11(25%) (p<0.068), workload per week: number of patients seen 250 vs. 184 (p<0.007); numbers of working hours 33.4 vs 51.3 (p<0.05); hours spent on administrative works 6.0 vs 6.9 (p<0.315).

Conclusion: In this study, there were more female doctors in the primary care workforce; older and more male doctors were in private practice. Doctors in public clinics compared to private GPs were younger, had less postgraduate qualifications, saw more patients per week but working lesser hours.

Keywords: Primary care doctors, Family physicians, General practitioners, workload, Malaysia

Poster 40

A report on diabetes control and complication: the Malaysian Diabetes Registry

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Background: The Diabetes Registry Malaysia (DRM) is made up of Diabetes in Children and Adolescent Registry (DiCARE) and An Audit of Diabetes Control and Management (ADCM). The ADCM started in May 2008 and the online databases are managed by the secretariat based at Clinical Research Centre, Hospital Kuala Lumpur. The ADCM’s online databases have its main source data providers (SDP) from government health clinics throughout Negeri Sembilan (NS), Selangor and Perak.

Objective: To determine the diabetes control profile in relation to complication rates.

Methods: An online standard case record form (CRF) in the DRM_ADCM website is made available for sites SDP to capture the latest data of all diabetes patients aged 18 years old and above. Every new calendar year would require new notification of CRF. The biostatisticians in the Clinical Research Centre of the Ministry Of Health are handling the data cleaning and analyses for this report.

Results: 20330 patients were in the registry until 31st December 2008, 89.8% were from NS and 10.1% from Selangor. Majority were type 2 diabetes mellitus (99.1%). 56.6% were female; mean age was 57.9 years (SD 11.58) with 76.8% of them aged above 50 years old. Malay consisted of 56.3%, Chinese 19.5%, Indian 22.5% and other races 1.7%. 64.1% had their HbA1c tested and out of this, 30.3% and 18.0% attained HbA 1c < 7% and HbA 1c < 6.5% respectively. Despite similar diabetes control (HbA 1c < 6.5%) for the two genders (χ²=1.32, p= 0.257), female seem to suffer more microvascular complications (microalbuminuria, χ²= 33.05, p<0.001 and GFR<60 ml/min, χ²=753.54, p<0.001) as compared to men who suffered more from macrovascular complications (ischaemic heart disease, χ²=57.61, p<0.001 and stroke, χ²=13.87, p<0.001).

The Chinese, despite having the largest proportion achieved HbA1c < 6.5% among three main races (χ²=71.64, p< 0.001), did not obtain lesser complications from nephropathy (12.5% in Chinese compared to 11.0% in Malay and 16.1% in Indian had GFR< 60 ml/min respectively), ischaemic heart disease (6.4% in Chinese compared to 7.5% in Malay and 7.4% in Indian; χ²=5.67, p = 0.532) and stroke (2.3% in Chinese compared to 1.9% in Malay and 1.3% in Indian; χ²=15.38, p = 0.078). 42.6% of those aged 65 years old and above achieved HbA1c < 7% compared to 19.5% aged below 65 years old. There was an increasing trends of all complications rate in older patients except nephropathy which was more prevalent in younger age groups (19.3% had GFR< 60 ml/min among those aged < 65 years old compare to 6.1% among 65 years and older). Similar phenomena was seen in the longer duration of diabetes, the worse diabetic control with the higher complication
rates except nephropathy (12.6% had GFR< 60 ml/min among those with diabetes < 10 years compared to 10.8% among those with diabetes > 10 years; χ²=168.76, p<0.001).

Conclusion: Two thirds managed to have HbA1c tested at least once per year and slightly less than one third achieved HbA1c < 7%. The relationships between diabetic control and complications were not as straightforward as expected. There must be other factors causing different gender to have different complications; possible socio-genetic factors underpinning Chinese diabetics suffering from as many complications despite relative better disease control compared to other races. Those that were well-controlled seem to survive into older age and less suffered from nephropathy.

Keywords: Diabetes Registry Malaysia (DRM), diabetes control, diabetic complications

Poster 41

Assessment of the Level One of the Quality Improvement Program of the Academy of Family Physicians Malaysia

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(Members of the Quality Improvement Program of the Academy of Family Physicians, Malaysia)

Background: The concerns for standards and quality of general practice clinics were raised in 2004 at the Council Meetings of the Academy Family Physicians Malaysia, and as such a committee was set up to develop and promote a Quality Improvement Program among the general practitioners in Malaysia. The committee proposed a program of three levels of clinic quality improvement to reflect the structure, processes and outcomes of clinic management of patients.

Objective: To determine the standard of Level 1 of the Quality Improvement Program in participating clinics.

Method: A questionnaire was prepared after studying various international quality programs for primary care including Singapore and Australia where practices in these countries resembled Malaysian practices closely. The questionnaire outlined details of personal data, practice data, practice environment, facilities, services and others included items of registers for chronic illnesses, any special procedures or investigations that are carried out in the clinic. In personal data and practice data all information was essential requirement. In practice environment, facilities, services and others, there were items that were essential and items that were non-essential. All essential items needed to be compiled with. The questionnaire was sent to participant doctors in 52 clinics where after completion the questionnaire and return to the secretariat. The returns of the questionnaire were tabulated to appraise the level of adherence to the essential requirements and to non-essential items.

Results: 100% of the clinics adhered to all the essential requirements while only 52% met the non-essential details.

Conclusion: It was shown that compliance to essential requirements of the Level 1 of the Quality Improvement Program has been good, however, it is necessary to advise the participants to improve the non-essential aspects of the requirements in order to achieve optimal quality in general practice.
Primary care doctors’ intention to engage men in health assessment: Weighing the balance between men’s receptivity and medical importance

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Background: Men’s health issues are prevalent in primary care settings and primary care doctors (PCDs) are well positioned to offer health assessment, but men’s health issues are often not discussed in the consultation.

Objectives: This study aimed to develop a substantive theory to explain the process of decision making by primary care doctors in engaging men in health assessment.

Methods: Grounded theory method was adopted. Data source was from 10 in-depth interviews and 8 focus group discussions conducted with a semi-structured guide. Interviews were recorded and transcribed verbatim for analysis. Initial open coding captured the concepts of processes from the data, followed by selective and theoretical coding to saturate the core category. Constant comparative method was used throughout the process to allow emergent of the theory.

Results: 48 PCDs from private and public settings were interviewed. PCDs engaged male patients in health assessment when they associated high medical importance with the relevant issues. The decision to engage men also depended on perceived chances of success in negotiations about health assessment. High chance of success, associated with minimal negotiation effort, is associated with men being most receptive to health assessment. However, the higher the perceived importance of a health issue, the lesser the influence of men’s receptivity on the doctors’ intention to engage men in health assessment. Additional to the intention to engage men in health assessment, the final decision is also influenced by perceived external barriers and individual doctor’s competencies in delivering health assessment. The main external barrier is time constraint.

Conclusion: The process of decision making involves the intention to engage men in health assessment. This intention depends on the perceived balance between the receptivity of male patients and the medical importance of the issues in mind.

Keywords: Men’s health, health assessment, preventive health service, family practice, decision making
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Poster 43

Coughs and colds: the influence of the work place on primary care utilisation
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Background: Work plays an important role in illness causation, response and health care utilisation. A significant load of primary care utilisation in Malaysia is contributed by minor ailment consultations particularly for coughs and colds. Yet, little is known about how work places issues are involved in driving these consultations.

Objectives: This study was carried out to explore the proportion of primary care consultations carried out for coughs and cold. This paper specifically addresses how work place factors influence health care utilisation for such conditions.

Methods: A mixed methods research was conducted among patients who consulted primary care doctors with coughs and colds using Parson’s Sick Role Model as a theoretical framework. This was carried out in four public health centres and 28 private clinics in an urban area within the state of Selangor. The quantitative study was a cross-sectional study on working adults between the ages of 15 to 64 years. Data were analysed using bivariate and multivariate statistical analyses. In the embedded qualitative study, 50 respondents were purposively sampled for in-depth interviews. The interviews were recorded, transcribed and analysed using thematic analyses.

Results: Patients with coughs and colds constituted 16.1% of the overall patient load, with the proportion being higher in the private clinics (21.5%) compared to public health centres (15.1%). A total of 1453 patients responded to the cross-sectional study (response rate 93.4%). The majority of the respondents were employed in the private sector (74.2%) and worked as plant and machine operators (19.2%). Civil servants and self-employed respondents were more likely to use public clinics compared to private sector employees (OR 11.86; 95% CI 6.54 to 21.52; p< 0.001 and OR 6.83; 95% CI 3.74 to 12.50; p < 0.001). Qualitative transcripts revealed that employment medical benefits provided resources to consult doctors for minor ailments. These ailments have varying impact on individuals’ adoption of the sick role depending on illness sanctioning policies at the workplace as well as their work roles and responsibilities.

Conclusion: Work place factors play a significant role in influencing primary health care utilisation for minor ailments in Malaysia.

Keywords: minor ailments, health care utilisation, primary care, work

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A report on disease control: the Malaysian Diabetes Registry
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Background: The Diabetes Registry Malaysia (DRM) consists of Diabetes in Children and Adolescent Registry (DiCARE) and An Adult of Diabetes Control and Management (ADCM) Registry. The ADCM started in May 2008 and the online databases are managed by the secretariat based at Clinical Research Centre, Hospital Kuala Lumpur. The information available from the registry can be used to estimate incidences of different type of diabetes and evaluate its risk factors and treatments in the country. The ADCM’s online databases have its main source data providers (SDP) from government health clinics throughout Negeri Sembilan (NS), Selangor and Perak. It is hope that all the health care facilities which treat diabetes patients will join in as SDP in the future for representativeness of the data in the country.

Objective: To determine the disease control profile of the diabetic patients up to 31st December 2008.
Methods: An online standard case record form (CRF) in the DRM_ADCM website is made available for sites SDP to capture the latest data of all diabetes patients aged 18 years old and above. Every new calendar year would require new notification of CRF. The data was retrieved from the registry until 31st December 2008. The biostatisticians in the Clinical Research Centre of the Ministry Of Health are handling the data cleaning and analyses for this report.

Results: 20330 patients were in the registry until 31st December 2008, 89.8% were from NS and 10.1% from Selangor. Majority of the cases were Type 2 Diabetes Mellitus (99.1%), 56.6% were female; mean age was 57.9 years (SD 11.58) with 76.8% of them aged above 50 years old. Malay consisted of 56.3%, Chinese 19.5%, Indian 22.5% and other races 1.7%. 65.9% were hypertensive and 36.3% had dyslipidaemia. 14% had body mass index below 23 Kg/m2. 8.5% of men had waist circumference (WC) < 90 cm as compared to 5.3% women had WC < 80 cm. The means Random Blood Glucose (RBG) and Fasting Blood Glucose (FBG) were 10.9 mmol/L (SD 4.30) and 8.7 mmol/L (SD 3.45) respectively; 14.5% and 13.9% attained RBG<8 mmol/L and FBG<6 mmol/L respectively. The mean HbA1c was 8.3% (SD 2.16) and 11.6% achieved HbA1c < 6.5%. The means systolic blood pressure (SBP) and diastolic blood pressure (DBP) were 136.4 mmHg (SD 19.11) and 80.8 mmHg (SD 9.91) respectively, and 15.6% had blood pressure below 130/80 mmHg. The means total cholesterol (Total-C) was 5.2 mmol/L (SD 1.28), triglyceride (TG) was 1.9 mmol/L (SD 1.18), high density lipoprotein cholesterol (HDL-C) was 1.4 mmol/L (SD 0.72) and low density lipoprotein cholesterol (LDL-C) was 3.2 mmol/L (SD 1.17). 21.5% had their LDL-C controlled below 2.6 mmol/L.

Conclusion: There was only slightly more than one tenth of diabetic patients were well-controlled according to 2009 clinical practice guideline on Management of Type 2 Diabetes Mellitus. A huge majority had obesity and hypertension as co-morbidity. Most did not have effective treatment for their blood pressure and dyslipidaemia.

Keywords: Diabetes Registry Malaysia (DRM), HbA1c, hypertension, dyslipidaemia

Poster 45

Factors influencing home delivery in Myanmar
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Background: The choice of delivery locations in Myanmar can broadly be classified into two categories: home delivery and institutional delivery (maternity home or hospital). Home delivery is usually the cheapest option, but is associated with many risks of infections and lack of available equipments occur complications. Institutional deliveries may be at hospitals or health centers. Although morbidity is higher in home delivery than institutional delivery, some mothers have been executing their childbirths at home.

Objective: To determine factors affecting home and institutional delivery in urban and rural area of Myanmar.

Methods: A cross-sectional survey was done during May, 2009 in 35 townships of 4 Divisions. Interviews were carried out on 2071 women who delivered within 12 months of the date of interview with a pre-tested structured questionnaire.

Results: After multivariate analysis, low education (OR 2.31), low income (OR 2.74), Buddhist (OR 3.24), younger age in first pregnancy (OR 2.32), separated delivery room (OR 6.84) were significantly risk factors for home delivery.

Conclusion: The results suggested that mothers, who were young and in the low socio-economic scale, unskilled birth attendants delivered at home more frequently in Myanmar.

Keywords: Home delivery, Myanmar
Perceived barriers for cardiovascular screening among apparently healthy post menopausal women of east coast Peninsular Malaysia

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Background: Cardiovascular disease (CVD) is an important cause of death among women worldwide. The major risk factors for CVD in women are similar to men however the risks even multiply enormously when they reach postmenopausal age. The lifetime risk of developing coronary artery disease was 32%, a risk 3 times that of breast cancer. In Malaysia, about one in three Malaysian women died of Coronary Artery Disease (CAD) and it was 2.5 times more common as a cause of death as all cancers combined.

Objectives: To explore the barriers of cardiovascular screening among postmenopausal women.

Methods: Qualitative research using focus group discussion (FGD). A total of four FGD were done from urban and rural area in the state of Kelantan and Terengganu.

Results: Respondents age range of late forties to early seventies has listed down several factors as barriers for screening. Cardiovascular disease was not considered as a major problem as compared to breast cancer and cervical cancer. They perceived cardiovascular is a men’s disease. The fact that they are apparently healthy; they do not have time and there is always long waiting at the government clinics, therefore make them feel unnecessary to add to the burden of health carers. They also do not want unnecessary stress from the information gather during screening; the fact that they have little information on CAD also do not support the idea of screening.

At the conceptual level, they repeated highlighted patient-doctor relationship, they belief that doctors are there to cure and therefore one would only need to see them when one is ill. In other words the relationship did not assist to improved their perceived benefits and actions for screening. On top of it as CVD’s symptom is known only when there is death in family or in the immediate community it is seen almost as an end in itself and therefore unlike cancer the perception on severity and suffering of illness is not seen clearly.

Conclusion: Knowledge and awareness of CAD and preventive health care is still lacking among these groups of women, this is strengthened by their perception and supposedly reaction from their relationship with health cares especially doctors. The health care environment needs to be re-look in order to create positive health preventive action among apparently healthy post menopausal women.

Keywords: barrier, cardiovascular screening, postmenopausal
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