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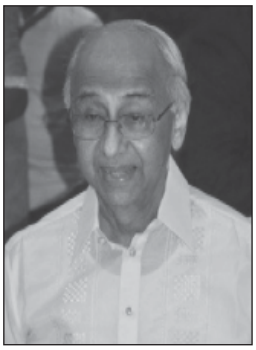
Message from the Chairman of Council, Academy of Family Physicians of Malaysia



This year, the Asia Pacific Primary Care Research Conference (APPCRC) has grown in stature pari pasu with the Academy of Family Physicians Malaysia (AFPM) in that the Conference has attracted many researchers from the region, and the AFPM has achieved many milestones in promoting Family Medicine as a specialty with a strong research accent in Malaysia.

The Malaysian Primary Care Research Group (MPCRG), an offshoot of the Research Network of Asia Pacific (ReNAP) and being the research arm of the AFPM has developed into an organisation which enjoys recognition by the peers in research in the Asia Pacific Region. It has also served as a publication avenue for the growing numbers of young researchers in the burgeoning Malaysian medical faculties and the primary care circles in the Asia Pacific Region.

The concept of hosting the APPCRC alternately in Singapore and Malaysia has fruited in many ways and WONCA Asia Pacific, the Singapore College of General Practitioners and the Academy of Family Physicians Malaysia can congratulate themselves in providing an outlet to the great potential of research development in the region. The young researchers must be congratulated for leadership, creativity and enterprise. It has become mutually beneficial for all concerned in promoting research as well as the researchers and the institutions the researchers are from.

It is hoped that such healthy discussions will continue with the support of the philanthropists, well-wishers and those who see growth in Primary Care research, which is essential to the health delivery systems in the region. Policy makers, academicians, regulators and primary care physicians must grasp the potential in their midst and welcome such developments and it is in their own interests to support guide, direct and accept the outcomes of such research and to move forwards instead of viewing sceptically at Primary Care research. The researchers look forward to the authorities to advance the current, mainly, observational studies to more interventional studies in primary care in order to develop the repository of data which is lacking. Data is required to plan delivery of health care.

Congratulations must go the organising committee who have produced a conference of which all can be proud of. Many are looking forward to the contest which is taking shape as a permanent feature of the APPCRC and to the Rajakumar Award.

Best wishes to the participants of the conference and the contestants.

Associate Professor (Adjunct) Datuk Dr DM Thuraiappah
Chairman of Council, Academy of Family Physicians of Malaysia
Vice President, WONCA Asia Pacific Region
Chairman, WONCA World Working Party on Quality and Safety in Family Medicine

Message from the Chair

I would like to welcome all of you to the 3rd Asia Pacific Primary Care Research Conference 2011 in Malaysia!

The theme of the Conference this year is 'Bridging the gaps: Doing research in the real world'. This title is particularly apt in the ever-changing world of primary care, where healthcare professionals are faced with wide-ranging clinical and systemic challenges. We need answers to clinical questions and solutions to make the health system more effective and efficient. There is also an urgent need to find out our patients' views, concerns and needs to make health care more patient-centred. However, it is challenging to do research in busy primary care, particularly outside the academic setting where research may not be a priority. This Conference, therefore, aims to address exactly that: to address these gaps and discuss ways to help us do research in the real world.

Our Scientific Committee has drawn up an exciting programme for the Conference with plenaries and workshops covering from health system research, incorporating IT in research to practical research skills such as SPSS basics and how to conduct interviews and focus groups in qualitative research. I am sure you will find topics that will help you learn about research and network with like-minded colleagues from the region.

It is indeed heartening to see the Conference growing from strength to strength since its inception in 2009 in Malacca. We are pleased to see participation from across the region including Australia, Hong Kong, Japan, Korea, Malaysia, Myanmar, New Zealand, Singapore and Yemen. The quantity and quality of the abstracts have certainly surpassed those from previous Conferences and this has made organizing the Conference worthwhile.

I would like to take this opportunity to thank the Academy of Family Physicians of Malaysia for the unwavering support given to this Conference. We are also very grateful to the Family Medicine Specialist Association, College of Family Physicians Singapore and WONCA. Last but not least, my most sincere gratitude to the Organising Committee for the excellent teamwork. A big thank you!

I wish you a fruitful conference!

Best wishes,
Associate Professor Dr Chirk Jenn Ng
Chair
3rd APPCRC

Message from the President of Family Medicine Specialists Association of Malaysia

A warm welcome to all participants to this 3rd Asia Pacific Primary Care Research Conference held at Summit Hotel USJ, Subang Jaya, Kuala Lumpur from 3rd–4th December 2011.

The Malaysian Primary Care Research Group (MPCRG) which is under the auspices of the Academy of Family Physicians of Malaysia (AFPM) and Family Medicine Specialists Association (FMSA) co-organize this conference and in collaboration with Ministry of Health (MOH), WONCA and College of Family Physician Singapore. I heartily congratulate the organizing committees, our invited speakers and participants for carrying out this important education programme.

This Conference will be a good platform for primary care researchers across Asia Pacific to disseminate their research work, learn new research knowledge and skills, and network and collaborate with like-minded colleagues. The Conference also provides a safe environment for novice primary care researchers to learn research skills and showcase their research ideas.

The theme for the Conference this year is 'Bridging the gaps: Doing research in the real world'. While maintaining the objective of nurturing the novice researchers in primary care research (Pre-Conference: Research Championship), the focus of the 2011 Conference will be to explore practical ways to do research in busy general practice and discuss strategies to translate research evidence into practice via health system research. The participants will have a chance to have a hands-on experience in qualitative interviewing, using SPSS programme for data analysis and learn about the nuts and bolts of health system research.

On behalf of the FMSA, it is great pleasure for me to extend greetings to everyone participating in this conference. Appreciation and gratitude also to Yang Berbahagia Dato' Dr Maimunah binti A Hamid, Deputy Director General of Health (Research and Technical Support), Ministry of Health and all sponsors for their valuable support and paving the way without which this conference would not be possible.

Dr Mastura Hj Ismail
President of the Family Medicine Specialists Association of Malaysia

Message from the President, College of Family Physicians Singapore

It is heartening to see the Asia Pacific Primary Care Research Conference moving on into the third year. Our Malaysian colleagues must be commended for their unstinting support of this very important conference since its debut at the Melaka meeting. The Singapore College is proud to be associated with this conference and will continue to work with our colleagues in the region to promote research in primary care.

Albert Szent-Gyorgyi the Nobel Prize laureate for Medicine in 1937 said that "Research is to see what everybody else has seen, and to think what nobody else has thought". This is especially true for the apparently mundane world of primary care. I believe we are sitting on a treasure trove of undiscovered gems that will bring great improvements to the health of our patients. There is so much new knowledge and information that is waiting to be discovered in the ordinary daily experiences in the world of the primary care physician.

I hope that this conference will set many of our primary care physicians thinking about their experience in their daily practice of medicine. I am sure we will harvest a lot of newly discovered and useful knowledge in the coming years if we continue to challenge and inspire them with conferences such as the Asia Pacific Primary Care Research Conference.

I would like to urge all the primary care physicians to continue their support of this and future conferences. Congratulations to the host organizing committee for carrying the torch and bringing this conference to new heights.

Associate Professor Dr Kheng Hock Lee
President
College of Family Physicians Singapore

Message from the Family Health Development Division, Ministry of Health of Malaysia

Malaysia's success in uplifting the health status of her population at reasonably affordable cost has in part been due to the Ministry of Health's policy in making primary health care as the thrust of the delivery system supported by good secondary care. With the challenges faced by country due to demographic and epidemiologic transition as well as the increasing expectation of a more socioeconomically progressive population, the need for universal access to an equitable health care system is all the more important if the Government's aspiration for Malaysia to attain the status of a high income nation by 2020 is to be realised. In cognizance, one of the Ministry of Health's strategies in the 10th Malaysia Plan is to transform the health sector to increase the efficiency and effectiveness of the delivery system to ensure universal access.

Medicine is increasingly technology driven and efficient and effective use of the finite resources at our disposal is critical in order to keep up with advancements in health technology and to meet the ever increasing needs of the population. Practitioners on the ground are the most appropriate to identify research needs and to carry out applied research to gather evidence which will impact not only their clinical practice, but provide input to policy advisers in the formulation of evidence-based policies. This year's Conference theme of 'Bridging the gaps: Doing research in the real world' is especially apt in this regard.

Towards this end, the organization of this conference is seen as the outcome of efforts to increase the capacity of our primary health care practitioners in research. It is a platform for budding researchers to come together to update their knowledge and skills, access to some mentoring and more effectively to learn from each other. It is this coming together of service providers, researchers from the academe and with the support of professional bodies which is one of the strengths of the organization of this conference, sustaining the efforts from its inaugural conference in 2009 to the successful realisation of this 3rd Conference. The Ministry of Health appreciates the close networking that has developed with the academic institutions and professional bodies in the organization of the APPCRC.

I am sure this Conference will achieve its aim of providing a platform for an exciting sharing among practitioners and researchers alike, as its regional reach in the Asia Pacific brings different context to similar research issues under study.

Dr Kamaliah Mohamad Noh
Deputy Director (Primary Health Care)
Family Health Development Division
Ministry of Health Malaysia

SCIENTIFIC PROGRAMME

	Pre-conference Research Championship Workshop: 2nd December 2011 (Friday)		
Time	Day 1: 3rd December 2011 (Saturday)		
0800–0830	Registration		
0830–0845	Opening ceremony		
0845–0930	**Plenary 1: Using evidence for health care reform** **Dato' Dr Maimunah Abdul Hamid**		
0930–1015	**Plenary 2: Doing research in the real world** **Professor Moyez Jiwa**		
1015–1045	Tea		
Concurrent Workshops	**Track 1: Health System Research (HSR)**	**Track 2: Biostatistics**	**Track 3: Qualitative Research**
1045–1145	What is health systems research? *Role Play* *Roslinah Ali*	Introduction to basic statistics using SPSS: Using SPSS to create a data template. Descriptive statistics I: types of data, frequency, mean, median, range *Seng Fah Tong*	ABC of qualitative research *Ngiap Chuan Tan*
1145–1300	Knowledge translation in HSR. *Show and tell* *Lee Lan Low*	Descriptive statistics II: data distribution – test of normality; recode, and compute function in SPSS *Seng Fah Tong*	How to design a topic guide *Chirk Jenn Ng*
1300–1415	Lunch		
1415–1530	Identifying and prioritising problems in HSR *Interactive session* *Haniza Mohd Anuar*	Introduction to experimental / epidemiology studies: Power, odds ratio, relative risk, confidence intervals *Cheong Lieng Teng*	Conducting an in-depth interview *Interactive session* *Chirk Jenn Ng*
1530–1600	Tea [view posters]		
1600–1730	Working out objectives and research design in HSR *Interactive session* *Nur Azmiah Zainuddin*	Inferential statistics: Tests of relationships: Chi-square, cross tabulation, correlations *Cheong Lieng Teng*	Conducting a focus group discussion *Interactive session* *Ngiap Chuan Tan*

Time	Day 2: 4th December 2011 (Sunday)		
0800–0845	**Plenary 3: Medical informatics: Application in research** **Professor Moyez Jiwa**		
Concurrent Workshops	**Track 1: Health System Research**	**Track 2: Biostatistics II**	**Track 3: Qualitative Research**
0845–1000	Getting research into policy and practice: The Research Highlight *Interactive session* *Samsiah Awang*	Inferential statistics: Testing of means; Parametric – t-test and ANOVA, Non parametric – Mann Whitney, Kruskal Wallis *Cheong Lieng Teng*	From transcribing to qualitative data analysis *Ngiap Chuan Tan/* *Chirk Jenn Ng*
1000–1030	Tea		
1030–1130	Oral presentations		
1130–1230	Research Championship		
1230–1300	Award and closing ceremony		
1300–1400	Lunch		

Malaysian Primary Care Research Group (MPCRG)

The MPCRG was formed in September 2001 under the auspices of the Academy of Family Physicians of Malaysia. It was initiated by a group of primary care researchers with the aim to promote research in primary care.

The research group is represented by clinician and academicians from both public and private sectors. We conduct workshops, conferences and conduct nationwide studies.

Website: http://mpcrg.net

PLENARIES & WORKSHOPS

PLENARIES

Plenary 1: Using evidence for health care reform

Dato' Dr Maimunah Abdul Hamid

Dato' Dr Maimunah Abdul Hamid, the Deputy Director-General of Health, Research and Technical Support (R&TS), of the Ministry of Health Malaysia is a Public Health Specialist. The first Director of the Institute for Health Systems Research, an institute under the National Institutes of Health (NIH) Ministry of Health Malaysia, she was the prime mover in promoting and inculcating Health Systems Research in Ministry of Health and headed the World Health Organization (WHO) Collaborating Centre for Health Systems Research and Quality Improvement from 1988 to 2008. She serves in numerous national and international boards and advisory committees, and shares her experience and knowledge through serving as WHO temporary advisor and through consultancies. She has spearheaded a number of national and international projects. In the area of healthcare transformation, she directly supervises the Planning and Development Division, who is taking the lead role in coordinating Malaysian's 5-year plans for health sector. She has been involved in many interactions in the preparation of the conceptual paper for 1Care for 1Malaysia and presently chairs the coordinating committee for all technical working groups for 1Care.

Abstract

Health Care Reform is an issue being grappled by many countries, Malaysia included. The types of reform may vary between countries, but common areas of concern are coverage, cost and quality of health care services provided. For reforms to be successfully implemented there is a need to get a "buy-in" from all stakeholders. In one hand, scores of literatures are available reporting sufficient successes in the application of research evidences for clinical management of patients. Databases such as Cochrane and Pub-Med have a wealth of scientific information for such purposes. On the other hand, there is a dearth of publications reporting the use of research evidences towards policy making. In addition, there has also been much debate on the selective or legitimate use of evidence to sustain a pre-determined position already taken by policy makers.

A paradigm shift from both researchers and policy makers alike is needed towards using research findings for healthcare reforms. Enhancing, advocating and strengthening the capacity of policy makers to utilize research findings must be made a permanent agenda; researchers in turn will need to have a mindset change of not just being contented to have their work published in peer-reviewed journals but strive for utilization of research findings to improve health status and services.

The Ministry of Health Malaysia has laid down several strategies to enhance the utilization of research in preparation for the oncoming healthcare reform. Using the *Getting Research into Policy and Practice* (GRIPP) Framework as its reference, several concurrent activities have been put into motion; from the identification and subsequent prioritization of research areas to identification and distribution of dedicated research funds and capacity building.

Plenary 2: Doing research in the real world

Professor Dr Moyez Jiwa

Professor Jiwa qualified as a general practitioner in 1991 and has 20 years of clinical experience in a variety of clinical settings in the UK and Australia. In 2003, he was awarded an MD from the University of Sheffield, UK. In 2005, he was one of the very few general practitioners serving as Director of Research and Development for a UK NHS Hospitals Trust. After arriving in Australia in 2006, he was appointed as the Director of the WA Centre for Cancer and Palliative Care in 2006 and is now the inaugural Chair of Health Innovation, Curtin University, Perth. He has published over 60 peer reviewed papers, continues to mentor students at every level and serve the general practice community in a variety of forums, both nationally and internationally.

Abstract

A number of trends will impact on general practice and primary care in the years ahead:

- Telemedicine
- Clinical Governance and litigation
- The Internet
- Electronic medical records
- Changes in the doctor-patient relationship
- Genomics, Robotics, nanotechnology
- Increasing demand from an ageing population with a growing burden of chronic and life style related diseases
- Changing models for health care funding.

Any or all of these will revolutionise the way healthcare is organised and delivered worldwide. The context in which we practice as well as the tools available to us are changing at a faster rate than ever before. Each innovation offers vast opportunity for research. Each generates a plethora of research questions. At the same time, the drivers for efficiency and greater team work in practice will introduce new professionals to the frontline in primary care. How will primary care providers integrate to deliver the best patient experience? How can researchers make a contribution to this new environment in healthcare? Will we recognise the general practice consultation in 2050? In this presentation, Professor Jiwa will review some of the most significant challenges in health care in the years ahead and offer some ideas on how general practitioners and others in primary care can contribute through research and innovation.

Plenary 3: Medical informatics: Application in research

Professor Dr Moyez Jiwa

Abstract

By 2050, most people worldwide will access medical information on-line on a regular basis, most probably on their mobile phone. In some countries, it is likely that we will consult doctors on line as often, or even more often than we do face-to-face. Doctors will maintain electronic medical records and access information on desktop or, more likely, handheld computers. Patient support groups, personal medical records and decision making tools will be available to all. It will be the norm for patients to take responsibility for their own chronic conditions and the relationship with medical practitioners will be changed beyond recognition. In this context, there is great scope to ensure innovation does not undermine the core elements of the medical consultation - namely the encounter when one human being gives their undivided attention to another human being in distress. It is in the consultation that we promote healing, recovery and growth. The challenge for researchers is to ensure that technology does not impact on the medical encounter to the point where a machine is responsible for addressing human 'dis-ease'. In this presentation, Professor Jiwa will give some examples of research involving information technology and how it can be deployed to support the doctor-patient encounter rather than replace it.

WORKSHOPS

Track 1: Health system research

Facilitators: Roslinah Ali, Lee Lan Low, Haniza Mohd Anuar, Nur Azmiah Zainuddin, Samsiah Awang, Ee Ming Khoo, Mastura Ismail

Abstract

Health systems research (HSR) is a tool for evidence-based decision making in healthcare. As such, while it does not deviate from the basic principles of scientific rigour in research, it calls for continual deliberations between researchers and policy-makers, right from when the problem arises, up to when the findings are presented to the relevant stakeholders.

Through this track, we will share with you the significance of HSR, share an experience on carrying out an HSR project, teach you a systematic and objective method for prioritising, help you bring a problem through objective formulation to decision on research design, and introduce to you the concept of research highlight.

This track involves lectures, role play and practical sessions. It will not only help you appreciate the role and importance of HSR, but will also impart knowledge, skills and tools to guide and assist you in your endeavour to adopt HSR in your daily working life.

Track 2: Biostatistics

Facilitators: Cheong Lieng Teng, Seng Fah Tong, Verna Kar Mun Lee, Stalia Siew Lee Wong, Ping Yein Lee

Abstract

This is a basic biostatistics workshop targeted at novice researchers and it aims to provide participants an opportunity to learn basic statistics using SPSS. The approach taken in this workshop will be “learning by doing”. Participants are expected to bring their own computer with a pre-loaded SPSS (or download a trial version of SPSS version 20 from http://www14.software.ibm.com/download/data/web/en_US/trialprograms/W110742E06714B29.html?S_CMP=rnav). A dataset will be sent to registered participants prior to the workshop. During the workshop, brief lectures will be given on key topics, followed by many exercises taking the participants through data handling and analysis using SPSS. Experienced facilitators will be available to guide participants in small groups.

At the end of the workshop, participants will be able to enter research data into SPSS, editing the data and perform simple statistical analysis. Participants will be able to generate descriptive statistics (e.g. mean, median, standard deviation) and understand their meaning. Participants will also be able to select appropriate statistical tests depending on the characteristics of the study variables (e.g. chi-squared test, t-test, ANOVA, Mann-Whitney U test and Krukall-Wallis test) and interpret the statistical output.

Track 3: Qualitative research
Facilitators: Chirk Jenn Ng, Ngiap Chuan Tan, Nik Sherina Haidi Hanafi, Stephanie Teo, Yew Kong Lee

Abstract

Qualitative research is an interpretative approach to study people, behaviours and interactions in a natural setting. It helps to make sense of what we observe and to understand the underlying meanings. This approach plays a pivotal role in exploring research issues that are important and relevant to primary care. Primary care professionals are in the frontline to provide holistic care to people in the community with the aim of improving their physical and socio-psychological well-being in relation to their family, environment and society. Qualitative method provides us with a scientific tool to explore patients' views and perceptions which in turn shape their health and help-seeking behaviour and their interaction with health providers. It can also help us to understand doctors' behaviours and decision making process as well as how the complex health system works by looking at the implementation process and interactions between stakeholders.

The Qualitative Research workshop aims to equip primary care professionals with the knowledge to understand the concept and principles of the method and the skills to collect qualitative data and to analyze such data systematically. The workshop will comprise of lectures to empower the participants and role play for hands-on in carrying out in-depth interviews and focus group discussion.

Pre-Conference Workshop

Research Championship
Coaches: Chirk Jenn Ng, Ngiap Chuan Tan, Cheong Lieng Teng, Ee Ming Khoo, Nik Sherina Haidi Hanafi, Irmi Zarina Ismail, Verna Kar Mun Lee, Ping Yein Lee, Choon How How, Maizatullifah Miskan

Abstract

The aim of the Research Championship is to provide a platform for novice primary care researchers to work as a team and learn research via personal coaching by experienced researchers.

It has three stages:

1. The team submits a brief research proposal for consideration. Four proposals are selected by a panel of reviewers.
2. The four selected teams are coached by experienced primary care researchers during the Pre-Conference workshop to improve the research proposal.
3. The four teams present their proposal and compete for the Research Championship during the conference. It is judged by a panel of international jurors and the audience.

AUTHORS AND ABSTRACT TITLES

ORAL

1. Nazrila Hairin Nasir, Ng Chirk Jenn, Mohazmi Mohamad. Evaluating the effectiveness of a fluid chart to improve oral fluid intake in suspected dengue patients: A feasibility study.
2. Noorlaili Tohit, Harriet Radermacher, Colette Browning. Healthy ageing perspectives of older Malays in Selangor, Malaysia – a qualitative study.
3. Suraya Abdul Razak, Wong Li Ping, Christina Tan Phoay Lay. Perceptions of unmarried teenage mothers in a Malaysian setting towards antenatal care: A qualitative study.
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5. Azainorsuzila Mohd Ahad, Khoo Ee Ming. Associated factors and predictors of asthma control in primary school children.

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4. Lee Yew Kong, Lee Ping Yein, Akmal Syahidatul, Ng Chirk Jenn. Insulin myths: healthcare professionals' views of patients' perceptions towards insulin therapy.
5. Adibah Hanim Ismail, Azura Mat Seman, Juwita Shaaban. Peripheral neuropathy among newly diagnosed type 2 diabetes mellitus.
6. Cheong Ai Theng, Lee Ping Yein, Sazlina Shariff Ghazali, Mastura Ismail, Jamaiyah Haniff, Mohamad Adam Bujang, Chew Boon How, Syed Alwi Syed Abdul-Rahman, Sri Wahyu Taher, Zaiton Ahmad, Nafiza Mat Nasir. Predictors of poor glycaemic control among women with type 2 diabetes mellitus.
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11. Tina Janamian, Claire Jackson, Lisa Crossland, Julie Johnson, James Lamerton, Jenny Morcom. Understanding the elements of a successful change management approach in general practice – an example of the Improving Diabetes Management Program.
12. Iliza Idris, Nor Asiah Hashim, Chan Chun Wai, Teng Cheong Lieng. Hypertension guideline adherence in public primary care clinics.
13. Iliza Idris, Khoo Ee Ming. Screening for microalbuminuria among patients with hypertension without concomitant diabetes, as a marker of cardiovascular risk.
14. Withdrawn
15. Chia Yook Chin, Ching Siew Mooi. Incidence and predictors of conversion to new onset diabetes mellitus over a 10-year period in Malaysia.
16. Chia Yook Chin, Ching Siew Mooi. Accuracy and concordance of serum creatinine to estimated glomerular filtration rate in determining chronic kidney disease in Malaysia.
17. Chan Chun Wai, Wang Junyi, Joanne Johnny Bouniu, Annalene Melkiau, Parampreet Singh Sidhu, Teng Cheong Lieng. The association between medication adherence and hypertension control in primary care clinics.

18. Wang Harry Haoxiang, Wong Martin CS, Wong Samuel YS, Tang Jin Ling, Wang Jia Ji, Li Donald KT, Griffiths Sian M. Patients' experience of primary care: A cross-sectional comparison study in mainland China using Primary Care Assessment Tool.
19. Chua Szu May, Teoh CCY, Kwa Siew Kim, Abirami K, Izzat MH. Knowledge and perception of medical students towards emergency contraceptive pills.
20. Quah Joanne Hui Min, Tay Ee Guan, Ng Li Ling, Sin Gwen Li, Seow Adeline. Prevalence, perceptions and barriers to care of depression among geriatric primary care patients in Singapore.
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22. Tin Myo Han, Win Zaw, Tin Tin Hla, Tin Aye, DM Thuraiappah, Khin Nan Thi. Assessment of knowledge and perception of general practitioners on continuing quality improvement programme in Myanmar.
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27. Withdrawn
28. Irmi Zarina Ismail, Anita Abd Rahman, Magdalen Anthony, Nur Shamim Inani, Lee Yong Li. Knowledge of pap smear of academicians at a public university in central region of Malaysia.
29. Maung Thet Naing, Tin Myo Han, Tin Aye. Improving social support to TB patients under Public-Private Mix DOTS (PPM-DOTS) services contributes towards better treatment adherence of TB patients in Myanmar.
30. Maung Thet Naing, Tin Myo Han, Tin Aye. Improving accessibility and availability of Public-Private Mix (DOTS) services contributes better treatment adherence of TB patients.
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34. Ahmad Abir Ab Ghani, Norhayati Mohd Noor, Rosediani Muhamad, Zulrusydi Ismail. Childhood atopic eczema: A measurement of children's quality of life and family impact and associated factors for children's quality of life.
35. Wong Swee Siong, Annaletchumy Loganathan, Kavitha Subramaniam. Knowledge and attitudes toward prevalence of Human Papillomavirus (HPV) infection, HPV vaccination and screening: A cross-sectional study on male and female students of higher education institutions in Malaysia.
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40. Almutairi Bader. Factors influencing family physicians prescribing behaviour: A systematic review.
41. Paranthaman Vengadasalam, Subashini A, Junaidi Ibrahim. Maternal mortality review: A case of pulmonary haemorrhage due to ruptured lung hemangioma secondary to Ghon's focus invasion.

42. Sami Abdo Radman Al-Dubai, Kurubaran Ganasegeran, Mustafa Ahmed Al Shagga, Mohanad Rahman Alwan, Mohammed Faez Baobaid. Factors affecting dengue fever knowledge, awareness and practice among selected urban, semi-urban and rural communities in Malaysia.
43. Seow Branden Zi Xuan, Wee Liang En, Koh Gerald Choon Huat. Smoking, socioeconomic status and health behaviour in a low-income urban Asian population: A community-based study in Singapore.
44. Seow Branden Zi Xuan, Wee Liang En, Chin RunTing, Wong Jolene Si Min, Koh Gerald Choon Huat. Colorectal, cervical and breast cancer screening in an urban low-income setting: A mixed methods study.
45. Lim Michael Warren, Wee Liang En, Koh Gerald Choon Huat, Chin Run Ting, Wong Jolene Si Min, Yeo Wei Xin. Area and individual level socioeconomic factors of hypertension management in an urbanised Asian population: A community-based study in Singapore.
46. Lim Michael Warren, Wee Liang En, Chin Run Ting, Wong Jolene Si Min, Koh Gerald Choon Huat. Cardiovascular health screening in an urban low-income setting at baseline and post-intervention.

RESEARCH CHAMPIONSHIP PROPOSALS

1. Boey Justin Jian Jun, Po Jing Yu, Poh You Kai. Case control study on the biomechanical risk factors for trigger finger in Asian patients.
2. Mohd Khairi Mohd Noor, Siti Nurkamilla Ramdzan, Maliza Mawardi. University Malaya Medical Centre's physician practice and perspective in providing phone number to patient.
3. Josephine Henry Basil, Ng Sok Nee, Anis Adilah, Pua Chiew Yian, Soo Gian Wan, Azzakirah Ishkandar, Erik Tan Xi Yi, Priyal A/P Gunasagaran, Goh Li Li. Prevalence of paediatric dosing errors in public clinics within the Petaling District, Selangor.
4. Chuang Ding Fang, Ho Zhuan Yi, Tham Shu Qi. Atopic Dermatitis Action Plan Effectiveness (ADAPE) Study.

RESEARCH AWARDS

Prizes will be given to:

- all oral presenters
- 3 best posters
- Research Championship winning team

Rajakumar Research Award (USD 1500)

This research award is given to the best oral presenter at the 3rd 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 the Asia Pacific region to emulate Dr MK Rajakumar's passion for learning and research, while providing quality care for patients.

Wong Heck Seng Award (SGD 1000)

Judges for the Research Championship, oral and poster presentations are:

1. Professor Dr Moyez Jiwa (Chair)
   Curtin University, Australia
2. Professor Dr Yook Chin Chia
   University of Malaya, Malaysia
3. Associate Professor Dr Lee Gan Goh
   National University of Singapore, Singapore
4. Dr Nordin Saleh
   Ministry of Health, Malaysia

ABSTRACTS: ORAL PRESENTATIONS

Oral Presentation 01

Evaluating the effectiveness of a fluid chart to improve oral fluid intake in suspected dengue patients: A feasibility study

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Background: Dengue has significant morbidity and mortality. The revised 2009 WHO dengue guidelines advised all suspected dengue patients to drink five or more glasses of fluid a day as it may reduce the number of hospitalization. Currently, there are no published interventional studies to improve oral fluid intake amongst suspected dengue patients. Thus, a complex intervention in the form of a fluid chart and cup was designed.
Objectives: To assess the feasibility and acceptability of conducting a randomised controlled trial to evaluate the effectiveness of a fluid chart in improving oral fluid intake of suspected dengue patients in primary care.
Methods: This was a feasibility study using a randomized controlled design. The data was collected over two months at a teaching primary care clinic. The table of random numbers was used. All participants received the dengue home care card, and followed up until they were clinically better. The intervention group received the fluid chart and cup. Baseline clinical and laboratory data, 24-hour fluid recall (control group) and the fluid chart (intervention group) were collected.
Results: There were 68 participants in the control group and 75 participants in the intervention group. The mean age was 29.0 and 29.1 years, of which males constituted 61.8% and 64.0%, respectively. From the clinical baseline data, more participants in the intervention group were in the recovery phase than the controls (19.1% versus 30.7%), with more control group participants with a body temperature of more than 38ºC (20.0% versus 2.7%) respectively. The haematological profile at baseline in terms of the haematocrit, total white blood cell count, and platelet levels were similar between the two groups. Amongst those requiring admission, 17.6% were from the control group and 10.0% were from the intervention group (p= 0.192). Amongst those requiring intravenous fluid treatment, 22.1% were from the control group and 12.9% were from the intervention group (p=0.154). Therefore, participants in the intervention group had 7.6% fewer admission and received 9.2% fewer intravenous fluid therapy compared with the controls. Based on this treatment effect size, the sample size for the main evaluation randomised controlled trial was determined. Several issues pertaining to the research process and intervention's feasibility and acceptability were also identified.

Oral Presentation 02

Healthy ageing perspectives of older Malays in Selangor, Malaysia – a qualitative study

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Background: Healthy ageing is rarely explored in people from different cultures particularly in developing countries. In Malaysia, the Ministry of Health has started health care program for the older people since year 1996 in response to the increasing ageing population, however the older Malaysians' perspective of healthy ageing had never been reported. This paper reports a qualitative study of healthy ageing conceptualization among older Malays in Selangor, Malaysia, as part of a bigger study on Cultural Conceptualization of Healthy Ageing by Healthy Ageing Research Unit (HARU), Monash University, Australia, which involves participants from China, Malaysia and Australia.
Objectives: To explore healthy ageing conceptualization in the perspective of older Malays in Selangor, Malaysia.
Methods: Eight focus group discussions consisted of a total of 38 participants were conducted. Participants shared their opinions about ageing and ageing well. Factors contributing to age well and suggested preparation to achieve healthy ageing were also being discussed. The transcripts were analysed using thematic analysis approach.
Results: The themes identified constituting healthy ageing were physical health and function, peace of mind, spirituality, financial independence, family and living arrangement. Each theme was interrelated to each other. Spirituality was a core resource in participants' lives. Participants reported that good physical health was an important resource that facilitates commitment to their spiritual activities. Participants wished for a "peaceful life" and experienced this by enhancing their spirituality, having financial independence, living in a place they love and having family members who live in harmony.
Conclusion: In this Malay community where religious affiliation is a tradition, spirituality can be fundamental for healthy ageing. Healthy aging concepts should be carefully interpreted according to culture and characteristics of each population. More studies on ageing in place among the other ethnic groups are needed to inform the design of health promoting services for the ageing population.

Oral Presentation 03

Perceptions of unmarried teenage mothers in a Malaysian setting towards antenatal care: A qualitative study

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Background: The most consistent risk factor for adverse outcomes in teenage pregnancy is the lack of antenatal care. Poor antenatal care attendance among teenage mothers is associated with socio-economic, personal and system barriers. However, not much is known about this problem in Malaysia.
Objectives: To explore perceptions of unmarried teenage mothers towards antenatal care.
Methods: In-depth interviews (IDI's) were conducted with fourteen unmarried teenagers aged between 10 and 19 years recruited from two shelter homes for teenage mothers in Klang Valley. The IDI's were transcribed and analyzed qualitatively using content analysis and managed by NViVo 2 software.
Results: The mean age of the participants was 17.1 years. Majority were Malay teenagers and had completed secondary school. Ten were unemployed. Only a minority had regular antenatal care prior to their stay in the shelters. Poor knowledge about healthcare during pregnancy and perceived lack of support from family and health care providers influenced their acceptance at the antenatal clinics. Although participants agreed the importance of antenatal care, the majority preferred to avoid it because of being embarrassed and not because they perceived themselves to be at high risk or they feared being reported to the authorities. Concerns were raised regarding limited information resources, long waiting time at government clinics, costly private clinics and insensitive clinic staff attitudes.
Conclusion: The Malaysian education system and social views need to change towards teenage pregnancies. Support from family members is crucial. Training needs to be conducted for health care staff in effective communication and delivery of health care services, and they should be encouraged to provide more user-friendly and unprejudiced care to these teenage mothers.

Oral Presentation 04

Efficacy of a 4-week self-management program for breast cancer as a chronic illness

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Background: Increasing research has shown the efficacy of patient self-management interventions on many chronic conditions, primarily with non-cancer population and its significance in cancer population has only recently gain recognition.
Objectives: The aim of the study was to examine the efficacy of a 4-week self-management program on the primary outcome of quality of life (QOL) and secondary outcomes of distress (DASS) and limitation in participation (IPA), for women with breast cancer.
Methods: A prospective controlled trial, with the experimental arm receiving the 4-week program and usual care, whilst the control arm received usual care only. SAMA (Staying Abreast, Moving Ahead) was a 2-hour weekly (over 4 weeks), facilitator-led self-management education and support, to address its two pronged aims on enabling women to stay abreast and to move on in life. Measurements were taken at baseline and post-interventions.
Results: A total of 147 women diagnosed with breast cancer within the last six months, participated. MANCOVA (adjusted for baseline measures) demonstrated significant differences between groups [$F(6,129)=2.26$, $p=0.04$ at post test and $F(6,129)=4.090$, $p<0.001$ at follow-up]. Post hoc analysis indicated significantly better outcome on all measures. At follow-up the experimental group had a mean QOL score of 3.39 [CI=1.37-5.42; $p=0.001$] greater than the control. The intent-to-treat analyses showed beneficial outcomes for women receiving usual care plus self-management.
Conclusion: With breast cancer taking a form of chronic illness, the proactive implementation of a self-management program on top of usual medical care have demonstrated improved health outcomes. SAMA is feasible, timely and effective in enabling women to self manage the many medical and non-medical tasks arising from diagnosis and treatment for breast cancer.

Oral Presentation 05

Associated factors and predictors of asthma control in primary school children

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Background: Asthma control in children is associated with many factors that varies in different populations and ethnicities. Identification of predictors for asthma control would guide better asthma management strategies.
Objectives: To determine the associated factors of asthma control and predictors for poor asthma control in the primary school children with reported asthma.
Methods: This was a two-phased cross-sectional study involving 6441 school children in six primary schools in the Port Dickson District, Malaysia. In Phase 1, self-administered questionnaire was used to identify children with physician-diagnosed asthma reported by parents. In Phase 2, asthma control was assessed using GINA 2009 guidelines. Data on socio-demography, health care utilisation, medicine use and precipitating factors of asthma were collected.
Results: A total of 448 (8.9%) children were reported to have asthma. Of these, 311 (69.4%) parents agreed to participate in Phase 2. Only 161 (51.8%) children had good control, 99 (31.8%) had partial control and 51 (16.4%) had uncontrolled asthma in the past one week. Significant associated factors ($p<0.05$) with level of asthma control were: ethnicity, family history of asthma, passive smoking, regular follow up, regular treatment, use of reliever and controller medication, previous asthma exacerbations, settings of emergency care, previous hospitalization, exposure to cold weather, food, dust, carpet, viral infection, exercise and pets. The predictors for poor asthma control were previous hospitalization (OR 11.895; 95% C.I. 2.301, 61.485, $p=0.003$), Malay ethnicity (OR 4.881;95% C.I. 2.371, 9.764, $p<0.001$), exercise-induced asthma symptoms (OR 8.323; 95% C.I. 3.458, 20.028, $p<0.001$) and exposure to pets (OR 2.620; 95% C.I. 1.046, 6.563, $p=0.04$).
Conclusion: Asthma control in the primary school children surveyed was poor. Avoidance of precipitating factors such as exercise and pet need to be reinforced in particular those who had poor control.

ABSTRACTS: POSTER PRESENTATIONS

Poster 01

Chronic pain in primary care attenders: Severity and level of expressed need

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Background: Chronic pain is an important healthcare problem in primary care but the severity of pain and needs have not been well researched.
Objectives: To determine chronic pain grade (CPG) and the level of expressed need (LEN) in chronic pain sufferers.
Methods: This is a sub-analysis of a cross-sectional study on the prevalence of chronic pain. A random sample of patients aged 21 years and above attending a university-based primary care clinic was screened for chronic pain using self-administered case screening questionnaires. Patients identified with chronic pain were then interviewed face-to-face to assess chronic pain grade and level of expressed needs using CPG and LEN questionnaires. CPG Questionnaire has seven-items that measures severity of chronic pain in persistence, intensity and disability and is classified into grades 0-IV (grade 0, no pain; grade IV, most severe pain). LEN Questionnaire has four questions that measures patients' response to chronic pain and health care utilization. It was categorized into levels 0-4 (level 0, no need; level 4, highest level of need).
Results: 490 patients were approached, 465 consented (95% response rate). The prevalence of chronic pain was 54.8% (n=255). Mean age of chronic pain sufferers was 53.3±13.6 years. Among the chronic pain sufferers, 89 (34.9%) had grade I pain, 81 (31.8%) grade 2, 56 (22.0%) grade 3 and 29 (11.4%) grade 4 pain. For LEN, 57 (22.4%) showed no expressed need, 78 (30.6%) had level 1 need, 61 (23.9%) level 2, 34 (13.3%) level 3 and 25 (9.8%) level 4 need. There were significant associations found between grades of chronic pain and age ($F=3.819$, $p<0.011$), and occupation categories ($X^2=26.093$, $df=15$, $p=0.037$). Significant association were also found between levels of expressed need and age ($F=2.992$, $p<0.019$).
Conclusions: There are obvious unmet needs among chronic pain sufferers and measures are needed to address this issue.

Poster 02

Prevalence of chronic kidney disease and its associated factors in patients with type 2 diabetes mellitus

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Background: Diabetes is the leading cause of chronic kidney disease. However, it remains under-diagnosed in the diabetic population.
Objectives: To determine the prevalence of chronic kidney disease (CKD) in patients with type 2 diabetes mellitus (T2DM) and to determine its associated risk factors.
Methods: A cross-sectional study was conducted over an eight-week period at a primary care clinic in Seremban, Malaysia. All adult patients with T2DM attending the clinic were invited to participate and a face-to-face interview was done using structured questionnaire consisting of data on socio-demography and clinical characteristics. Clinical parameters were retrieved from medical records. The estimated glomerular filtration rate (eGFR) was calculated using the Cockroft-Gault equation to determine the prevalence of CKD.
Results: A total of 376 patients with T2DM participated. Response rate was 97.4%. The prevalence of CKD in patients with T2DM was 41.5%. There were 137 (87.8%) patients with CKD who had a normal range of serum creatinine. A significant association was found between age, duration of diabetes, hypertension, a positive family history of kidney disease, higher BMI, central obesity, serum creatinine, HbA1c level and CKD. Medications used such as biguanides, angiotensin converting enzyme inhibitors, diuretics and alpha blockers were also significantly associated with CKD. Using logistic regression, significant predictors for CKD were age, serum creatinine, central obesity and BMI.
Conclusion: Nearly half of the patients with T2DM had CKD. Most patients with CKD had a normal range of serum creatinine. It is therefore important to assess the eGFR for CKD status in clinical practice than dependence on serum creatinine level alone.

Poster 03

What are the tools and gadgets that healthcare professionals use to facilitate insulin initiation in patients with type 2 diabetes?

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[2]University of Malaya, Kuala Lumpur, Malaysia

Background: One of the main reasons for the delay in insulin initiation in type 2 diabetes is patients' misconception about insulin therapy, its benefits and side effects. To overcome this barrier, healthcare professionals (HCP) often use different tools to educate patients during consultations.
Objectives: This study aimed to explore the range of tools and gadgets used by HCP in Malaysia to facilitate insulin initiation amongst patients with type 2 diabetes.
Methods: In depth interviews and focus group discussions were conducted in Klang Valley and Seremban in 2010-11. HCP consisting of general practitioners (n=13), medical officers (n=8), diabetes nurses (n=3), government policy makers (n=4), family medicine specialists (n=8) and endocrinologists (n=2) were interviewed. A topic guide was used to guide the interviews, which were transcribed verbatim and analysed using Nvivo9 software using a grounded theory approach.
Results: HCPs used flip charts, diagrams, brochures and posters to explain the patho-physiology, disease progression and complications of diabetes to patients. HbA1c records were felt to be important as they served as evidence of poor diabetes control and helped to reinforce the need for insulin to patients. Decision maps were used to help patients make decision about starting insulin. Some HCP suggested using models of diabetic complication to instill fear to the patients. Showing patients the injection pens and needles and demonstrating the injections on dummies were found to be helpful in dispelling myths and barriers of insulin therapy. A simplified process of insulin injection would help patients to understand the process better. The insulin chart and glucometer were important tools for regular monitoring and self-titration especially at the early phase of insulin initiation.
Conclusion: There are various tools and gadgets to facilitate insulin initiation and HCPs should fully utilize these tools and gadgets in their clinical practice.

Poster 04

Insulin myths: healthcare professionals' views of patients' perceptions towards insulin therapy

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[2]Universiti Putra Malaysia, Serdang, Malaysia

Background: Nationwide surveys have shown that the prevalence of diabetes in Malaysia has almost doubled in the past ten years; yet diabetes control remains poor and insulin therapy is underutilized. Patients' negative perceptions about insulin are one of the reasons why they refuse to initiate insulin despite being advised to do so.
Objectives: To explore the healthcare professionals' views on the perceptions of patients with type2 diabetes towards insulin therapy.
Methods: In depth interviews and focus group discussions were conducted in Klang Valley and Seremban in 2010-11. Healthcare professionals consisting of general practitioners (n=11), medical officers (n=8), diabetes nurses (n=3), government policy makers (n=1), family medicine specialists (n=1) and endocrinologists (n=2) were interviewed. A topic guide was used to guide the interviews. The interviews were transcribed verbatim and analysed using Nvivo9 software using a grounded theory approach.
Results: Patients perceived insulin as a "poison" and believed that insulin causes many side effects like sexual dysfunction, organ damage and viewed insulin as a precursor of dialysis. Patients also perceived insulin as a "drug" that is addictive and irreversible once started. Misperceptions about insulin injections include overestimating the complexity of the process, fearing new technology and perceiving the injections as being invasive. Patients viewed insulin as indicating that the disease is severe and terminal. It was seen as a "last resort", "end of life" and leading to death. To the patient, initiating insulin was also viewed as a failure in diabetes control and a punishment for failing. There was a sense of stigma attached to insulin and patients perceived that insulin therapy would cause a drastic change in lifestyle.
Conclusion: In conclusion, there are many myths about insulin which have to be addressed by healthcare professionals when helping patients to make decisions about starting insulin.

Poster 05

Peripheral neuropathy among newly diagnosed type 2 Diabetes Mellitus

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Background: The onset of Type 2 Diabetes Mellitus (T2DM) is often preceded by a long period of unrecognized metabolic abnormality, because of this reason; neural dysfunction was likely to be detected at the time when diabetes was first diagnosed. Diabetic patients with peripheral neuropathy are at higher risk of developing foot infection and ulcer. It will lead to poor quality of life and higher risk of mortality.
Objectives: To determine the prevalence of peripheral neuropathy in newly-diagnosed T2DM.
Methods: A cross-sectional study was conducted among 254 newly-diagnosed T2DM patients who attended a primary health clinic from January 2009 to January 2011. Data collected included socio-demographic data, clinical examination and investigation results. Peripheral neuropathy was confirmed if patient was unable to feel the monofilament 5.07(10g) to one or more sites tested.
Results: Of all the participants, 147 were female (58%) and 107 were male (42%). Majority of them were Malays (86.2%) with mean (SD) age of 53.3(9.06) years. The prevalence of peripheral neuropathy was 8.7%. Retinopathy (14.6%) was the highest complication followed by nephropathy (11%), neuropathy (8.7%) and ischaemic heart disease (6.7%).
Conclusion: The detection of peripheral neuropathy should be done in all newly diagnosed type 2 diabetic patients early as preventive measures can be taken to prevent diabetic foot disease.

Poster 06

Predictors of poor glycaemic control among women with type 2 diabetes mellitus

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Background: Globally, the number of people with diabetes mellitus (DM) is increasing. In Malaysia, the prevalence of DM among women aged ≥18 years was 11.3%. Women with poor glycaemic control are at risk of poor pregnancy outcomes and long term complications. Hence, good glycaemic control could reduce the morbidity and mortality of these women especially those planning for conception.
Objectives: To determine the glycaemic control and the predictors of poor glycaemic control in adult women with type 2 diabetes mellitus (T2DM).
Methods: Data of women aged ≥18 years with T2DM were retrieved from the Malaysian Adult Diabetes Control and Management Registry. The data were mainly contributed by the public primary care clinics from January to December 2009. The target for glycaemic control was <6.5% as recommended by the Malaysian Clinical Practice Guidelines on Diabetes Management.
Results: A total of 41,796 women were included in the analysis and 22.3% (9302) were of reproductive age (18-49 years). The majority were Malays (64.3%), had diabetes of <5 years duration (50.7%) and 45.3% had co-morbidity of hypertension and dyslipidaemia. Less than a third achieved glycaemic target (17.1%). The factors associated with poor glycaemic control (HbA1c≥6.5%) were women of reproductive age (OR=1.8, 95% CI=1.4-2.3, p<0.001), Malays (OR=1.5, 95% CI=1.2-1.9, p<0.001), central obesity (OR=1.3, 95% CI=1.0-1.7, p=0.028), on pharmacological treatment ([oral hypoglycaemic agent only] OR=4.2, 95% CI=2.3-7.8, p<0.001), insulin only (OR=6.5, 95% CI=2.6-16.2, p<0.001), combination of oral hypoglycaemic agent and insulin (OR=19.9, 95% CI=9.1-43.6, p<0.001), longer duration of diabetes ([duration 5-10 years] OR=1.3, 95%CI=1.1-1.6, p=0.009) and [>10 years] (OR=2.0, 95% CI=1.5-2.9, p<0.001), uncontrolled triglycerides status (OR=1.5, 95% CI=1.2-1.8, p<0.001) and uncontrolled LDL-C (OR=1.3, 95% CI=1.0-1.5, p=0.024).
Conclusion: The glycaemic control in women with T2DM is poor. Health care providers need to strategize in identification of high risk groups especially women in reproductive age.

Poster 07

Epidemiological transition in local primary health care in Bangladesh

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Background: Assessment of epidemiological transition is essential for effective health planning. Many developing countries face an epidemic of chronic non-communicable disease, responsible for many deaths.
Objectives: This study aimed to assess disease prevalence in Bangladesh-Korea Friendship Hospital, a local primary health care center in a rural Bangladesh, built by Korea International Cooperation Agency (KOICA).
Methods: The data of all patients who had visited the KOICA medical consultant were collected for 16 continuous working days from 10th August to 19th September in 2011. The data in 1999 and 2005 were also gathered in corresponding dates and duration. The data were written by a single KOICA doctor each year. Patient diagnoses with chief complaint were reorganized as following; diabetes mellitus, primary hypertension, cardiovascular disease, pulmonary disease, digestive disease, musculoskeletal disease, dermatologic disease, other non-communicable disease (such as neurologic, renal, thyroid, liver disease), malnutrition, infectious disease, tuberculosis and miscellaneous. The prevalence of diseases in 1999, 2005, and 2011 was compared.
Results: Total number of patients in 1999, 2005, and 2011 were 335, 457, and 260 respectively. The most common disease for each year was as follows: digestive disease in 1999 and 2005, and diabetes mellitus in 2011. Diabetes mellitus (0.9% to 22.3%), tuberculosis (1.2% to 16.5%), and other non-communicable disease (3.9% to 6.5%) were increased, and cardiovascular disease (2.1% to 0.8%), digestive disease (29.6% to 10.0%), malnutrition (7.5% to 0.4%), dermatologic disease (5.7% to 1.5%), and infectious disease (15.5% to 3.8%) were decreased from 1999 to 2011. Primary hypertension (1.7%), pulmonary disease (8.2%) and musculoskeletal disease (11.5%) showed negligible change.
Conclusion: The epidemiological transition has occurred as there was increase in diabetes mellitus and other non-communicable disease. It is notable that tuberculosis has increased as well. The strengthening of institutional capacity to cope with emergence of non-communicable disease and tuberculosis is essential.

Poster 08

Perceived lack of effectiveness of the Mini-CEX as a learning tool for final year medical students

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Background: Direct observation of medical students with actual patients is important for performance-based assessment of clinical competencies. The mini-clinical evaluation exercise (Mini-CEX) is widely used for such assessment.
Study Objective: Final Year medical students' perceived effectiveness of the Mini-CEX as a learning tool was evaluated.
Methods: All final year medical students of Penang Medical College during 2010 and 2011 were required to complete a minimum of 8 Mini-CEX assessments during their 3 week-rotation in Family Medicine. A standardized questionnaire on perceived effectiveness was completed by each student. A total of 233 final year students completed 1864 Mini-CEXes. The reasons of lack of effectiveness were then analysed.
Results: A total of 233 students responded in this survey, 121 students from year 2010 and 112 from year 2011. Perceived lack of effectiveness due to the tutor factors were: "Feedback too generalized" 33 (14.2%), "no action plan given" 26 (12.0%), "feedback too little or none" 26 (11.2%), "no one-to-one observation done" 23 (9.8%), "feedback given not immediate" 12 (5.2%), "tutor not serious" 5 (2.1%). Student factors for lack of effectiveness were performance anxiety 40 (17.2%), "feedback does not meet self reflection" 17 (7.3%), "need longer time to improve weakness" 12 (5.2%), "already aware of feedback" 4 (1.7%), "difficult to change bad habit" 2 (0.8%), and "did not take mini-CEX seriously" 2 (0.8%).
Conclusions: Both students and tutors contributed to the lack of effectiveness of Mini-CEX as a learning tool. Students expected tutors to give feedback that is not too general, give action plan, and give some feedback. The top student factor was performance anxiety.

Poster 09

Considerations made by rural registrars in 2009 regarding training location

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Background: Previous studies have both supported and rejected claims that spending time during vocational training in a rural location encourages rural practice at the completion of training. This paper is part of a larger study examining practice intention of rural registrars at the completion of their training.
Objectives: This paper hopes to explore whether rural registrars want to be in their current training location, and also what influenced their decision to train there. Having this information will enable current incentives to be correctly targeted in order to retain the registrar, within the rural community, on completion of training.
Methods: Following extensive research, a 20-question survey was administered to 1007 rural registrars through 'General Practice Education and Training' (GPET). There was a return rate of 34.25%. From the larger survey, it was possible to extract 3 questions which investigated whether the registrars had selected to complete rural training, if they would prefer to be working in another location, and what specific considerations they made prior to beginning rural training.
Results: Of the 294 participants in this study, 47% strongly agreed that they chose to complete their general practice training in a rural location, along with 32% who agreed. 20% indicated that rural training was not their choice. 1% did not respond. When asked if they would prefer to be working in another location, 26% indicated that they would, and 72% responded negatively. Of the themes identified that influenced registrars in their choice of training location, the 2 most frequent responses were family and the training term opportunities offered.
Conclusion: 232 rural registrars had chosen to work in that location and 77 indicated they would like to work elsewhere. These statistics may have been skewed by the 10-year moratorium in Australia. Family was the most popular consideration that registrars made before commencing rural training.

Poster 10

Long waiting lists and delayed access: An assessment of hospital specialist outpatient services in Queensland using the Clinical Microsystem Approach

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Background: Waiting times for Queensland Hospital Specialist Outpatient Department (SOPD) services have reached crisis point and patients are unable to receive timely treatment. Improving SOPD services to accommodate increasing demand and addressing the long waiting lists for SOPD services is a high priority for Queensland Health.
Objectives: To understand the underlying issues related to the long waiting lists, to identify the barriers and enablers to the referral processes, and to find solutions to improve the referral process and reduce hospital waiting times.
Methods: The clinical microsystem approach was used to assess four SOPDs in two Queensland hospitals. The research used mixed method strategy including quantitative and qualitative methods**:** key informant interviews with stakeholders and SOPD staff, audits of referral and discharge letters, an audit of hospital wait list data, and document review of referral processes and education packages developed for general practitioners.
Results: Perceived barriers to improving referral processes include: a lack of available services in primary care setting, current outpatient model does not have capacity to cope with high demand, low number of discharges, a historic lack of engagement between public hospitals and general practice and traditional disinterest in partnering with primary care clinicians. Perceived enablers include: a shift in culture about the importance of collaborating with primary care clinicians and enhanced communication and referral processes. Audit of referral and discharge letters indicated significant improvement in the quality and completeness of referrals from general practice to SOPD at post-intervention. The audit of SOPD waiting list and key performance indicator data indicated little positive change, in some cases negative, in wait list figures from baseline to post- intervention.
Conclusion: Findings can be used to inform the development of new approaches and innovative models, developed in partnership by primary and secondary care providers, to improve access to services by patients.

Poster 11

Understanding the elements of a successful change management approach in general practice – an example of the improving diabetes management program

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Background: In 2008, a Division of General Practice in Queensland initiated an Improved Diabetes Management (IDM) program with 12 general practices. This program used numerous strategies including facilitation of team-based care, information management and diabetes educator support, clinical audit and education and training. In order to support the expansion of this program it was evaluated.
Objectives: The evaluation was undertaken to (a) determine how the clinical microsystem approach was applied to the implementation of the IDM Program, (b) develop a comprehensive understanding of the way a clinical macrosystem leads and supports change, (c) identify a theoretical framework relevant to the IDM program (c) understand the key characteristics of this high performing clinical microsystem site.
Methods: This study included key informant interviews and a document review. IDM program strategies were compared against characteristics of high performing clinical microsystem sites identified in literature.
Results: Several key characteristics emerged from the analyses that were similar to those of a successful clinical microsystem approach identified by Nelson *et al*. (2007); namely:
– uses peer promotion - 'leadership of the micro system'
– provides ongoing practice support - 'macro system support of the microsystem'
– is based on community needs and aims to improve patient care - 'patient focus'
– provides professional development and benefits to practice staff - 'staff focus'
– focuses on inter-professional learning and teamwork - 'interdependence of the health care team'
– improvements to practice databases - 'information and information technology'
– fosters improved practice management processes - 'process improvement'; and
– provides results feedback to practices - 'performance results'.
Conclusion: The Clinical Microsystems Approach provides a useful framework for the implementation of multi-practice improvements to care. This approach might be considered as a pathway for the effective uptake of innovation in improving health care delivery across primary care.

Poster 12

Hypertension guideline adherence in public primary care clinics

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[3]International Medical University, Seremban, Negeri Sembilan, Malaysia

Background: Poor blood pressure control is linked to the high incidence of complications, especially stroke, renal impairment and cardiovascular events. The Malaysian Hypertension Clinical Practice Guideline was released in 2008. The extent of the implementation of the recommendations of this guideline is unknown.
Objectives: To assess adherence to process and outcome audit criteria for hypertension management in public primary care clinics.
Methods: Consecutive adult hypertensive patient on follow-up at two public primary care clinics in Seremban were interviewed using structured questionnaires. Their clinic records were checked for the performance of audit indicators developed from clinical practice guidelines. Uncontrolled blood pressure is defined as >140/90 (non-diabetes) or >130/80 (diabetes).
Results: 232 adult hypertensive patients were enrolled from the two primary care clinics: 43.1% males, 41.4% Malays, 28.0% Chinese, 29.3% Indian, 1.3% other ethnic group. Smoking was noted in 27.0% of males and diabetes in 42.2%. The proportion of patients having uncontrolled blood pressure was 48.3% (38.8% in non-diabetic, 61.2% in diabetic hypertensive patients). 153 patients (65.9%) had urinalysis in the past one year; of those who had urinalysis, 10.4% were found to have proteinuria. 85.8% had renal profile done in the past one year; of those who had renal profile, 24.1% had glomerular filtration rate <60 ml/min. 20.8% of patients on monotherapy were prescribed a beta-blocker. 37.1% of patients who were either diabetic or had proteinuria were not prescribed angiotensin-converting enzyme inhibitors or angiotensin-receptor blockers.
Conclusion: Non-attainment of blood pressure treatment target is common in the public primary care clinics, especially among the diabetic hypertensive patients. The non-achievement of audit indicators suggests a need for a more concerted effort to implement the Malaysian Hypertension Clinical Practice Guideline at the local level.

Poster 13

Screening for microalbuminuria among patients with hypertension without concomitant diabetes, as a marker of cardiovascular risk

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Background: Microalbuminuria is a predictor of cardiovascular event. It is a risk factor for stroke and ischaemic heart disease. Screening for microalbuminuria is recommended annually for patients with hypertension according to Malaysian Hypertension Clinical Practice Guidelines (2008).
Objectives: To determine the prevalence of microalbuminuria and its associated factors in patients with hypertension without concomitant diabetes mellitus in a primary care clinic.
Methods: This is a cross sectional study on patients attending follow up for hypertension at a public primary care clinic in Seremban, Malaysia. Patients with diabetes were excluded. Face-to-face interviews were conducted to collect demographic data and clinical history and clinical measurements such as the waist circumference, body mass index and blood pressure (BP) were taken. Microalbuminuria is defined as 2 out of 3 abnormal random spot urine specimens taken within a 3-month period. Good BP control was defined as BP<140/90 mmHg. Blood investigations such as fasting blood glucose and fasting lipid profile were taken.
Results: A total of 379 patients were recruited (response rate 98.4%). Mean age of the respondents was 58.8 years (SD 10.8 years). The majority were Chinese (56.2%) and female (61.5%). The prevalence of microalbuminuria was 8.6%. Mean BP was 136/78.9 (SD 14.3/ 8.2) mmHg. 60.5% patients had good BP control. There was no significant association found between demography, clinical history or clinical parameters with microalbuminuria.
Conclusion: The prevalence of microalbuminuria in patients with hypertension without concomitant diabetes mellitus was found to be relatively low, which is consistent with other studies, using three urine samples to determine microalbuminuria. The majority of respondents had good BP control, which could account for the non-significant associations of microalbuminuria with other clinical characteristics.

Poster 15

Incidence and predictors of conversion to new onset diabetes mellitus over a 10-year period in Malaysia

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Background: Community cross-sectional studies have shown that the prevalence of diabetes mellitus (DM) is escalating. However little is known about the diabetes conversion rate in the hospital outpatient department setting. Early detection and management of DM and its related metabolic abnormalities may reduce, delay or prevent diabetes related complications.
Objectives: This study aims to determine the incidence of newly diagnosed DM and its predictors of conversion, in a group of patients followed up over a 10-year period.
Methods: This is part of the10-year retrospective cohort study of 1395 patients registered with the Department of Primary Care Medicine Clinic at the University of Malaya Medical Centre. Out of this cohort, 786 patients were not diabetics at baseline. Patients' information was collected at baseline (1998) and at the end of 10 years (2007) from patient records. Diagnosis of new onset DM was as determined by the attending doctors. Multiple logistic regression statistics was used to test the association of cardiovascular risk factors with new onset diabetes mellitus.
Results: 786 subjects without diabetes in 1998 were examined. In 1998, their mean age and BMI were 56±10years and 26±5 kgm^2 respectively. The incidence of newly diagnosed DM over 10 years was 30% (n= 236). The conversion rate to DM was highest in Indians (43.0%) followed by, 35.1% and 22.3% in Malays and Chinese respectively. There is significant association between Indian, BMI and the diabetes conversion rate. Indian is 2.67 times higher to develop diabetes compared to non-Indian (OR 2.67, 95%CI 1.65-4.34) whereas higher BMI patients were 2.3 times more likely to develop diabetes compared to lower BMI patients (OR 2.3, 95%CI 1.07-1.19).
Conclusion: The high conversion to diabetes should prompt us to screen regularly for diabetes, particularly amongst Indians and the obese.

Poster 16

Accuracy and concordance of serum creatinine to estimated glomerular filtration rate in determining chronic kidney disease in Malaysia

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Background: Detection of chronic kidney disease (CKD) particularly in its early stages is important as adjustment of dose of drugs is necessary to prevent adverse drug reaction. Early intervention can also retard the deterioration of kidney function and this can bring about considerable cost savings. The serum creatinine (SCr) level is the most frequently used method to screen for the presence of CKD. However, little is known about its accuracy in identifying early CKD in a primary care setting in Malaysia.
Objectives: This study aims to determine the prevalence of early CKD that could be missed when using SCr compared to using the estimated glomerular filtration rate (eGFR).
Methods: This is part of a 10-year retrospective cohort study of patients registered with the Department of Primary Care Medicine Clinic at the University of Malaya Medical Centre. The data presented here is that for the year 2007. Estimated GFR is determined by the Crockcroft-Gault (C-G) formula. According to the National Kidney Foundation, a SCr $\geq$ 140µmol/L or an eGFR < 60 ml/min are used as cut off points to identify CKD. Concordance of SCr with eGFR and the Mc Nemar statistic are used to test the accuracy of SCr in detecting early CKD.
Results: A total of 1100 subjects were recruited. The mean age was 66±9 years. The mean SCr and eGFR was 86±42 µmol/L and 70±30 ml/min respectively. The result demonstrated discordance between Scr and C-G values where 370 patients (33.6%) had a normal SCr had C-G values <60ml/min ($p<0.001$).
Conclusion: Screening for CKD using SCr fails to detect an additional third of patients with impaired renal function. Hence, using eGFR is a better way to identify early CKD.

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References:

1) Ranfuzosin prescribing information leaflet, Ranbaxy data on file.

2) Claus G Roehrborn, Alfuzosin: overview of pharmacokinetics, safety, and efficacy of a clinically uroselective blocker. Elsevier science Inc, 2001. (This study was done on Sanofi-Aventis Alfuzosin formulation. Ranbaxy's Ranfuzosin 10mg is bio-equivalent to Xatral XL 10mg.

3) Claus G Roehrborn and Raymond C Rosen, Medical therapy options for aging men with benign prostatic hyperplasia: focus on Alfuzosin 10mg once daily. Clinical Interventions in Aging 2008.

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Published in : *The Medical Journal of Malaysia* ‡

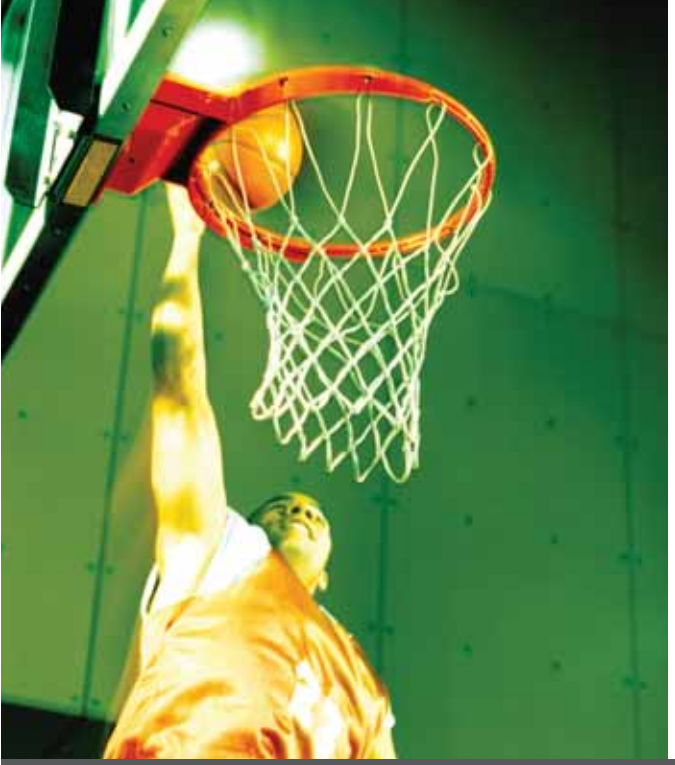
A Multicenter Study in Malaysia to Determine the Efficacy and Safety of a Generic Atorvastatin

N Punithavathi, DCH, L M Ong, FRCP, Y L L Lena, MSc, S Leekha, MD, on behalf of the Storvas Clinical Trial Study Group

‡ Volume: 64, Issue No: 2, June 2009, pp 150-154

ABSTRACT

A multicenter study was conducted to assess the efficacy of a generic form of Atorvastatin (Ranbaxy's Storvas®) in the treatment of Primary Hypercholesterolemia. One hundred and nineteen patients were given 10mg of Storvas® for four weeks and increased to 20mg if target LDL-Cholesterol was not achieved. LDL-Cholesterol was reduced by 36.6% at four week and 37.5% at eight weeks from baseline. Total cholesterol and triglycerides were significantly reduced. There were no drug-related serious adverse events. We conclude that the generic atorvastatin is safe and effective in the treatment of primary hypercholesterolaemia and the results are comparable to published data on innovator atorvastatin.



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References:

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References:

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Abbreviated Prescribing Information

NAME OF THE MEDICINAL PRODUCT CHAMPIX (varenicline tartrate) 0.5 mg and 1 mg film-coated tablets. INDICATIONS CHAMPIX is indicated for smoking cessation. DOSAGE AND ADMINISTRATION The recommended dose is 1 mg twice daily following a 1-week titration as follows: Days 1 – 3: 0.5 mg once daily, Days 4 – 7: 0.5 mg twice daily, Day 8 – End of Treatment: 1 mg twice daily. The patient should set a date to stop smoking. CHAMPIX dosing should start 1 – 2 weeks before this date. Patients who cannot tolerate adverse effects of CHAMPIX may have the dose lowered temporarily or permanently to 0.5 mg twice daily. CHAMPIX can be taken with or without food. Patients should be treated with CHAMPIX for 12 weeks. For patients who have successfully stopped smoking at the end of 12 weeks, an additional course of 12 weeks treatment with CHAMPIX at 1 mg twice daily may be considered. In patients with a high risk of relapse, dose tapering may be considered. Special Patient Populations No dosage adjustment is necessary for patients with mild to moderate renal impairment, patients with hepatic impairment and elderly patients. For patients with severe renal impairment, the recommended dose of CHAMPIX is 1 mg once daily. CHAMPIX is not recommended for use in patients with end stage renal disease or children or adolescents below 18 years of age. CONTRAINDICATIONS Hypersensitivity to the active substance or to any of the excipients. PRECAUTIONS Smoking cessation, with or without pharmacotherapy, has been associated with the exacerbation of underlying psychiatric illness (e.g. depression) and may alter pharmacokinetics or pharmacodynamics of some drugs. There is no clinical experience in patients with epilepsy. Discontinuation was associated with an increase in irritability, urge to smoke, depression, and/or insomnia in up to 3% of patients. CHAMPIX has no clinically meaningful drug interactions. Safety and efficacy of CHAMPIX in combination with other smoking cessation therapies have not been studied. CHAMPIX should not be used during pregnancy. It is unknown whether varenicline is excreted in human breast milk. Animal studies suggest that varenicline is excreted in breast milk. A decision on whether to continue/discontinue breast feeding or to continue/discontinue therapy with CHAMPIX should be made taking into account the benefit of breastfeeding to the child and the benefit of CHAMPIX therapy to the woman. CHAMPIX may cause dizziness and somnolence and therefore may influence the ability to drive and use machines. Patients are advised not to drive, operate complex machinery or engage in other potentially hazardous activities until it is known whether this medicinal product affects their ability to perform these activities. ADVERSE EVENTS Smoking cessation with or without treatment is associated with various symptoms: for example, dysphoric or depressed mood; insomnia; irritability; frustration or anger; anxiety; difficulty concentrating; restlessness; decreased heart rate; increased appetite or weight gain have been reported in patients attempting to stop smoking. No attempt has been made in either the design or the analysis of the CHAMPIX studies to distinguish between adverse events associated with study drug treatment or those possibly associated with nicotine withdrawal. In general, when adverse reactions occurred, onset was in the first week of therapy; severity was generally mild to moderate and there were no differences by age, race or gender with regard to the incidence of adverse reactions. The most common adverse event was nausea. Other common adverse events included increased appetite, abnormal dreams, insomnia, somnolence, dizziness, dysgeusia, vomiting, constipation, diarrhoea, abdominal distension, stomach discomfort, dyspepsia, flatulence, dry mouth, and fatigue.

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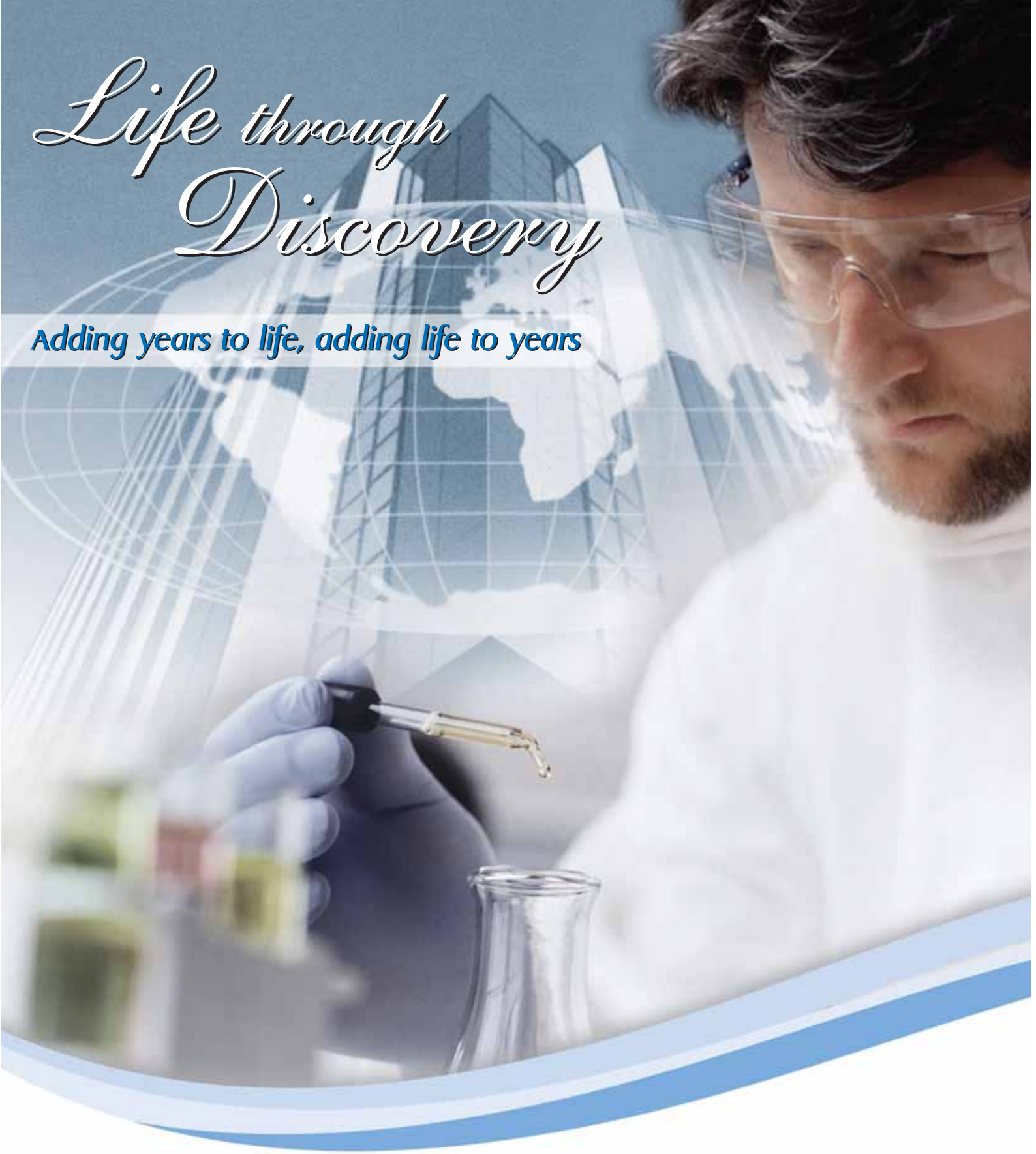

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Poster 17

The association between medication adherence and hypertension control in primary care clinics

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Background: Uncontrolled hypertension has been largely attributed to treatment non-adherence. Morisky Medication Adherence Scale (MMAS), an internationally widely used and validated medication adherence assessment tool, has not been used in Malaysian setting to assess the adherence to antihypertensive agents. Therefore it is not sure whether this scale is applicable to hypertensive patients in Malaysia.
Objectives: This study was conducted to assess the adherence to antihypertensive agents using MMAS, and to determine whether the blood pressure control is associated with the level of adherence.
Methods: This was a cross-sectional study. A total of 232 adult patients from Klinik Kesihatan Seremban and Ampangan, Negeri Sembilan, were enrolled in this study. The data collection was carried out via personal interview using various questionnaires including socio-demographic questionnaire, knowledge questionnaire, and MMAS questionnaire. Adherence was assessed using MMAS, which was divided into 3 categories: low, medium and high adherence. Blood pressure recorded on the last visit was used to determine whether the blood pressure was controlled. Controlled blood pressure was defined as ≤140/90 in hypertension without diabetes and ≤130/80 in hypertension with diabetes.
Results: Proportion of patients with controlled blood pressure was 51.7% (hypertension without diabetes 61.2%, hypertension with diabetes 38.8%). Proportion of patients in low, medium and high adherence categories were 32%, 39.8% and 28.1%, respectively. The proportion of patients with controlled blood pressure were 59.5%, 53.3% and 41.5% in low, medium and high adherence categories, respectively (p=0.102). The mean number of antihypertensive agents used among the patients was only 1.8.
Conclusion: The majority of the hypertensive patients have medium to high adherence. Medication adherence is not associated with the blood pressure control. This lack of association may be attributed to the under-treatment of hypertension in the study setting.

Poster 18

Patient's experience of primary care: A cross-sectional comparison study in mainland China using Primary Care Assessment Tool

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[3]Bauhinia Foundation Research Centre, Hong Kong

Background: China is undergoing a healthcare reform which systematically strengthens community-based primary care services. The services are provided by community health centres (CHCs) in urban areas with a six-in-one comprehensive care package. The Pearl River Delta (PRD) refers to the network of 6 cities representing different mainstream models of primary care services in mainland China.
Objectives: This study aimed to cross-culturally adapt the Primary Care Assessment Tool (PCAT) developed in the US to mainland China and process it within 6 cities of the PRD, which each has different responses to national policy for developing primary care services.
Methods: A Mandarin Chinese version of PCAT-AS was developed to measure the extent and quality of primary care services in Chinese population. The comparability of language and similarity of interpretability between the original and back-translated versions were evaluated. Multistage cluster sampling method was adopted to select CHCs and systematic sampling method was adopted to select patients. Interviewers were trained to improve inter-rater reliability before face-to-face interviews were conducted in all the 6 cities.
Results: The mandarin Chinese version of the PCAT-AS was congruent with the meaning of original English version after the validation of the quality of translation. A total of 3,080 subjects were surveyed. Cronbach's alpha values (internal reliability) for total PCAT score were 0.86 and intra-class correlation coefficient value (test-retest reliability) was 0.71. The total PCAT score varied significantly across different primary care service delivery models.
Conclusion: Primary care service provided by CHCs of government-owned model received the highest PCAT total score and was also superior in two of primary care domains (first contact-utilization and coordination of services). Further multi-level analysis will be able to explore the relationship between primary care achievements and different service delivery model, which could inform policy makers of the way to strengthen primary care in the future.

Poster 19

Knowledge and perception of medical students towards emergency contraceptive pills

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Background: Hormonal emergency contraceptive pills (ECP) is one of the methods available in Malaysia for emergency contraception. It is effective if taken within three to five days of unprotected intercourse. Advocating use of ECP can help in reducing unwanted pregnancies, unsafe abortions and baby dumping.
Objectives: The aim of the study is to assess the knowledge and perception of medical students towards ECP and the differences in perception between gender and seniority.
Methods: A cross-sectional study on knowledge, awareness and perception of ECP using a self-administered questionnaire was conducted among year 3 and 4 medical students in a private medical university. The questionnaire was piloted on a small group of students and corrected for ambiguity. Descriptive data was captured using SPSS version 17.0. Analysis for differences between gender and seniority was done using chi-square with p- value of <0.05 for statistical significance.
Results: 96% of the respondents had heard of and were aware of the existence of ECP. Year 4 students were better-informed due to training on the subject. Students want to learn more about ECP and advocate its use for the public. Compared to the senior students, year 3 students were less likely to prescribe ECP to the public ($p<0.05$). No gender difference in perception of ECP was noted. Half of the students were under the misconception that ECP can cause abortion and promote promiscuity. Some think that using ECP is against religious beliefs.
Conclusion: The majority of this private university's medical students were aware of ECP. Senior students were more knowledgeable on emergency contraception.

Poster 20

Prevalence, perceptions and barriers to care of depression among geriatric primary care patients in Singapore

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Background: Depression in elderly primary care patients is under-detected and under-treated. It can severely affect function and quality of life in the elderly, and even lead to suicide. Effective treatment for depression is available. Hence, all patients with depression should be diagnosed and treated appropriatedly to optimise their prognosis.
Objectives: i) To establish the prevalence of depressive symptoms among elderly primary care patients. ii) To find out the perceptions towards depression and identify the barriers to seeking care.
Methods: We conducted a cross-sectional study at 6 polyclinics across Singapore. 519 patients were recruited and a 20-minute interviewer-administered questionnaire was applied. The questionnaire included the Even Briefer Assessment Scale for Depression (EBAS Dep), which is a locally validated depression screening tool. We also collected information on the perceptions and barriers to seeking care of our participants for depression. Participants who were screened positive for depressive symptoms were referred for assessment by the psychiatrist team, and appropriate treatment was recommended.
Results: From our study, the prevalence of depressive symptoms in our elderly primary care patients was 4.4%. We have also found that there was a stigma against patients with depression among our local elderly population.
Conclusion: The prevalence of depressive symptoms among elderly primary care patients in our population appears to be low. However, there is a stigma against patients with depression in our local elderly population. Further studies should be done to elucidate the factors that contribute to this and to tackle it, with the aim of improving the mental health of our population.

Poster 21

Assessing the clinical preventive health care services of the university health centre, International Islamic University, Malaysia by using electronic medical record data analysis to improve care services

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[1]International Islamic University, Malaysia
[2]Academy of Family Physicians, Malaysia and MAHSA University College

Background: A university health centre is an ideal setting to study the services provided in primary care. Analysis of electronic medical record (EMR) data in the health centre will improve the understanding on patients and health care services.
Objective: This paper attempted to analyse clinical preventive services data from an electronic medical record (EMR) system in a university primary care centre.
Methods: The setting was the University Health Centre of International Islamic University, Malaysia (UHC-IIUM), Kuantan. The clinical preventive health care services (CPS) data was extracted from the year 2010 EMR data of UHC-IIUM; which included demographic information, immunization, counseling, prophylactic antibiotics, screening services and reason for encounter (RFE). A cross-analysis was done for CPS and RFE.
Results: Out of the total 10,517 patient encounters at the University Health Centre in year 2010, the percentages of CPS performed were : immunization (0.2%), counseling (2%), prophylactic antibiotics (1.5%), screening for chronic diseases by paid investigations (2.2 %) and measuring blood pressure (BP), weight and height (5.8%). In further analysis with RFE, all immunization was for tetanus toxoid; 96% counseling was for ante-natal care (ANC); all prophylactic antibiotic were given to trauma cases. Regarding paid screening investigations, the most frequently done was-full blood count (FBC) (36%), followed by general health screening package - (FBC, LFT, RFT, FBS, LIPID PROFILE, U/FEME, VDRL, HEPATITIS-B, Free T4 and rheumatoid factor) (17%) and Pap smear 0.01%. Only 5.5% of all consultations included measurement of blood pressure, weight and height.
Conclusion: This study illustrated the delivery of clinical preventive services in UHC-IIUM need to be improved.

Poster 22

Assessment of knowledge and perception of general practitioners on Continuing Quality Improvement Programme in Myanmar

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Background: Provision of quality healthcare in a safe environment should be universally available. Prior to implementation of a Continuing Quality Improvement (CQI) Programme among 10,017 general practitioners (GPs) in Myanmar, the General Practitioners' Society of the Myanmar Medical Association (MMA-GPS) conducted a survey to gather data for perception and knowledge of the general practitioners in order to design a relevant CQI programme for quality and safe general practices to be implemented in collaboration with the Ministry of Health, Myanmar Medical Council and Myanmar Medical Association.
Objective: To assess knowledge and perception of GPs on CQI for quality care and safe general practice.
Methods: Total 110 GPs from six selected townships of Myanmar were assessed ausing a self-administered questionnaire to explore their knowledge and perception on the goals, key elements, steps of CQI, members of CQI committee and willingness to participate in the CQI programme.
Results: Out of 110 GPs, 75% of them have heard about CQI programme, 66% had knowledge about the CQI programme; the goals of CQI were mentioned by 74%; 72% knew about the key elements and 70% knew the steps of CQI. The members of CQI programme committee proposed were GPs (75%) followed by professional body (61%), advisors from health authority (57%), clinic staff (51%) and patients (47%). Regarding application of CQI in improvement of clinical practices, 80% accepted it and 77% wanted to participate in CQI programme.
Conclusion: This study showed that the CQI was acceptable by 110 GPs. The affirmative perception of GPs on CQI programme was positive indicators for the implementation of CQI programme in Myanmar. Furthermore, it is now necessary to conduct a study to confirm the quality and safe indicators to design the CQI program.

Poster 23

Planning of public healthcare facilities using location allocation model: A case study of Kuala Langat district, Selangor, Malaysia

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Background: Finding the correct location of any facility and determining the demands which are to be assigned to it is very crucial in public health service. This is to ensure that the public gain maximum benefits. In this study, we analysed the previous location decisions of public primary healthcare (PHC) facilities in the district of Kuala Langat. With total population of 235300 (from 2008 data), the PHC in the district is currently served by 27 facilities. The percentages of total population covered within the maximum allowable distance of 3 km and 5 km are 69.7% and 77.8% respectively. This is very low compared to the Malaysian National Health Policy of Health for All (100% coverage).
Objectives: This study aims to propose the locations of the additional facilities or upgrading of the existing facilities in the area.
Methods: The expected population growth for the study area is calculated based on every 5 years projection. Data on the total population served by each clinic, the locations of the facilities and capacity of each facility are collected from the district health office and used as input in a location allocation model. The model is a bi-objective model which simultaneously maximizes the percentage of population covered and minimizes the total travelled distance by the uncovered population. The limited capacity of the facilities and time constraints are also addressed.
Results: The result shows that in the next 15 years when the total population is projected to increase to 303784 or 29% higher than in the year 2008, the percentages of population covered within 3 km and 5 km are 86.6% and 93.7% respectively.
Conclusion: The above result can only be achieved if proper planning in upgrading of the capacity of the selected facilities or introduction of new facilities.

Poster 24

A method to identify the appropriate age range for vascular screening program for China and other Asian countries

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Background: Vascular screening is an efficient way to identify high risk individuals in primary prevention of cardiovascular disease (CVD). In USA, people aged 20 and above would have regular vascular screen while in UK, people aged 40-74 were invited to a similar program. Information including age, sex, smoking status, blood pressure levels, blood cholesterol profile, and the presence of diabetes mellitus were recorded to assess the future probability of developing cardio-vascular risk. The population cardiovascular risk distribution and availability of resources are significantly different between Asian and Western countries. Limiting such programs to high risk age group is more cost-effective for Asian countries.
Objectives: To develop a method to identify the appropriate age range for vascular screening program in China, and other Asian countries.
Methods: A national cross-sectional health survey data of China and a risk algorithm was developed in combined Asian cohorts (data from Asia Pacific Cohort Studies Collaboration, with less than 15% participants from China) were used to estimate the age-gender specific population risk distribution. Only the predetermined treatment cut-off (for example 10-year CVD risk 0.2-20% the probability to develop CVD in next 10 years) falls into the 95% range of risk distribution of certain age group, people in this age group would need vascular screening. The risk of other age group will be either too low or too high for the vascular screening program.
Results: The 95 percentile of risk distribution of male aged 45-49 was 0.19, which was lower than the treatment cut off. That means the vascular screening programs are not indicated for males younger than 50 if we can accept 5% of the high risk individual in that age group to be missed. The 5 percentile of risk distribution of male aged 80-84 is 0.22, which means more than 95% man in that group would need treatment, so no need of further vascular check. The same analysis was done for females.
Conclusion: Men aged 50-79 years and women aged 60-84 years were the most appropriate age range for vascular screening programs in China. This statistical approach could also be used in other Asian countries.

Poster 25

Determinants of uncontrolled dyslipidaemia among 70889 adult type 2 diabetes mellitus in Malaysia

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Background: Numerous studies with compelling evidence had showed a clear relationship between dyslipidaemia and cardiovascular (CV) events in patients with diabetes mellitus. Effective treatment of lipid profiles to targets was associated with reduction of CV risks and events by halting or even reversing atherosclerotic progression.
Objectives: This study was to determine the major determinants of uncontrolled dyslipidaemia in adult patients with type 2 diabetes mellitus.
Methods: This was an analysis of secondary data obtained from a web-based Diabetes Registry in Malaysia, namely the Diabetes Registry Malaysia – Audit of Diabetes Control and Management (DRM-ADCM). The data of patients registered to DRM-ADCM from 1st January 2009 until 31st December 2009 was included in this analysis. The variables included demographic and clinical data such as age, sex, diabetes duration, glycaemic control, blood pressure, body mass index, and pharmacological treatment. Independent determinants were identified using multivariate logistic regression.
Results: A total of 303 centres (190 health clinics, 13 hospitals) contributed a total of 70889 patients (1900 or 2.9% patients were from hospital). Out of the total tested patients, 31%, 52.4% and 67.4% achieved treatment targets for low density lipoprotein-Cholesterol (LDL-C) (≤2.6 mmol/L), triglyceride (TG) (≤1.7 mmol/L) and high density lipoprotein- cholesterol (HDL-C) (≥1.1 mmol/L) respectively. About 38% were reported to have dyslipidaemia. There were a total of 28829 (40.7%) patients on lipid-lowering agents and out of these, 90.7%, 8.1% and 1.3% were on statins only, fibrates only and a combination of statins & fibrates respectively. About one third (38.1%) of patients >40 years old were on a statin. Malay ethnicity (compared to Chinese) and younger age groups (<50 years old) were two of the independent determinants of uncontrolled LDL-C, TG and HDL-C. Female gender (OR 1.16 95% CI 1.11 to 1.21) and uncontrolled blood pressure (OR 1.10 95% CI 1.05 to 1.15) were determinants of uncontrolled LDL-C, and poor glycaemic control was independently related to high TG (OR 1.17 95% CI 1.12 to 1.22). Patients not on statins were 20% more likely to have uncontrolled LDL-C and patients on fibrates were related to uncontrolled TG (4.8 times) and HDL-C (2.2 times).
Conclusion: Our study has highlighted the suboptimal management of diabetic dyslipidaemia in Malaysia, right from the annual testing rate of lipid profiles, control to target rates and lipid-lowering agents' usage. Pharmacological treatment of dyslipidaemia was largely ineffective with majority of patients not reaching treatment targets. Primary care in this country has to recognize these shortfalls and take immediate remedial measures to improve ineffective treatment of diabetic dyslipidaemia.

Poster 26

Prevalence and treatment outcomes of medical emergency at two public health clinics in Malaysia

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Background: A medical emergency occurs when a condition is of sufficient severity that required an immediate medical attention, absence of which might result in serious morbidity or mortality. Information on the medical emergency presented to health clinics are important for facility and staff preparedness. It informs and guides training of house officers and family medicine specialist trainees.
Objectives: Our study was to discover the types and treatment outcomes of medical emergency cases at two urban community polyclinics in Petaling district, Selangor.
Methods: Universal sampling was employed to recruit all emergency cases over one month period (12 April to 11 May 2011). All patients presented with conditions that fulfilled the emergency definition were informed of this survey and allowed to opt-out. A structured case record form was developed to capture demography data, whether the index case was self-presenting or decided by health care worker as a medical emergency, presenting complaint, diagnosis, concurrent chronic disease and their treatment outcomes at the clinic level. Emergency cases were classified according to the International Classification of Primary Care, revised second edition (ICPC-2-R).
Results: A total of 125 medical emergencies with 279 presenting complaints were recorded. The mean age was 30.7 years old (SD 19.9, range 19 days to 76 years). The patients were mainly men (50.4%), Malay (Malay 55.3%, Indian 26.8% and Chinese 10.6%), with secondary formal education (42.7%) and unemployed (38%). The prevalence of medical emergency was 0.56% (125/22320). Chief complaints were mainly from ICPC-2-R chapter R (respiratory system) and chapter A (general and unspecified), 40.0% and 28.0% respectively. There were 75.2%, 37.6% and 10.4% of patients presented with two, three and four complaints respectively. The most common diagnoses from chapter R and A were acute exacerbation of bronchial asthma (86.8%) and viral fever which was mostly suspected dengue (46.7%) respectively. There were 10 accident/injuries/trauma, two fractures, one dislocation, one head concussion, one eye injury, four suspected acute myocardial infarction, two hypertensive urgency and two hypertensive emergency. 40% were referred to hospitals compared to 31.2% given a clinic follow-up and 28.0% discharged upon full recovery. A patient deemed to have an emergency by a health care worker was six times more likely to be referred to hospital compared to patient who self-presented as emergency (CI 1.25 to 28.73, p=0.03).
Conclusion: In these urban public polyclinics, there was about one medical emergency for every 200 patients presented which were mainly acute asthma and viral fever. More than half were discharged well and given follow-ups. Emergency case profiles reported from this study cannot be generalized to other clinics at different locations.

Poster 28

Knowledge of academicians about Pap smear at a public university in the central region of Malaysia

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Background: Cervical cancer mortality rate is lower among populations that are screened regularly with Pap smear. In Malaysia, uptake of Pap smear is still low and poor knowledge is identified as one major barrier. An educated population is assumed to be knowledgeable in health matters but their acceptance of Pap smear are no difference from the general population.
Objectives: This study was conducted to assess the female academicians' knowledge of Pap smear and factors affecting the knowledge.
Methods: Between January and July 2010, a cross sectional study was conducted at eight randomly chosen faculties of a public university. Calculated sample was 120 female academicians. A pre-tested self-administered questionnaire (Cronbach's alpha=0.7) was used to capture the following data: the purpose and procedure of Pap smear; the target group; the schedule; and HPV vaccination. Respondents with score above the mean score are considered as having adequate level of knowledge in Pap smear.
Results: There were 101 respondents in this study. The mean respondents' age was 39.03±8.83 years. The mean total knowledge score about Pap smear was 6.90±1.17 and 67.3% of respondents had adequate knowledge. All the respondents knew what Pap smear was and 82.2% knew how it was performed. However, 6.8% respondents were not aware of the purpose of Pap smear while 17.8% repondents knew the schedule of pap smear. Majority (95%) were aware of the need to do Pap smear in sexually active women. Despite that, 82.2% and 92.1% respondents thought that older age and healthy women need not undergo Pap smear respectively. Only 23.8% knew that screening is allowed in pregnancy. Age (r_s0.231, p=0.006) and income (r_s0.236, p=0.017) had a significant but weak correlation to knowledge. The other factor affecting the knowledge was marital status (X^2=7.393, p=0.025).
Conclusion: Female academicians had adequate general knowledge of Pap smear. The factors associated with adequate knowledge of Pap smear in this population were age, income and marital status.

Poster 29

Improving social support to tuberculosis patients under public-private mix Dots (PPM-DOTS) services contributes towards better treatment adherence in Myanmar

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Background: In 2010, total 1,022 general practitioners (GPs) were engaged with PPM-DOTS project in 70 selected townships of Myanmar. Among them, 95.4% adherence rate was observed in 4 PPM-DOTS project townships. Adherence to the long course of tuberculosis (TB) treatment is a complex, dynamic phenomenon with a wide range of factors among which social support is a major influencing factor.
Objective: To assess contribution of social support of family members and general practitioners in the PPM-DOTS services to treatment adherence of TB patients.
Method: A cross-sectional study was carried out among 175 TB patients from the four selected townships. A pre-tested, semi-structured questionnaire was used in face-to-face interview to assess emotional, informational, logistic support from family members and GPs.
Result: Out of 175 TB patients, 98% of them mentioned that they had good family relationship and appreciated encouragement by GPs. They received adequate information and reminders to take TB treatment from family members (100%), GPs (99%) and friends (92%). Almost all patients recognized support by GPs in supplying the anti-TB drugs (99.4%) and financial support for transport and other materials related to diagnosis and treatment (91.4%).They also received financial support from family members (99%) and logistic support from friends (95.4%). 89%, 99% and 97% agreed that they received at least good support in emotional, informational and logistic respectively. Overall, social support, informational support, logistic support were all significantly associated with treatment adherence ($p<0.05$).
Conclusion: Improving social support to TB patients in the PPM-DOTS programs contributed to better treatment adherence. Thus, improving social support to TB patients should be extended to all PPM-DOTS project townships to ensure high adherence rate and subsequently to assist in mitigation of the TB burden in Myanmar.

Poster 30

Improving accessibility and availability of public-private mix (dots) services contributes to better treatment adherence of tuberculosis patients

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Background: Myanmar Medical Association, Project Management Unit (MMA-PMU) has been implementing PPM-DOTS project for tuberculosis (TB) since 2003 in cooperation with National TB Control Programme (NTP). In 2010, although a total of 1,022 GPs were engaged in the PPM-DOTS project in 70 selected townships of Myanmar, only 118 GPs from 16 project townships were involved in the provision of comprehensive case management of TB patients including anti-TB drugs and social support to improve accessibility and availability of PPM-DOTS services to TB patients. The rest are participating in case finding, referring of TB suspects to respective township NTP and provision of anti-TB drugs.
Objective: To evaluate the impact of accessibility and availability of PPM-DOTS services provided by GPs on the treatment adherence of TB patients.
Method: A cross-sectional study was carried out among the 175 TB patients from 4 selected PPM-DOTS project townships from February to August 2011 by using a pre-tested questionnaire in face-to face interview to assess the adherence rate of TB treatment and the accessibility and availability of PPM-DOTS services.
Results: Of the175 TB patients 167 (95.4%) were adherent to the treatment. 96% and 97% agreed on the accessibility and availability of PPM-DOTS services respectively. There was a significant association ($p<0.05$) between treatment adherence and accessibility and availability of the PPM-DOTS services.
Conclusion: This study indicated that improving accessibility and availability of PPM-DOTS services by GPs significantly improved treatment adherence of TB patients. Thus, comprehensive case management of TB patients including anti-TB drugs and social support should be scaled up as much as possible to attain high adherence rate which may assist in mitigation of the burden of TB in Myanmar.

Poster 31

Malaria disease: Knowledge, attitude and practice of adult population in Al Hodaidah city, Yemen

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Background: Malaria is one of the most serious health problems in Yemen.
Objectives: To assess knowledge, attitude and practice of adults with regards to malaria disease in Al Hodaidah city in Yemen.
Methods: A cross- sectional study was conducted in six health centres in Al Hodaidah city in Yemen using multi-staged random sampling. A total of 120 participants were recruited. The questionnaire included: socio-demographic data, knowledge, attitude and practice regarding malaria disease.
Results: Mean age was 31.23 (±7.74) years and the age ranged from 20 to 60 years. The majority was male (54%). Most of the participants had good knowledge (85.8%) and the majority of them (95%) knew that malaria is transmitted by mosquito bite. However, 37.5% thought that malaria could be transmitted by drinking dirty water. The main sources of their information were the media (45.8%) followed by health workers (37.5%). The majority had positive attitude (96.7%) and satisfactory practices (52.5%). Although most (95.0%) participants thought that malaria could be controlled, 92.5% did not use bed net in every bed. There was a significant association between knowledge and gender of the respondents; men were more knowledgeable than women (92.4%, 77.8% respectively) ($p=0.022$). There was no significant association between knowledge and other socio-demographic factors ($p>0.05$).
Conclusion: In general, there was a satisfactory knowledge, practice and attitude among participants of this study, except in the prevention of malaria. This study found a significant association between knowledge and gender. This may be attributed to gender discrimination in the country. Social stability, reduction of civil conflicts, improved literacy, especially among women and increasing income and improving socio-economic status are necessary to adopting good practices.

Poster 32

Why do asthmatic patients continue to smoke?

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Background: One-third of adult asthma patients smoke cigarettes despite knowing that smoking can trigger asthma exacerbation.
Objectives: This study aimed to determine the reasons for asthmatic smokers continue to smoke cigarettes.
Methods: This was a cross-sectional questionnaire survey of adult asthmatic patients who were managed at public primary care clinics in Singapore. 174 asthmatic smokers (AS) of both genders from four local ethnic groups and aged 21 to 50 years old were recruited into this survey. Data on their demographic and smoking characteristics, reasons for smoking and experiences during their quit attempts, were collected and analysed using the statistical software STATA version 11.
Results: The median age of AS was 30 years. 75% were male and mostly Malay (58%). 71% of them had secondary or lower levels of education. 86% of adult asthma smokers started to smoke before 20 years old. 98% smoked less than 10 sticks per day and 97% reported smoked for ≤5 years. 25% of them had no intention to quit smoking. Those who continued to smoke cited various reasons for smoking such as stress relief (79%), peer pressure (36%), influence from family members who smoked at home (40%), think better (35%), staying alert (57%), and staying relaxed (53%). Although 77% believed that smoking would worsen their asthma, yet they continued to smoke. Those who attempted to quit unsuccessfully encountered symptoms such as restlessness (43%), mood swings (27%), difficulties in concentration (25%) and irritability (24%), thus continues to smoke. Even when ill, 44% did not refrain from smoking.
Conclusion: Adult asthmatic smokers continued cigarette smoking due to the perceived benefit of stress relief and maintenance of mental alertness, and the experience of withdrawal symptoms in their quit attempts. Programmes to support their smoking cessation attempts should address these psychosocial issues and rectify misperceptions.

Poster 33

Impact of cigarette smoking on symptoms and quality of life of adult asthmatic patients who are managed in public primary care clinics in Singapore

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Background: Cigarette smoking aggravates asthmatic exacerbation and yet some asthmatic patients continue to smoke.
Objectives: This study aimed to compare the quality of life (QOL) between adult asthmatic smoker and non-smoker patients.
Methods: Asthma Quality of Life (AQLQ) questionnaires were administered to adult asthmatic patients on follow up at public primary care centres in Singapore. The survey also included data of their asthma status such as symptom profiles. The independent two-sample t-test and ANCOVA model were used for comparing differences in mean domain scores between non-smokers and smokers. The effect of smoking on nocturnal symptoms and awakening were compared using χ^2 test and ordinal logistic regression.
Results: 357 adult asthmatic patients (183 non-smokers and 174 smokers) were recruited. Asthmatic smokers were mainly male ($p<0.001$), single ($p=0.008$) and younger, with a mean age of 30 years ($p=0.007$). They were more affected by nocturnal cough and wheezing ($p=0.016$), with no statistical difference for day symptoms, activities of daily living and history of hospitalization. After adjustment for age, gender and prescribed asthma medications, the mean scores in the AQLQ “symptoms” and “emotional function” domains of asthmatic smokers were 0.41 (95% CI 0.10 to 0.72) and 0.50 (95%CI: 0.16 to 0.84) point lower than non-smokers, with no statistical differences in mean scores in the “activity limitations” and “exposure to environmental stimuli” domains.
Conclusion: Asthmatic smokers were affected by nocturnal symptoms, and had lower “emotional function” scores, resulting in poorer QOL.

Poster 34

Childhood atopic eczema: A measurement of children's quality of life and its impact on family and factors associated with children's quality of life

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Background: Atopic Eczema (AE) constitutes about 40% of referrals to paediatric dermatology clinics in Malaysia. The current consensus outlines that the majority of AE children can be appropriately managed within primary care settings. More appropriate and effective primary care management will only be possible if primary care providers have greater awareness in the health-related quality-of-life (QoL) issues concerning childhood AE and the impact of AE on patients' families. Health-related QoL is increasingly acknowledged as an important component of patient care and clinical research.
Objectives: The study aimed to determine the QoL of children with AE, the impact of AE on the family and the factors associated with children's QoL.
Methods: A cross-sectional study involving 111 patients in the dermatology clinic of Hospital Raja Perempuan Zainab II was carried out from January 2010 to January 2011. QoL was measured using CDLQI. The impact of AE on the family was measured using DFI. The Malay versions of CDLQI and DFI were used in this study.
Results: The mean (SD) CDLQI score was 9.7 (6.00). The means (SD) of the most affected items were 1.6 (0.80) (concerning symptoms), 1.0 (0.90) (concerning emotions), 1.2 (0.90) (concerning sleep loss) and 1.1 (0.90) (concerning treatment problem). The mean (SD) DFI score was 7.8 (6.00). Families in this study scored highest in the questions concerning expenditure (mean=1.0 (0.90)) and family diet (mean=1.0 [0.80]). Others such as questions concerning housework (mean=0.9 (0.80)) and maternal exhaustion (mean=0.9 [0.80]) almost reached the arbitrary cut-off point of 1.0. Disease severity as measured by SCORAD was the only factor significant associated with QoL in childhood AE ($p<0.001$).
Conclusion: AE impact on the QoL of children and the disease severity is significantly associated with the patient self-reported QoL measurement in this study. Primary care providers should not perceive AE merely as physical illness but also as psychologically disabling illness. Even though QoL measures are subjective, they should be considered during periodic health visits to primary care.

Poster 35

Knowledge and attitudes toward prevalence of human papillomavirus (HPV) infection, HPV vaccination and screening: A cross-sectional study on male and female students of higher education institutions in Malaysia

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Background: Most studies have been carried to study the pathogenesis of HPV infection, knowledge and awareness towards HPV among women population while little is known about male populations. However, male HPV infection is also an important concern, both for the disease burden in men and for the risk of transmission to women. Recent studies indicated that HPV is associated with a variety of cancers in men, including anal cancer and a subset of penile and oral cancers. Despite the high prevalence, HPV knowledge has been found to be poor in both genders.
Objectives: The aim of this study is to evaluate the knowledge towards HPV infection, its risk factors, HPV transmitted disease, HPV screening and HPV vaccination among male and female university students. Besides that, this survey evaluates the attitude and acceptance towards HPV screening and vaccination among female university students.
Methods: A cross-sectional survey using convenience sampling was conducted between the month of March 2009 and May 2009 at six Higher Education Institutions in Malaysia; at different campuses of Tunku Abdul Rahman University (UTAR), such as Sungai Long campus, Setapak Campus and Kampar Campus; University of Malaya (UM); Putra Malaysia University (UPM); UCSI University, and Tunku Abdul Rahman College (KTAR). A total of 780 questionnaires were distributed, only 360 responded, therefore the respondent rate is 46.2%. Among those 360 participants 180 were male students and 180 were female students. Majority of respondents were Chinese and fall under the age group of 20-25. Difference of knowledge across gender were tested for statistical significance using Chi-Square test with Yale's correction by using the SPSS statistical software with the significance taken as $p<0.05$.
Results: More female respondents perceived women having multiple sexual partners ($p<0.0389$); engage in sexual activity at an early age ($p<0.0001$) and smoking habits ($p<0.011$) as risk factors of HPV infection compared to male respondents. On the other hand, male respondents had a significant lower level on knowledge towards HPV screening compared to female respondents ($p<0.0001$). Although only 18.33% of the female respondents know about HPV vaccination, 46.11% of female respondents wish to be vaccinated in the future. The three most commonly given reasons by the women for not undergoing vaccination were "shy and embarrassed" (97.73%), "don't feel the need" (75.00%) and financial problem (72.73%). However, a high percentage (75.56%) of female respondents will accept HPV screening in the future.
Conclusion: This study finds significant low level of knowledge among both genders. It is important to educate them to decrease the incidence of HPV-related diseases and to increase the uptake of preventive measurement towards HPV infection.

Poster 36

Knowledge, attitude and practice on hand, foot and mouth disease (HFMD): A cross-sectional study on non-academic staffs of UTAR Kampar Campus

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Background: Hand, foot, and mouth disease (HFMD) is a common febrile illness among young children. The symptoms are characterized by fever, ulcers in mouth, and rashes with blisters that appear on the palm and soles. The causative agent of HFMD is Coxsackievirus A16 and Enterovirus 71. The virus enables to transmit from one person to another person via direct contact with the infected person. Currently, there is no vaccination or specific treatment available for HFMD. However, practising good hygiene such as frequent hand washing lowered the risk of infection. HFMD will not cause fatality, but it can lead to complication such as encephalitis.
Objectives: The objective of this study is to assess the knowledge, attitude and practice on HFMD among non-academic staff in UTAR Kampar Campus.
Methods: A cross-sectional survey was carried out among non-academic staff without any age exclusion criteria. They were approached universally from various faculties and departments; Faculty of Science (FS), Faculty of Arts and Social Science (FAS), Faculty of Business and Finance (FBF), Faculty of Information and Communication Technology (FICT), Faculty of Engineering and Green Technology (FEGT), Institute of Chinese Studies (ICS) as well as Centre for Foundation Studies (CFS). Meanwhile, administration staffs from Department of Student Affairs (DSA), Department of Soft Skills Competency (DSSC), Department of Alumni Relations and Placement, Department of Safety and Security (DSS), affiliation ranging from manager, senior manager, general manager, executive, senior executive, lab officers, lab assistants and library staffs. There were 224 non-academic staffs in UTAR Kampar Campus, however only 116 of them willing to participate in this study. Differences in knowledge, attitude and practice across gender were tested by using Epi Info™ statistical software with the significance level taken as $p<0.05$.
Results: The result revealed that 60.3% of the non-academic staffs knew about HFMD. Among those who knew, 65.7% were female non-academic staffs and 34.3% were male non-academic staff ($X^2=0.996$, p-value=0.318. In terms of attitude, 67.0% of the female non-academic staffs and only 33.0% of male non-academic staffs ($X^2=7.506$, p-value=0.023) have good attitudes regarding HFMD. In addition, both male and female non-academic staff have similar practices on hand washing with the p-value >0.05 ($X^2=1.220$, p-value=0.749). Although, this study found that female non-academic staffs were more knowledgeable on HFMD, many of them were still lack knowledge especially on the prevention and treatment for HFMD.
Conclusion: Further actions are warranted to increase the knowledge on HFMD preventive method among UTAR non-academic staff in order to decrease the transmission and outbreak of HFMD.

Poster 37

Accuracy of the self-administered Asthma Control Test™ in a primary care setting

How CH
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Background: The current management of asthma focuses on control and the Asthma Control Test™ is a short and simple, self-administered screening tool that is currently widely adopted by healthcare institutions in Singapore.
Objectives: To assess the accuracy of the self- administered ACT among adult outpatients attending our public primary care facilities in Singapore.
Methods: 900 patients above 21 years old from three primary care polyclinics in Singapore participated in our study. Participants were recruited and interviewed by second year nursing students under the supervision of the principle investigators and academic supervisors. A standardized case vignette was read to each participant and then the participants were invited to complete the Asthma Control Test on their own according to the case vignette. They also rated the difficulty of completing each question in the ACT and completed a questionnaire assessing their literacy and numeracy at the same sitting.
Results: 47.2% of the participants were between 21 and 35 years old and 88% had achieved the education standard of GCE 'O' level or above. 64% were at least bilingual. Majority of the participants answered question 1 of the ACT correctly (75.9%), but only 13.6%, 15.1% and 11% answered questions 2, 3 and 4 correctly. Majority of the wrong answers overestimated the correct ACT scores (Q2-98%, Q3-97% and Q4- 96%). A higher proportion of respondents with asthma (n=77, $p<0.001$) were able to answer the ACT questions correctly. Educational level and language ability were not significantly associated with correct answers. Majority (69.8%) reported no subjective difficulty in answering all 5 questions.
Conclusion: The majority of overestimated ACT score will result in an under detection of true clinical conditions, and this may result in delayed access to appropriate medical care. The unanimous overestimation suggests that ACT may still be a valid self-administered tool in Singapore if we can redefine a local cut off score for "optimal control". The lack of associations of educational level and language ability with correct ACT scores suggests that even asthmatic patients with lower educational levels can be trained to use the tool accurately.

Poster 38

Insulin resistance and metabolic characteristics in chronic hepatitis C: Association with serum HCV RNA level

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Background: Insulin resistance and metabolic characteristics according to HCV RNA assay results in patients with anti-HCV antibody positive are not yet well established.
Objectives: We studied differences in insulin resistance and metabolic characteristics according to HCV RNA assay results in Korean adults who are anti-HCV antibody positive.
Methods: This is a cross-sectional study by 222 patients visiting the National University of Pusan from 1 January 2004 to 31 December 2007. All of them were anti-HCV antibody positive and were conducted RT-PCR for HCV RNA. The HCV RNA-positive Group consisted of 85 patients. The HCV RNA-negative uninfected Control Group consisted of 115 patients and the HCV RNA-negative treated Control Group consisted of 22 patients. We determined anthropometry, enzyme immunoassay for anti-HCV, RT-PCR, insulin resistance, insulin sensitivity, and plasma concentrations of fasting glucose, insulin, and lipid profile.
Results: No significant differences in the body mass index, waist circumference, blood pressure, fasting plasma glucose, fasting insulin, triglyceride, high density lipoprotein cholesterol, HOMA-IR and QUICKI were found between the HCV RNA positive and negative groups. The serum total cholesterol and low density lipoprotein (LDL) cholesterol level was significantly lower in the HCV RNA positive group than in the negative group (186.2±37.6 vs. 197.2±37.2 mg/dl, $p=0.041$, 111.7±34.1 vs. 121.4±35.5 mg/dl, $p=0.042$). High total cholesterol ($\geq$200 mg/dl) (adjusted OR=0.51, 95% CI 0.28-0.94, $p=0.03$) and high LDL cholesterol ($\geq$130 mg/dL) (adjusted OR=0.46, 95% CI 0.24-0.87, $p=0.02$) were inversely associated with being HCV RNA positive ($p<0.05$).
Conclusion: The HCV RNA-positive subjects had significant lower serum total cholesterol and LDL cholesterol level than the HCV RNA-negative subjects. They had lower prevalence of high serum total cholesterol and LDL cholesterol level.

Poster 39

Study of the intake of herbal/health supplements by patients on anticoagulation therapy and their knowledge of potential interactions of these supplements with warfarin

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Background: It is well documented that many drugs and food interact with warfarin.
Objectives: This research aimed to study the intake of herbal/health supplements by Sing Health Polyclinic (SHP) patients who were on warfarin, and their knowledge of potential drug-supplement interactions.
Methods: 100 SHP patients who were on warfarin were recruited from 4 polyclinics. Each patient was interviewed in person and completed a six-item questionnaire. The results of the survey were statistically analysed.
Results: In this three-month study, a significant 42 out of 100 patients (on warfarin) recruited concurrently took herbal/health supplements. Glucosamine, traditional Chinese medicines and Omega-3 fatty acids were the top 3 most commonly consumed herbal/health supplements. 89% of the 100 patients recruited were unable to verbalize the herbal/health supplements that could interact with warfarin. Out of the 42 warfarin patients who were taking herbal/health supplements, 57% did not inform their healthcare professionals that they were taking the supplements. Many patients perceived that these herbal/health supplements were common and unlikely to cause any harm. 48% of the 100 patients surveyed responded that they were not told about the possible drug-supplement interactions with warfarin. Doctors, pharmacists and family members were perceived to be their most reliable sources of information on drug-supplement interactions.
Conclusion: Patients' concurrent intake of herbal/health supplements without informing their healthcare professionals poses potential risk to the patients' health. Pharmacists can play a significant role in advancing medication safety by educating them on the possibility of drug-supplement interactions. This study also highlighted the need for further research to determine the potential interference/interaction between warfarin and herbal/health supplements.

Poster 40

Factors influencing family physicians prescribing behaviour: A systematic review

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Background: The prescribing habit by family physicians is a complex activity and depends on the interplay of many factors. In recent decades, many factors have been identified to influence family physician prescribing pattern.
Objectives: The aim of this systemic review was to identify and to assess factors affecting family physician prescribing behaviour.
Method: A broad conceptual literature review has been conducted using the keywords; "prescribing factors", "prescribing indicators", primary care prescribing", "GP prescribing", "drug cost", "drug advertising", "drug formulary", "polypharmacy", repeat prescriptions" and "new drug". "Medline, Pub med, and Eric were searched.
Results: We found 30 studies that met our selection criteria. There was a significant relation between certain family physicians characteristics and their prescribing behavior. Younger physicians have higher rates of new drug utilization. Female sex and recent graduation i.e. less years in practice are associated with high drug utilization rate. There was a linear correlation between the number of prescribed drugs and number of family physicians in the practice. In practices with large number of listed patients, physicians prescribed fewer drugs per patient compared to practices with low number of listed patients. Reducing interactions between physicians and pharmaceutical sales representatives has resulted in improved prescribing. Repeat prescribing accounted for the vast majority of all items as well as prescribing costs. Patient's age has more significant effect on drug utilization rate compared to patient's sex.
Conclusions: Physicians prescribing behavior appears to be influenced by multiple factors. Majority of studies in this review retrieve their data from health database. However, these comprehensive health databases have no information on the indications for drug treatment or ascertainment of comorbidity that may have affect prescribing behavior. Thus, attributes of the practice population need to be considered as potential biases. Data is lacking on combination of each factor to patient outcomes, this gap in the literature needs to be addressed.

Poster 41

Maternal mortality review: A case of pulmonary haemorrhage due to ruptured lung haemangioma secondary to Ghon's focus invasion

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Background: This case illustrates a case of maternal death due to an uncommon cause. The final cause of death was ascertained through a postmortem examination.
Objectives: To highlight the importance of conducting a full postmortem in cases of maternal mortality.
Case summary and discussion: This case report describes the chronology and postmortem findings of a woman who died of pulmonary haemorrhage at day 37 postpartum. There was no prior significant antenatal or medical history. A literature review of similar cases is also presented. The final cause of death was massive pulmonary haemorrhage from a ruptured lung haemangioma due to an invading Ghon's focus. There are few documented cases of lung haemangiomas. Haemangiomas are usually asymptomatic unless it bleeds. Ghon's focus is a caseating granuloma which invades the surrounding tissue. It is usually benign and may resolve spontaneously without causing complications or active tuberculosis.
Conclusion: The case illustrates the importance of conducting a full postmortem in a case of maternal mortality, as causes such as pulmonary embolism or amniotic embolism may sometimes be wrongly attributed.

Poster 42

Factors affecting dengue fever knowledge, awareness and practice among selected urban, semi-urban and rural communities in Malaysia

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Background: Dengue fever is a major public health problem in Malaysia.
Objectives: This study aimed to assess factors affecting knowledge, attitude and practice regarding dengue fever among selected population in Malaysia.
Methods: A descriptive community-based cross-sectional study was conducted on 300 participants from three different geographical settings of urban, semi-urban and rural areas within the states of Selangor and Kuala Lumpur. The questionnaire included questions on demographic data, knowledge, attitude and practice regarding dengue fever.
Results: Mean age of respondents was 34.4 (± 5.7) years and the age ranged from 18 to 65 years. The majority were married (54.7%) and Malay (72.7%). The majority heard about dengue fever (89.7%). Television was the common source of information about dengue fever (97.0%). The majority of respondents answered correctly on most of the items of knowledge. Only four items out of 15 were answered incorrectly by the majority of them. There was no significant association between knowledge score and socio-demographic factors. Regarding attitude toward dengue fever, about one fifth of the respondents (24%) believed that immediate treatment is not necessary for dengue fever and the majority of them were not afraid of the disease (96.0%). Attitude toward dengue fever was associated significantly with level of education and employment status ($p<0.05$). Practice was associated significantly with age, marital status, geographical area ($p<0.05$) and knowledge on dengue fever ($p=0.030$).
Conclusion: This study found a relatively adequate knowledge among participants but unsatisfactory attitude and practice**.** Knowledgeable participants were doing better in prevention practice of dengue fever. There is a need to increase health promotion activities through campaigns and social mobilization to increase knowledge regarding dengue fever. This would help to mould positive attitude and cultivate better preventive practices among the public to eliminate dengue in the country.

Poster 43

Smoking, socioeconomic status and health behaviour in a low-income urban Asian population: A community-based study in Singapore

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Background: The prevalence of smoking is higher amongst those with lower socioeconomic status (SES). In the West, SES has been shown to be independently associated with smoking as well as smoking cessation. In Asian populations, however, the evidence is less clear.
Objectives: We studied the socio-demographic and socio-economic factors associated with smoking among residents ≥40 years old in two low-SES housing precincts in Singapore.
Methods: From 2009-2011, we collected baseline information on smoking, socioeconomic indicators, and other health-related behaviors (e.g. drinking, physical inactivity, obesity, and health screening utilisation). Individual measures of SES included education, employment and household income. Neighborhood measures of SES included public rental vs. owner-occupied flats. Chi-square and multi-level logistic regression was used to identify factors associated with current smoking and heavy smoking (defined as ≥20 pack-years).
Results: Participation was 77.2% (1081/1400). At baseline, 23.1% (250/1081) were current smokers while 6.3% (68/1081) were ex-smokers; the national estimate for current smokers was 13.6%. In this low-income population, higher household income was associated with current smoking (OR=1.76(1.18-2.62), P=0.006) but inversely associated with heavy smoking (≥20 pack-years) (OR=0.37(0.14-0.97), P=0.042). Socio-demographic factors associated with smoking included younger age (OR=3.33(2.00-5.26), P=<0.001), male gender (OR=6.68(4.71-9.50), P=<0.001) and Chinese vs. Indian ethnicity (OR=3.33(1.67-6.67), P=0.001). Health behaviors associated with current smoking included alcohol consumption (OR=4.18(1.96-8.93), P=<0.001) and not going for regular blood pressure (OR=1.54(1.08-2.17), P=0.018) and fecal occult blood screening (OR=2.13(1.18-3.85), P=0.013). Socio-demographic factors associated with heavy smoking included male gender (OR=6.24(2.45-15.87), P=<0.001) and Malay vs. Chinese ethnicity (OR=1.92 (1.22-3.04), P=0.005).
Conclusions: Smoking rates in low SES Singaporeans are higher compared to the rest of the population and associated with individual measures of SES, as well as negative health behaviours such as non-participation in health screening and alcohol consumption. Family physicians attending to this segment of the population can do more to reduce the prevalence of smoking and simultaneously promote positive health behaviours, particularly among males, Chinese and Malay ethnic groups.

Poster 44

Colorectal, cervical and breast cancer screening in an urban low-income setting: A mixed methods study

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Background: Cancer is a leading cause of death. Not all segments of society might have equal access to screening.
Objective: We aimed to determine the screening uptake and its predictors for regular colorectal, cervical and breast cancer screening amongst the lower-income community.
Methods: The study population involved all residents aged ≥40 years in two precincts comprising owner-occupied housing (higher-income) and rental flats (lower income) in Taman Jurong and Macpherson Constituencies, Singapore. From 2009-2011, we collected baseline information on whether residents had gone for regular cancer screening. Chi-square and multi-level logistic regression was used to identify socio-demographic predictors of regular screening at baseline. Qualitative data exploring the reasons for not going for regular cancer screening were thematically analysed.
Results: The participation was 77.2% (1081/1400). At baseline, in the lower-income community, 7.7% (33/427) had regular faecal occult blood testing (FOBT), while 20.4% (44/216) had Pap smear and 15.1% (94/623) had mammography at the recommended frequency. In the higher-income community, 16.6% (66/397), 41.9% (93/222) and 15.9% (48/302) had the three screening tests respectively. While screening rates were significantly higher ($p<0.001$) in the high-income community for FOBT and Pap smear, the difference was insignificant for mammography ($p=0.654$). At baseline, amongst residents living in the lower-income community, site (Taman Jurong vs. Macpherson) was significantly associated with uptake of both Pap smear (OR=2.67, CI=1.34-5.30, $p=0.008$) and mammography (OR= 3.58, CI=1.88-6.83, $p<0.001$), while higher educational status ($p=0.022$) and higher household income ($p=0.005$) were also associated with increased uptake of Pap smear. Family history of cancer was not a significant predictor of FOBT uptake ($p=0.235$). “Not necessary as healthy/not at risk”, “never heard about screening” and “too busy” were common reasons for irregular cancer screening in both communities.
Conclusions: Participation in cancer screening is poor amongst the lower-income community. Family physicians can encourage screening by dispelling misconceptions and increasing awareness about subsidized screening.

Poster 45

Area and individual-level socioeconomic factors associated with hypertension management in an urbanised Asian population: A community-based study in Singapore

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Background: Little is known about factors affecting hypertension management amongst those of lower socioeconomic status (SES) in Asian societies. We determined whether area and individual-level SES factors could affect hypertension management in an urbanised low-SES Asian community.
Objectives: We aimed to determine the sociodemographic predictors of hypertension prevalence, the awareness, treatment and control of hypertension in a low-SES Singaporean community.
Methods: The study population comprised residents from 3 blocks of rented flats (low area-level SES) and 3 adjacent blocks of owner-occupied flats (high area-level SES) in Singapore. From 2009-2010, blood pressure was measured while demographic details and reasons for irregular BP screening, monitoring and treatment were collected. Uncontrolled BP was defined as known hypertensives and on medication with systolic BP $\geq$ 140 mmHg and/or diastolic BP $\geq$ 90 mmHg. We used logistic regression to determine the predictors of hypertension management. Reasons for suboptimal management were qualitatively analysed.
Results: Participation was 90.0% (359/400) for the low-SES neighborhood and 70.2% (351/500) for high-SES neighborhood. Prevalence, awareness, treatment and control of hypertension in the low-SES neighborhood was 63.9% (228/357), 61.8% (141/228), 69.5% (98/141) and 43.9% (43/98) respectively, compared with 65.0% (228/351), 83.3% (190/228), 85.3% (162/190) and 66.0% (107/162) in the high-SES neighborhood. Both individual-SES (e.g. employment, household income) and area-level SES (rental vs. owner-occupied) independently associated with the prevalence, awareness, screening, treatment and control of hypertension (all $p<0.05$), but area-level SES was consistently associated with all studied variables. In the low-SES neighborhood, awareness was higher amongst diabetic and dyslipidaemic patients. Treatment of hypertension was less likely amongst financial aid recipients and hypertensive control was less likely in those employed (all $p<0.05$). High cost of screening/treatment was the most frequently cited barrier to hypertension treatment.
Conclusion: Both low individual SES and staying in a poorer neighborhood were associate with suboptimal hypertension management. Family physicians must work with other community stakeholders to reach out this group, particularly in less well-off areas, if hypertension management is to be improved.

Poster 46

Cardiovascular health screening in an urban low-income setting at baseline and post-intervention

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Background: Low socio-economic status (SES) remains a barrier to screening participation. Equitable access to health screening in rapidly-urbanising Asian societies is important but few studies have evaluated the success of interventions in raising screening rates among low-income populations.
Objectives: The authors determined the predictors for regular health screening at baseline within a low SES group and evaluated the effectiveness of a six month intervention on screening in this group compared to a high SES group.
Methods: The study population included residents aged ≥40 years residing in either owner-occupied housing (high SES) or rental flats (low SES) in two Singapore precincts. Baseline information on residents' participation in regular hypertension, diabetes and dyslipidaemia screening was collected. Subsequently, residents not receiving regular screening were offered free blood pressure, fasting blood glucose and lipid testing over 6 months. Sociodemographic predictors of screening participation were identified using Chi-square and multi-level logistic regression at baseline, and using likelihood-ratio and Cox regression analysis post-intervention.
Results: Participation was 77.2% (1081/1400). At baseline, there was significant ($p<0.001$) difference in participation in regular cardiovascular health screening between the low SES and high SES groups. Sociodemographic factors predicting regular screening in the rental community included being married, not smoking and having a history of hypertension, diabetes or dyslipidaemia. Post-intervention, screening rates rose significantly ($p<0.001$) in both communities for all three modalities. Staying in a lower-income community (aRR=0.61, CI=0.37-0.99, p=0.048) and having hypertension (aRR=0.45, CI=0.18-0.98, p=0.049) was associated with lower participation in the intervention, while Chinese ethnicity (aRR=1.84, CI=1.00-3.43, p=0.050) and employment was associated with higher participation (aRR=1.57, CI=1.03-2.60, p=0.040).
Conclusion: Participation rates for cardiovascular health screening were poor in those of lower SES. The unemployed and lower-income were less likely to go for free and convenient screening; such interventions should be more specifically targeted at the lower-income.

ABSTRACTS: RESEARCH CHAMPIONSHIP PROPOSALS

Research Championship Proposal 01

Case control study on the biomechanical risk factors for trigger finger in Asian patients

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What is the research idea?

Previous studies have discovered that certain occupations which involve repetitive actions predispose to tenosynovitis (trigger finger). This may be because of the pathophysiology of trigger finger which involves repetitive stress or static weight-bearing at the A1 pulley of the metacarpophalangeal joint of the fingers. This case-control study aims to determine biomechanical risk factors, such as repetitive stress and static weight-bearing, for trigger finger in Asia. Activities which involve repetitive stress or static weight bearing at the A1 pulley of the metacarpophalangeal joints may cause tenosynovitis. We hypothesize that some of these activities are modifiable, such as carriage of bags or loads with handles that rest on the A1 pulley sites.

Why is this research idea important?

Trigger finger is a common disease afflicting 2-3% of the general population and up to 10% in patients with other co-morbidities such as diabetes mellitus. Since the prevalence of diabetes mellitus is increasing in developing and developed countries, the incidence of trigger finger is expected to increase as well. This makes identification of modifiable biomechanical risk factors for prevention of trigger finger an important study. Results of this study can potentially decrease healthcare and economic costs as well as increase the quality of life of the subjects at risk.

Knowing the biomechanical risk factors is also useful to primary care physicians in giving health advice for primary prevention as well as to inform invention of devices to prevent trigger finger.

How is the research idea relevant to primary care?

Primary care physicians have key roles in primary prevention. The modifiable biomechanical risk factors identified in this study will allow primary care physicians to educate patients to reduce or avoid the risk factors. This is especially important in trigger finger prevention for high risk group like diabetes mellitus patients.

Research Championship Proposal 02

University Malaya Medical Centre's physician practice and perspective in providing phone number to patient

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What is the research idea?

This research aims to explore the practice and views of the doctors working in University Malaya Medical Centre (UMMC) about providing their telephone number to their patients. The study also aims to assess the difference in the attitudes among the doctors in terms of age, gender, ethnicity, background, department and work seniority.

Why is the research idea important?

Telephone consultation has been used as an innovative method to improve the quality of care in the health system around the world. Many studies have found that telephone consultations are shorter, more time effective in managing chronic illness, helped to reassure worried patients and improving physician consultations compared to face-to-face consultations. However, although telephone consultations are widely used as a healthcare delivering method, current guidelines do not address adequately the issue of confidentiality. Before we initiate this practice in our setting, it is better to assess the opinion of our doctors on the above topic. It is possible that many doctors do not want to their personal telephone number to patient for fear of disruption of their personal life.

How is the research idea relevant to primary care?

For doctors working the primary care setting, telephone consultation may enhance the continuity of care since primary care doctors have more difficulty to monitor and observe the patients closely. The telephone consultation may also reduce hospital admission. Providing telephone number to patient can improve the efficiency of healthcare delivery and is an innovation that can potentially improve health care services and enhance patient satisfaction.

Research Championship Proposal 03

Prevalence of paediatric dosing errors in public clinics within the Petaling district, Selangor

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What is the research idea?

A standardized paediatric dosing guideline is not available in Petaling Health District Office. Therefore, prescribing error among paediatrics is a problem with potential underdosing or overdosing. This study sought to determine the prevalence of the dosing error among paediatrics in Petaling Health District Office and to explore the impact of the initiative employed to reduce the medication error rates. Besides, most studies were conducted in inpatient settings such as wards with limited studies performed in outpatient settings. With this, medication errors in an outpatient setting can be determined and a standardized paediatric dosing guideline can then be implemented.

Why is this research idea important?

Medication errors have become a major public health concern as it is probably one of the most common types of medical error. It is estimated that medication errors in the USA kill 7000 patients (both adults and children) in one year. The incidence of medication errors in UK hospitals are almost similar to those in the USA, in which prescribing errors occur in 1.5% of the prescriptions while 3 to 8% of doses given has administration errors. The frequency of medication errors is similar for children and adults. However, the risks for errors with potential for harm are three times as high for children. This is predominantly because the dosage calculations among paediatrics are individually based on their weight, age or body surface are and/or their clinical condition. The variations and difference in pharmacokinetic and pharmacodynamic parameters because of the various ages and stages of maturational development of children makes dosing even more complicated. Medication errors in children have been reported in the mass media and these cases are usually fatal. Iatrogenic adverse events are common consequences of medication errors. They can lead to prolonged hospitalization, unnecessary diagnostic tests, unnecessary treatments and death. A 2.57- fold increase in death which was attributed to medication errors over a 10-year period (1983 to 1993) was reported. Children have limited communication skills to alert parents and health care providers of potential mistakes or adverse events that they may be experiencing. Thus, it is important to minimize medication errors especially among paediatrics. Research into medication errors and the preventive strategies to reduce these errors have been mostly conducted among adults with information on medication errors in paediatrics being limited.

How is the research idea relevant to primary care?

The study findings on the potential medication errors will justify the need to propose actions to improve the prescribing practice among prescribers in Petaling Health District Office. The standardized paediatric guideline can then be used among all prescribers to improve the current practice, reduce possible overdosing or underdosing and reduce potential adverse drug events among paediatric patients.

Research Championship Proposal 04

Atopic Dermatitis Action Plan Effectiveness (ADAPE) Study

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What is the research idea?

Atopic Dermatitis (AD) is a chronic inflammatory skin disease characterized by periodical exacerbations, which can be abated with adjustment of medication. An *Atopic Dermatitis Action Plan* (ADAP) provides instruction to patients with AD to titrate their medication according to their skin condition. However studies using written ADAP had not conclusively affirm the effectiveness of this self-management strategy. Accessibility and user-friendliness of ADAP are potential barriers. We plan to determine the clinical effectiveness of ADAP on adult patients with AD using a randomized controlled trial (RCT). An RCT will provide us with the most valid method for determining the efficacy of a therapeutic intervention. The proposed ADAP will be based on an interactive platform such as phone applications. This modality of providing self-management instruction is innovative and allows easy customization, updating and accessibility.

Outcomes will be measured using the Scoring Atopic Dermatitis (SCORAD) and Dermatology Life Quality Index (DLQI). SCORAD is a validated tool for physicians to assess signs and symptoms of AD. DLQI measures improvement of itch, social and functional repercussions, and effect of AD treatment. Other outcomes include exacerbation rate, quantum of medication usage, unscheduled physician consultation rate, dermatologist referral rate and user-friendliness of ADAP.

Why is this research idea important?

AD affects 15-20% of school children and 2-10% of adults. Poor adherence to maintenance therapy in AD leads to increased exacerbations and subsequently higher risk of exposure to potentially toxic systemic drugs. Although not life threatening, AD can result in disability when extremities are affected, and significantly impact on patient's quality of life (QOL).

How is the research idea relevant to primary care?

AD is the commonest chronic skin disease managed in primary care. Family physicians are well placed in the community to educate and introduce AD patients to ADAP and improving their QOL.

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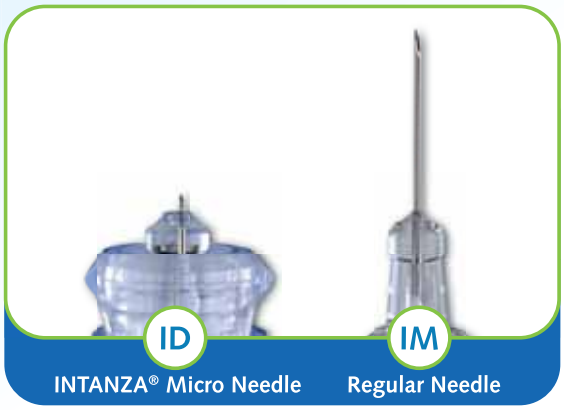

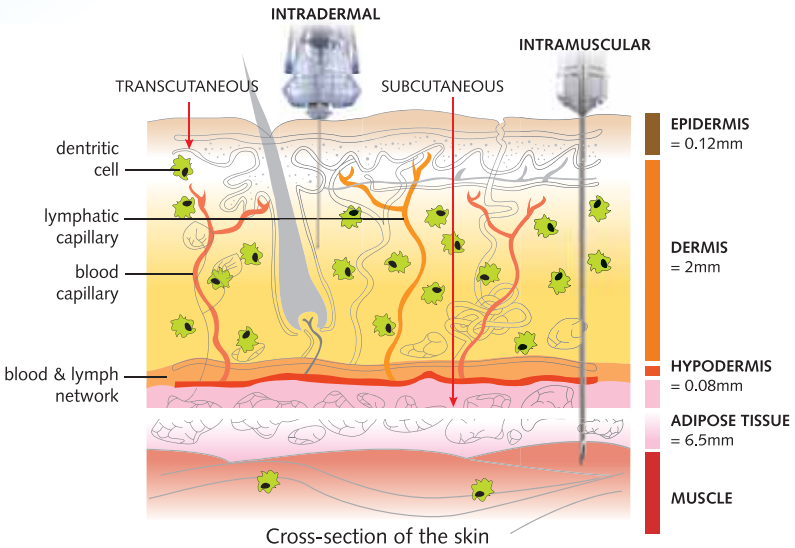

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