



Newsletter

THE RESEARCH NEWS THAT MATTERS

HIGHLIGHTS

- CRC joins social media in 2013. To be updated on what's latest with CRC, like us on <https://www.facebook.com/CRCMalaysia>
- Our Young Researchers have also created a facebook group to share with fellow members their research passion and work progress. *United They Stand to Spread and Sustain the Flame of Research.* <https://www.facebook.com/groups/MalaysianYoungResearchers/members/>
- Over 300 turned up at CRC's premier event, the National Conference for Clinical Research at Seri Pacific Hotel (3-5 September 2013)
- CRC led the NIH's organising committee for the 10th MOH-AMM Scientific Meeting, incorporating 16th Scientific Meeting of the National Institutes of Health and the National Ethics Seminar in 2013 (29-30 September 2013)

SEE INSIDE FOR PICTURES

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Message from the Editorial Board

Greetings and Happy New Year. After a long absence, CRC newsletter is back, and in this first issue for 2014, we include salient news and output of clinical research in the MOH.

Let's begin with a research reflection from Datuk Dr Noor Hisham's (Director-General of Health):

Good quality service and research is the order of the day. We must be driven by curiosity, we must cultivate passion for answers and challenging current practices and provocation thoughts for a better tomorrow with ideas of innovation and change. More importantly we need good transformational leaderships.

Go for it.

And here, we include a message from our beloved Deputy Director of Research and Technical Support, Dato' Maimunah Abd Hamid who retired on February 1st 2014. These were her parting words to CRC staff during her last visit:

Put publication as your priority. Start preparing manuscript early, even at the beginning of a project.

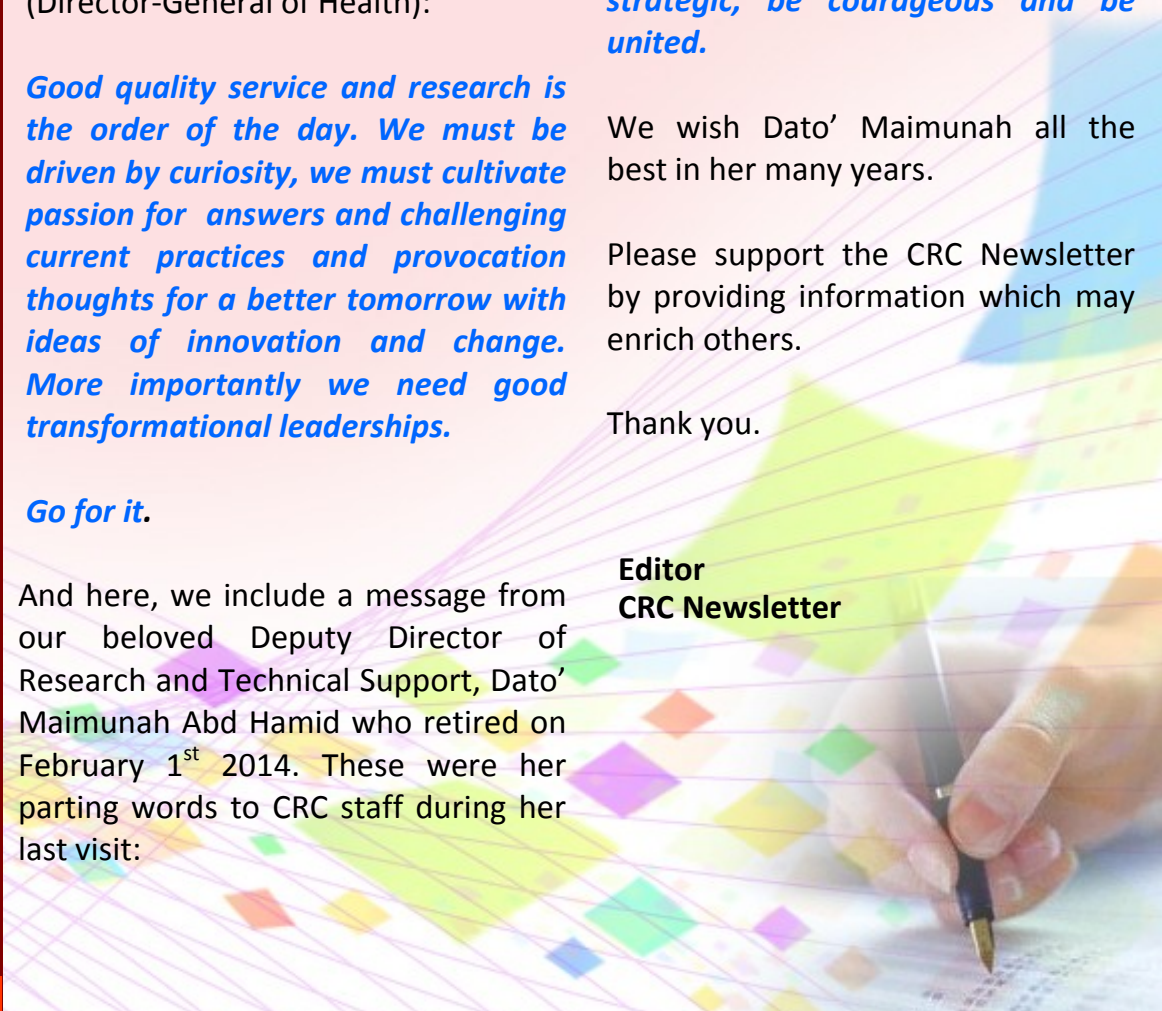
*Provide research findings for evidence based decision making
General advice - Be aware of your surrounding, be sensitive, be strategic, be courageous and be united.*

We wish Dato' Maimunah all the best in her many years.

Please support the CRC Newsletter by providing information which may enrich others.

Thank you.

**Editor
CRC Newsletter**



DATO DR MAIMUNAH ABDUL HAMID



CRC extends its deepest gratitude and appreciation to Dato' Dr Maimunah Abdul Hamid (Deputy Director General of Health for Research & Technical Support) who retires from government service on Feb 1, 2014, after devoting 33 years in the Ministry of Health, 28 years with National Institutes of Health and 5 years as Deputy Director of Health, Research & Technical Support.

We dedicate this poem to Dato Dr Maimunah with our best wishes for her retirement.

*A mentor, a leader, a colleague, a friend,
Memories we shared; the good times and bad.
Laughter and tears,
Passion and fears,
We face them together,
For research that matter.
For the triumphs of the past, we raise our glasses,
A solemn moment for the troubles that passed us.
Your guidance and grace,
We cherish and praise.
Thank you, we will miss you,
Good luck in all you do.
Our sadness for this goodbye, we will try to nurse,
But we will always pray for your health and happiness.*



2013, A SIGNIFICANT YEAR FOR RESEARCH IN MOSQUITO BORNE INFECTIONS

The First Vaccine For Dengue: Is It Safe?

Dengue is endemic in Malaysia and the Asia-Pacific region is known as dengue's global epicentre, putting at risk approximately 1.8 billion people. Every year, the number of cases increases dramatically.

Dengue can be caused by any of four different dengue virus serotypes and is primarily transmitted by the *Aedes aegypti* mosquitoes.

So, if dengue is our bane, a vaccine can be a blessing. In a phase III study, led by Dato' Dr Amar Singh, Head of CRC and Paediatric Department, Hospital Raja Permaisuri Bainun, Ipoh and Dr KK Tan, Paediatric Department, Hospital Tunku Jaafar, Seremban, 250 children between the ages of 2 and 11 years from four sites across Malaysia were randomised to

receive either a potential dengue vaccine (CYD-TDV) or placebo at 0, 6 and 12 months. The observers were blinded to the study.

Results were promising. The candidate vaccine, which has a three dose regimen, has a satisfactory safety profile and exhibits good immune responses against all four serotypes in children. These findings are consistent with data from phase I and II studies conducted in other countries. The CYD-TDV is currently in various stages of clinical development in Latin America and Asia. This study was highlighted in the Director-General of Health's Facebook page on October 23, 2013.

Source: Amar-Singh HSS, Koh MT, Tan KK, Chan LG, Zhou L, Bouckennooghe A, Crevat D, Hutagalung Y. Safety and immunogenicity of a tetravalent dengue vaccine in healthy children aged 2-11 years in Malaysia: A randomized, placebo-controlled, phase III study. *Vaccine* 2013;31:5814-5821.



Hisham Abdullah shared Noor Hisham Abdullah's photo.
October 23, 2013

Vaccine for dengue? Yes its coming from our MOH experts.....

@NajibRazak @kvssubra @AliHamsa55 @FaridaMohdAli @KKMPutrajaya - Another significant and important milestone in medical research and dengue management in Malaysia and perhaps in the world! A team of Ministry of Health's experts and pharmaceutical (Sanofi Pasteur) colleagues from France, China, and Singapore has published a journal article on randomised controlled trial (RCT) on dengue vaccine in children. Currently there's no vaccine available for dengue. This is the first Phase 3 RCT in children in the world using this new vaccine. Immunogenicity was reported as good. The trials were performed in 4 sites in Malaysia. Given the high burden of dengue fever in our country, Malaysia shall be a world leader in finding the best solution to combat the disease. Hope to see more breakthrough findings in this area.



Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Safety and immunogenicity of a tetravalent dengue vaccine in healthy children aged 2–11 years in Malaysia: A randomized, placebo-controlled, Phase III study ☆☆☆

3 Amar-Singh Hss^a, Mia-Tuang Koh^b, Kah Kee Tan^c, Lee Gaik Chan^d, Lynn Zhou^e, Alain Bouckennooghe^f, Denis Crevat^g, Yancee Hutagalung^{h,*}

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^g Clinical R&D, Sanofi Pasteur, Marcy l'Etoile 93280, France
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ARTICLE INFO ABSTRACT



PLASMODIUM KNOWLESI MOST COMMON CAUSE OF SEVERE MALARIA

A study looking at the clinical features and laboratory results of 295 patients diagnosed with malaria in Queen Elizabeth Hospital, Sabah revealed *Plasmodium knowlesi* as the most common malaria causing species (44%). *Plasmodium knowlesi* also causes severe disease as it was reported in 29% of patients compared to 16% with *P.vivax* and 11% with *P.falciparum*. Its severity is three times that of *P.falciparum*. Almost half of the *P.knowlesi* patients (47%) were farmers or plantation workers. Almost all of the *P.knowlesi* were given oral artemisinin therapy (92%) and almost all *P.knowlesi* patients with severe disease were given intravenous artesunate (95%). No deaths were reported. In line with this, researchers recommended wider implementation of early referral protocols and standardised use of intravenous artesunate and oral artemisinin therapy.

Since 2012, Sabah has been active in conducting research on various aspects of malaria, from disease burden, social and environmental risk factors, clinical trial on drugs and entomological studies on vectors. A

consortium of collaborators consists of Infectious Disease Unit and Clinical Research Centre of Queen Elizabeth I Hospital, Sabah State Health Department and University Malaysia Sabah Ministry, London School of Hygiene and Tropical Medicine, Menzies School Of Health Research (Australia), University of Glasgow (UK), University of Greenwich (UK), University of the Philippines Los Banos. Recently, lead researcher, Dr Timothy William from the Infectious Disease Unit of Queen Elizabeth I Hospital, Sabah received a grant of £3 million for 5 years from Medical Research Council, UK, and four travel awards from the American Society of Tropical Medicine to present their research findings in its 2013 Annual Meeting in Washington DC.

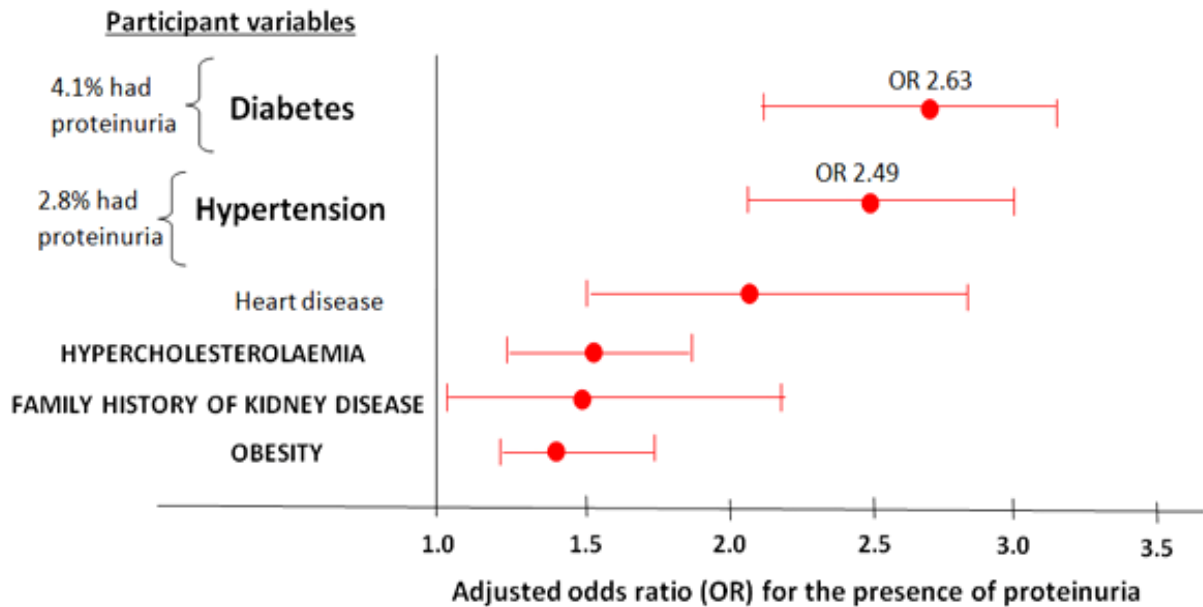
Source: Barber BE, William T, Grigg MJ, Menon J, Auburn S, Marfurt J, Anstey NM, Yeo TW. A Prospective Comparative Study of *Knowlesi*, *Falciparum*, and *Vivax* Malaria in Sabah, Malaysia: High Proportion With Severe Disease From *Plasmodium knowlesi* and *Plasmodium Vivax* But No Mortality With Early Referral and Artesunate Therapy. *Clin Infect Dis.* (2013) 56 (3): 383-397.

“We do not need passive scientific investigation that begins and ends with the researcher. Instead we need proactive innovations that improve our existing practices.” – Datuk Seri Dr S. Subramaniam, Minister of Health, in his National Conference for Clinical Research 2013 message in the souvenir programme

CRC's TOP HEALTH DISCOVERIES FOR 2013: A GRAPHICAL DISPLAY

1. Screen 7 people to detect a person with proteinuria or hypertension or diabetes

Proteinuria is a marker for renal disease. It was detected in 1.4% of all participants screened. Participants with diabetes or hypertension had higher rates of proteinuria.

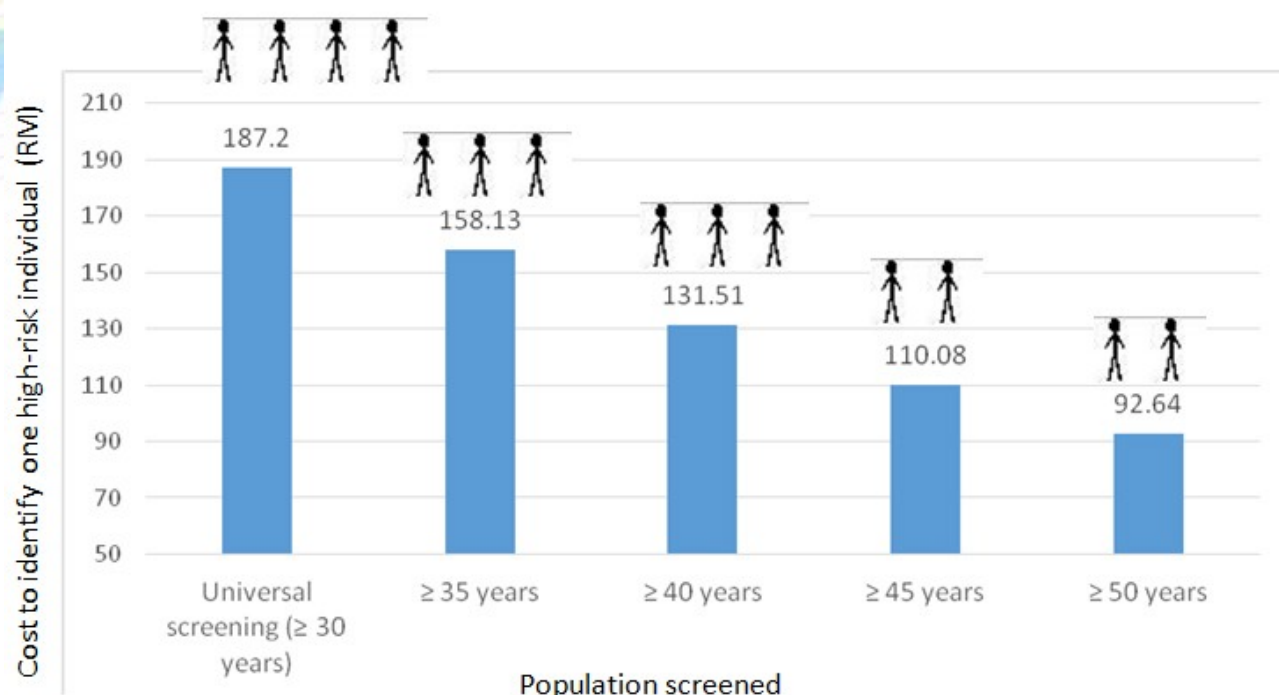


Study description: This was a nationwide health screening programme involving 40,400 adults of 18 years and older.

Recommendations: Individuals with diabetes, hypertension or heart disease should be screened for chronic kidney disease. And early detection of proteinuria can be adopted as an inexpensive screening.

Source: Ong LM, Punithavathi N, Thurairatnam D, Zainal H, Beh ML, Morad Z, Lee SY, Bavanandan S, Kok LS. Prevalence and risk factors for proteinuria: The National Kidney Foundation of Malaysia Lifecheck Health Screening programme. *Nephrology* 2013; 18:569–575

2. Universal screening to identify high cardiovascular risk individuals is costlier than



: number of people we have to screen to identify one high-risk individual

Study description: Data from a national population based survey of 24,270 participants between ages 30 and 74 years were analysed.

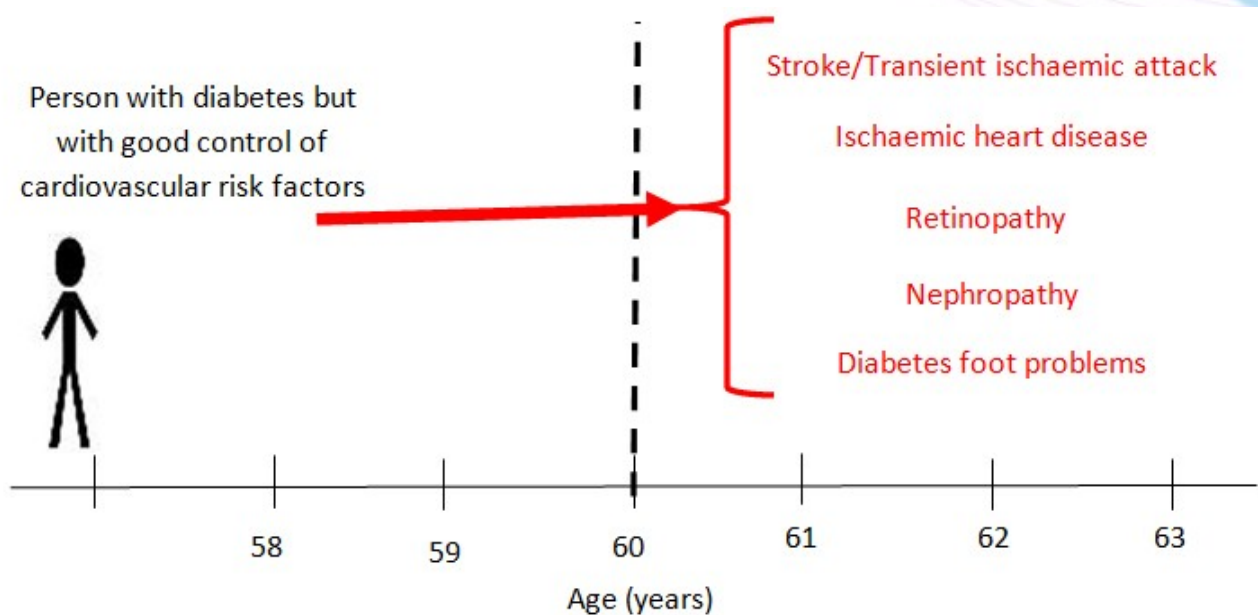
Recommendations: Opt for targeted age-specific screening strategies to ensure optimal utilisation of limited resources instead of universal screening.

Source: Selvarajah S, Haniff J, Kaur G, Tee GH, Bujang A, Kee CC, Bots ML. Identification of effective screening strategies for cardiovascular disease prevention in a developing country: using cardiovascular risk-estimation and risk-reduction tools for policy recommendations. BMC Cardiovasc Disord. 2013;13:10.



2013 CRC Research Camps in Kota Kinabalu and Fraser Hill

3. Patients with diabetes with good control of their cardiovascular risk factors are still at risk for diabetes-related complications when they reach the age of 60 years



Study description: This was a cross-sectional study involving secondary data from Audit diabetes registry of 70,889 patients with diabetes.

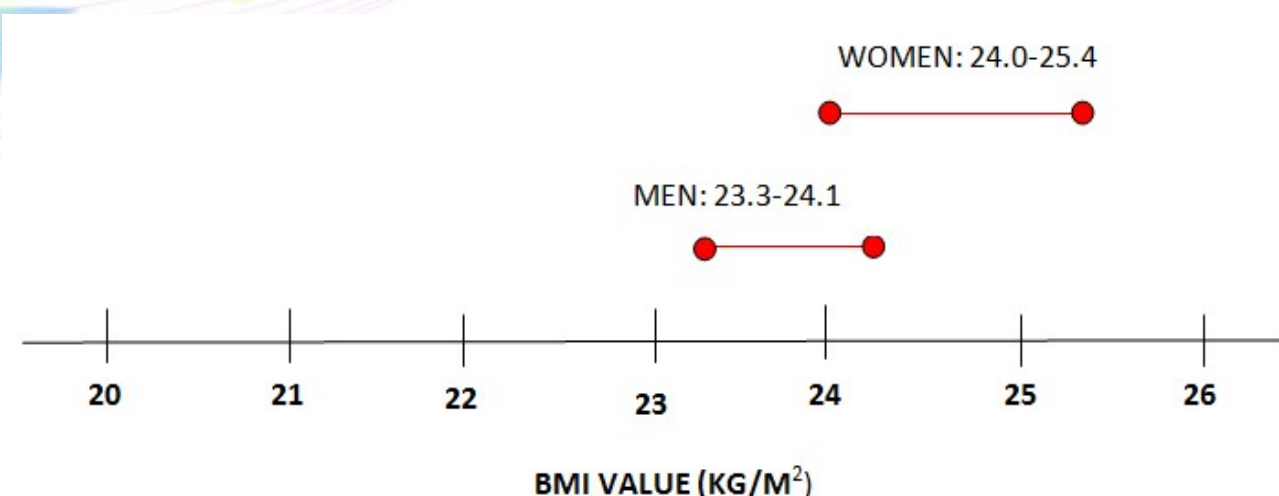
Recommendation: The current recommended control of targets in older patients with diabetes may have to be reviewed.

Source: Chew BH, Ghazali SS, Ismail M, Haniff J, Bujang MA. Age ≥ 60 years was an independent risk factor for diabetes-related complications despite good control of cardiovascular risk factors in patients with Type 2 Diabetes Mellitus. *Exp Gerontol* (ELSEVIER). 2013; 48(5): 485–491.



2013 CRC Research Camps in Langkawi and Johor Baru

4. Optimal Body Mass Index (BMI) cut-off values for predicting the presence of diabetes mellitus, hypertension or hypercholesterolaemia

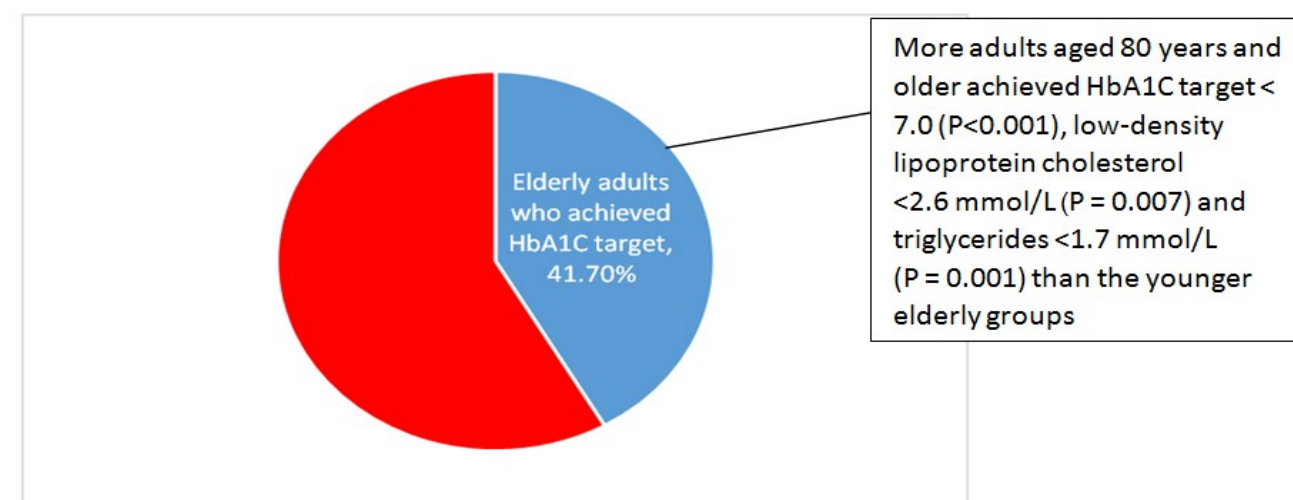


Study description: This was a population-based, cross-sectional study involving 32,703 adults 18 years and older.

Recommendations: The BMI cut-offs values can be used to identify individuals for cardiovascular risk screening and weight management programmes.

Source: Cheong KC, Yusoff AF, Ghazali SM, Lim KH, Selvarajah S, Haniff J, Khor GL, Shahar S, Rahman JA, Zainuddin AA, Mustafa AN. Optimal BMI cut-off values for predicting diabetes, hypertension and hypercholesterolaemia in a multi-ethnic population. Public Health Nutr. 2013;16 (3):453-459.

5. Suboptimal control of cardiovascular disease risk in adults with type 2 diabetes aged 60-69 years



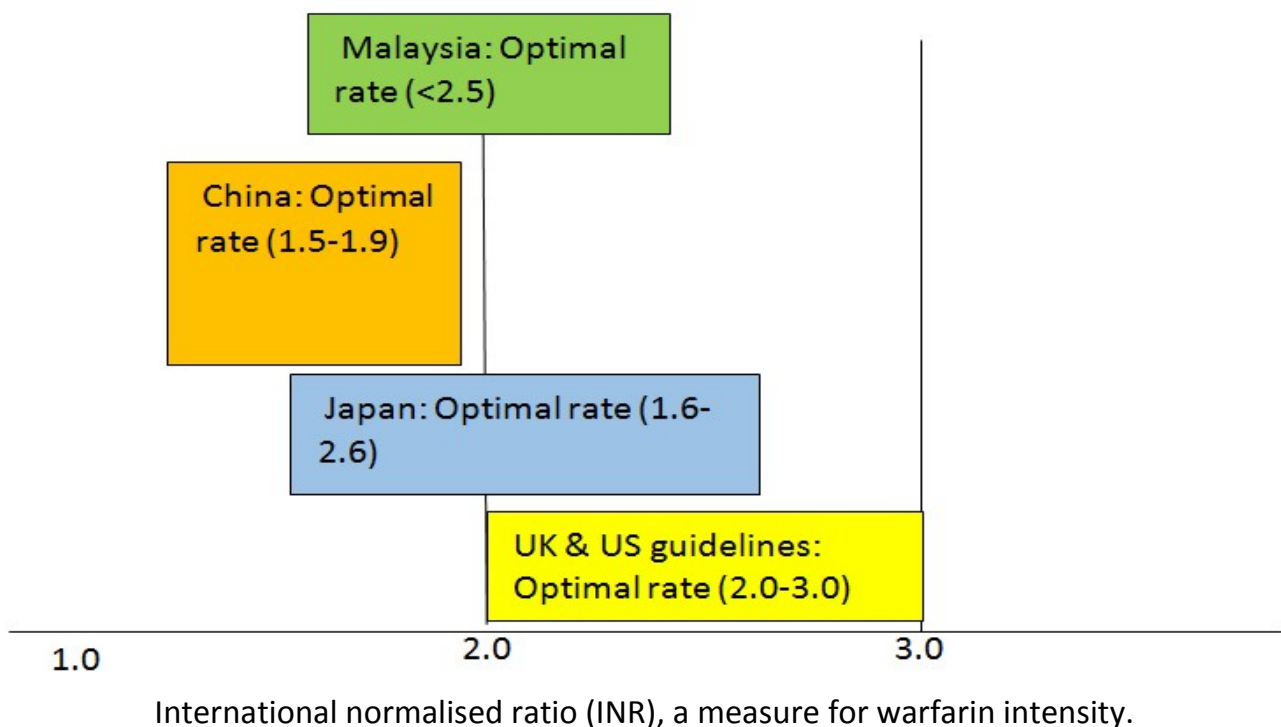
Study description: This was a cross-sectional study involving 10,363 people who were over the age of 60 years and had type 2 diabetes mellitus.

Recommendations: The BMI cut-offs values can be used to identify individuals for cardiovascular risk screening and weight management programmes.

Source: Sazlina SG, Mastura I, Ahmad Z, Cheong AT, Adam B, Jamaiah H, Lee PY, Syed-Alwi SA, Chew BH, Sriwahyu T. Control of glycemia and other cardiovascular disease risk factors in older adults with type 2 diabetes mellitus: Data from the Adult Diabetes Control and Management. Geriatr Gerontol Int. 2013; doi: 10.1111/ggi.12070.

6. Is the recommended range for warfarin intensity optimal for the Malaysian population?

Insufficient treatment may cause thromboembolism; overtreatment may cause haemorrhage



Study description: This prospective observational cohort study involved 125 adults over the age of 18 years who were on warfarin, the commonly prescribed anticoagulant for those at risk of thromboembolic events.

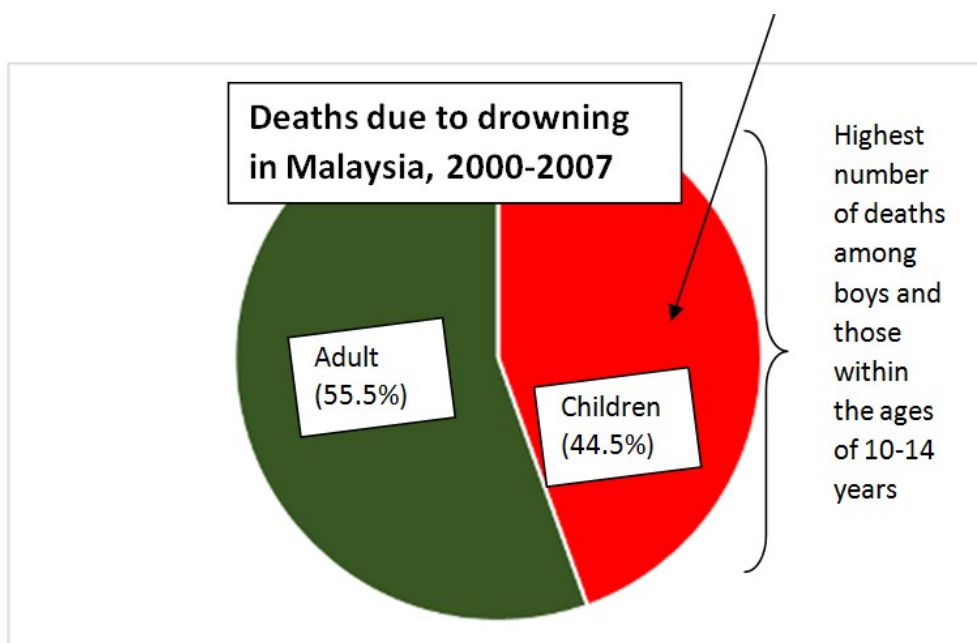
Recommendations: Lower INR ranges may prevent adverse events associated with the use of warfarin in our population.

Source: Edwards F, Arkell P, Fong AY, Roberts LM, Gendy D, Wong CS, Ngu JC, Tiong LL, Bibi FM, Lai LY, Ong TK, Abouyannis M. Bleeding events and associated factors in a cohort of adult patients taking warfarin in Sarawak, Malaysia. J Thromb Thrombolysis. 2013. DOI 10.1007/s11239-013-1017

7. Drowning second most common cause of death among Malaysian children

MAJOR CAUSES FOR DEATHS IN CHILDREN

1. **ROAD INJURIES:** 3.9 (15–18 years old) to 6.8 (<1 year old) deaths per 100,000
2. **DROWNING:** 3.05 deaths per 100,000 (1-18 years)



Study description: This was a nationwide 8 years data compilation on the prevalence of drowning in Malaysia from various government and non-government organisations.

Recommendations: Establish a drowning registry, create awareness and produce effective prevention measures.

Main Sources

- 1) Amar-Singh HSS, Tan PS, Hashim L. Childhood drowning in Malaysia. Asia Pac Psychiatry. 2013;5:7-13
- 2) Tan PS, Amar-Singh HSS, Hashim L. Prevention of childhood drowning in Malaysia. Oral presentation at the World Conference on Drowning Prevention; 2011 May 10-13; Vietnam.

Other source

- 1) Norlen M, Wong SV, Hizal Hanis H, Ilhamah O. Research Report: An Overview of Road Traffic Injuries Among Children in Malaysia and Its Implication on Road Traffic Injury Prevention Strategy. MRR 03/2011, Kuala Lumpur: Malaysian Institute of Road Safety Research.

TRIAL TALK

Novotech regional director says Malaysia desired destination for clinical trials

Dr Lil Edis, Asia's regional director for Novotech, a global CRO, shared her thoughts on Malaysia's clinical trial landscape in an article featured in Biospectrum.

Here are her 10 reasons why Malaysia is a good place for clinical trials:

1. The government of Malaysia appreciates the value of clinical research and has been actively promoting and developing the various aspects of the biomedical industry.
2. Malaysia has thirty established investigative sites and an active Clinical Research Centre network.
3. The investigators are enthusiastic and GCP-certified. Malaysia has made it mandatory for clinical trial investigators to have GCP. All GCP courses will have to be approved by the Ministry of Health and participants have to undergo a formal exam set by the Ministry.
4. Malaysia has a public database for research registration, the National Medical Research Register. Trials conducted in government hospitals must be registered in this register. Such database ensures research transparency and enables sponsors identify potential investigators.
5. Malaysian investigators are backed by dedicated and GCP-certified study coordinators.
6. Application for ethics and regulatory approvals can be done in parallel. The processes are uncomplicated and the timelines competitive. There is a centralised ethics committee for all government hospitals.
7. The timelines for review and signing of clinical trial agreements are relatively short.
8. Medical records are in English. Clinical trial documents (except for subject materials) that are submitted for approvals can be in English.
9. The cost to conduct trials in Malaysia is lower than its competitors.
10. High incidences (unfortunately) of diseases common in first world countries (type 2 diabetes, coronary artery disease, etc).

Source: Edis L. Good Clinical Practice-certified investigators ensure quality in Malaysia. Biospectrum; 17 Sep 2013 <http://www.biospectrumasia.com/biospectrum/opinion/195830/good-clinical-practice-certified-investigators-ensure-quality-malaysia/page/1#.UkAEToamiAg>

GCP Stats: In 2013, 1,186 people were trained for GCP. The participants were from the Ministry of Health, universities and private sector. Majority were doctors, but we also saw the participation of pharmacists, nurses, students and lecturers. Although more than half of the workshops were held in Klang Valley, almost all of the other states held workshops as well. These GCP courses were in collaboration with societies, universities, and other organisations with an interest in clinical research.



2013 Workshops on Research Ethics and Good Clinical Practice



2013 outreach training. From left: Research Awareness Day and Research Consultation Clinic



2013 Research Days in various states. Clockwise from top left: Negeri Sembilan, Sabah, Putrajaya

THINK TANK

Out with the old, in with the outcomes

$$\frac{\text{Outcomes that matter to patients}}{\text{Cost per patient}} = \text{Value}$$

It is inevitable; healthcare costs are expected to rise worldwide. Jonathan S. Skinner, economist and Professor of Health Policy and Clinical Practice at the Geisel School of Medicine suggests that technology seems to improve practice and reduce cost in all industries, except in healthcare. Innovation makes healthcare more expensive but not necessarily better. According to him, one reason is the considerable number of treatments available in which some bring great health value for the high cost incurred, while others may provide little or no value. This dismal outlook calls for the implementation of a new framework, one that focuses on innovations and developments that improve healthcare value and discards the rest.

We have heard this phrase, healthcare value, often. Day in and day out, we also come across words such as transparency and patient-centred. All these phrases are good and important, but are they the essence of our healthcare system or are they merely a hope of what it should really be about? Of course, this is not just a case of “all words and no practice”. Practitioners and policymakers are constantly looking into ways of cutting cost while retaining quality care. But they should start looking at outcome measures; understand what affects and matters most to patients. The way for a healthcare system to be sustainable is to improve healthcare

outcomes. Go back to your clinical data and find for ways to improve your patients’ outcomes.

Dr Jens Deerberg-Wittram, President of the International Consortium for Health Outcomes Measurement (ICHOM), in a talk introducing the purpose and plans of the non-profit organization, advocates outcomes as what matters most to patients and physicians. He says that results from laboratory tests, images, and examinations are important; but these indicators matter less if the outcomes are unsatisfactory. These outcomes include survival, degree of health or recovery, time to recovery, sustainability of health and nature of recurrences, and long-term consequences of therapy. These outcome measures, just like healthcare indicators, should have global standards.

ICHOM Cofounder Dr Stefan Larsson stressed the importance of doctors learning from each other and sharing the outcomes they achieve. Simply put, he summarised continuous improvement as physicians of a speciality getting together to agree on what constitutes quality in a particular condition, they then all measure the same set of outcomes in their respective practices. They share their data, find who is the best and learn from this person. Dr Larsson reveals that a model that puts quality first also reduces cost as unnecessary treatments can be eliminated.

ICHOM is working towards making outcome measurement sets for all relevant medical conditions. In 2013, ICHOM established four working groups; cataracts, back pain, coronary artery disease and prostate cancer. These working groups comprise outcome measurement leaders and patient advocates. Within 3 years, ICHOM hopes to cover 40% of the world's disease burden. Dr Goh Pik Pin, CRC's director who is also an ophthalmologist was invited to be part of the cataracts group. Besides Malaysia, five other countries were represented for this particular group. ICHOM's interest in Malaysia also stems from our history in developing disease registries.

ICHOM interviewed members of its working

groups about their work with the organization. Dr Goh Pik Pin became involved with ICHOM's effort as she believes that all patients should have access to the same treatment outcomes. She stressed the need to advocate to doctors and administrators that when they measure outcomes, they improve. In her field of public health ophthalmology for example, if every eye care provider in the world measures the outcomes of cataract surgery, the individual eye surgeon will be able to increase his competency just by benchmarking and comparing. By embracing health outcomes, everybody is a winner; the doctor enjoys the satisfaction of a job well done, the administrator enjoys cost savings, and the patient enjoys the best outcomes.

Sources

1. Skinner JS. The Costly Paradox of Health-Care Technology. MIT Technology Review. 5 September 2013. Available at <http://www.technologyreview.com/news/518876/the-costly-paradox-of-health-care-technology/> (Accessed on 18 December 2013)
2. International Consortium for Health Outcomes Measurement. Available at <http://www.ichom.org/>
3. Porter ME. What is value in healthcare? New Eng J Med 2010;363:2477-2481.



View the presentations during 2013 ICHOM Conference by **ICHOM Cofounders** at <http://www.ichom.org/news/conferences/#Conferencepresentations>

Michael Porter on Outcomes, the key to unlock Value Based Health Care and Stefan Larsson on Value Based Health Care: Idea to Reality. You can also watch Dr Goh's testimonial for the Cataracts Working Group <http://www.ichom.org/project/ataracts/>



Dr Goh Bak Leong, CRC Head Selayang Hospital, shares his insight on ICHOM. With his permission, we reproduce his report for CRC Newsletter.

Reflection on ICHOM Annual Meeting, Nov 2013

Health problems are similar worldwide, expected outcomes (from patients' perspective especially) should be similar as well, but the way healthcare providers (clinicians and policy makers) handle them can be very different, and hence resulted in very variable outcomes. Health care around the world are facing skyrocketing costs. In this global struggle to manage the cost of health care, practitioners and policymakers are increasingly focusing on value – delivering the best possible health outcomes at a given level of cost. This approach is known as **competing on outcomes**. Competition does exist in the health care industry today, but more often than not, it is focused on the wrong things: maximizing the number of specific procedures (whether diagnostic or surgical), the number of patients seen, whether they are medically necessary or not, with not much consideration of the impact on the quality of care. The advantage of competing on outcomes is that it focuses competition on what really matters to patients and ensure delivery of cost-efficient, quality care. More than ever, we need to know **the cost of care and expected outcome of treatments**. Patient relevant outcomes help us discover new approaches that cost less and are more effective.

At the moment, in health care, too much time is spent on measuring WHAT WE DO (PROCESS), instead of measuring the results that we achieve. Right now, we rely on **process measures** to define high-quality health care (so call KPI and CPG). But patients want to know how they'll feel and what they will be able to do after care, not about the guidelines their physicians and care teams follow. If we focus on outcomes, we can help patients truly understand the impact of their treatments. We can then answer questions such as, "Will I have long-term pain?" and "Will I be able to participate in normal activities?" or "How long will I live?", "Will I have time to see my children finish their education, working and get married?", or "How many days will I be admitted to hospital for access related complications in a year?"

Outcomes should be the results people care about most (both patients and health care providers, not just policy maker) when seeking treatment, including functional improvement, ability to live normal and productive lives. Hence, better health care should always start with clinicians improving the lives of their individual patients. Transforming health care should start by empowering clinicians worldwide to measure and compare their patients' outcomes and to learn from each other how to improve.

Why Competing on Outcomes matter? (value based vs volume based, or outcome based vs process based measurement)

Whether government or private insurers, payers around the world are driving the shift to competing outcomes. As a result, they have major responsibility to make sure outcomes-based competition leads to increased innovation, better quality care, and lower costs. There is huge opportunity for payers to create reimbursement models that deliver better value to patients than do traditional fee-for-service models, through reduced cost of care, shorter hospital stays, and lower rates of repeat surgeries / procedures (such as vascular access).

Competing on outcomes could help clinicians reconnect with the main reason they entered medical field in the first place: to improve the health and the lives of their patients. Instead of being afraid of increased transparency in outcomes, clinicians and provider organizations should embrace it.

Competing on outcomes could help clinicians reconnect with the main reason they entered medical field in the first place: to improve the health and the lives of their patients. Instead of being afraid of increased transparency in outcomes, clinicians and provider organizations should embrace it.

Transparency of patient outcomes is a prerequisite for outcomes-based competition. The simplest way to compete on outcomes is to use outcomes data to identify and promote the best clinical practices, reduced variation in treatment, and improve average health outcomes. Such effort typically require (1) a **change in mindset among clinicians**, who must begin to see the dissemination of outcomes data transparently is an essential public-health obligation, and (2) the active engagement of the appropriate professional societies and regulatory authorities to ensure that the **data collected have CLINICAL INTEGRITY**. Creating data transparency around outcomes requires collaboration and data sharing. Competition comes in when the data start to be made public, putting pressure on laggard performers to improve. Providers that remain ahead of the improvement curve and demonstrate superior outcomes can benefit from increased differentiation, higher patient volumes, and institutional growth.

When we focus on measuring **PROM** (patient relevant outcomes measures), this approach improves health care system in the following ways:

1. Encourage innovation

Health care is very complex and medical knowledge is changing fast. Hence, it is important that physicians constantly seek new ways to provide better care. A focus on outcomes encourages physicians to learn from their peers, and test new approaches based on reliable, patient-centered data.

2. Help patient make informed decisions

Reliable data and PROM enables physicians and patients to make better treatment decisions together. It can also help patients find the best-fitting physicians and care team to treat their conditions.

3. Reduced health care costs

With a clear focus on outcomes, patients are more likely to receive the right treatments, at the right place, at the right time – a recipe for preventing medical errors, unnecessary care (iatrogenic complications from less experience team for example), and reducing health care costs (by being more efficient).

ICHOM's cofounders (Michael Porter, Stefan Larsson and Martin Ingvar) bring three prominent organizations (Institute for Strategy and Competitiveness of Harvard Business School, The Boston Consulting Group, and Karolinska Institute), to bring about a new paradigm shift in Health Care transition, from the traditional volume-based model (or fee-for-service) of health care provision to the value-based model (outcomes based model).

“Although health care is one of the largest industries in most countries, it is also one of the least mature and most dysfunctional. The current health-care market, characterized by misaligned incentives that contribute to unsustainable increases in cost, has reached the end of its life cycle. It must be the highest priority, both for policy makers and for responsible industry leaders, to shape a new framework that will transform the health care market so that competitive forces will promote innovations and development that improve health care value..... and in so doing, to generate more value for patients and for society – to capture a fair share both for the taxpayers and citizens who fund our health care systems, and for the companies’ own shareholders” by Jennifer Clawson, Jens Deerb erg-Wittram, Martin Ingvar, Michael Porter, and Stefan Larsson

SNAPSHOTS: THE DEVELOPMENT EVOLUTION OF CRC IN THE STATE OF SARAWAK

2004: CRC Kuching became the third MOH CRC to be established. It began with a cupboard

2006: CRC Kuching began its full operation in Sarawak General Hospital (SGH).



2007: The soft launch of CRC SGH and the establishment of its own centre



2011: CRC's office taken down to make way for new building



2011: The expansion begins: Another CRC for Sarawak emerges. The setup of CRC Sibu was approved in 2011. Official launch by Dato Dr Azmi Shafie who represented the DG, Dato' Sri Hasan bin Abdul Rahman, was in July 2012



2011: CRC Kuching temporarily relocates its office while it awaited the completion of a new building.



2012: The Sarawak research expansion continues. CRC Miri was set up and officially launched



2013: Construction of CRC Kuching's new building in progress



2014: Completion of CRC Kuching's new home is expected to be in April



(In the next issues, we will focus on CRC hospital development of other states)

THE CRC FAMILY



The CRC Network Family with Datuk Dr Noor Hisham, Director-General of Health and Dato' Dr Maimunah, Deputy-Director General of Health (Research & Technical Support)



Datuk Sri S. Subramaniam being awarded the Honorary Fellowship at the 10th MOH-AAM & 16 NIH Scientific meeting on Sept 29 2013



Datuk Dr Noor Hisham officiates the National Conference for Clinical Research on Sept 3 2013, accompanied by Deputy Director General of Research & Technical Support Dato' Dr Maimunah and CRC Director Dr Goh Pik Pin



Team building in the Forest Research Institute of Malaysia and Cameron Highlands



Malaysian Young Researchers starts a new era for CRC by going online

Congratulations: Awards and Promotions

Recipients of <i>Anugerah Perkhidmatan Cemerlang 2013</i>	Promotions in 2013
Dr Jamaiah Binti Hj. Haniff	Dato Dr Ong Loke Meng (Jusa B)
Dr Nirmala a/p Bhoo Pathy	Dr Sharmila a/p M.K. Lakshmanan (UD54)
Dr Anita Racheal Winfred a/p Harold Ponnu	Dr Jaya Purany a/p Stanley Ponniah (UD54)
Ms Celine Tsai Pao Chien	Mr Law Kian Boon (U48)
Mr Chew Chun Keat	Mr Chew Chun Keat (U48)
Mr Syed Carlo Bin Edmund	
Mr Abdul Muneer Bin Abdul Hamid	
Mr Mohammad Aizat Bin Yusof	
Ms Khadijah Binti Abdul Majid	
Mr Abdul Aziz Bin Mohd	

Special recognition in 2013



Mr Chew Chun Keat was awarded the 2013 Australian Epidemiological Association's top student price in recognition of his exemplary performance in Introductory Biostatistics which he took as part of the Clinical Research Method Degree from Monash University in Australia.



Mr Lim Ka Keat was awarded 2013 Brian Abel-Smith Prize for the best long essay/dissertation in MSc in International Health Policy (Health Economics) from the London School of Economics and Political Science ,UK.



Dr Kalaarasu Periasamy was awarded the Jens Andreasen Award, a biennial award, that is presented for the best poster on dental traumatology in children by the International Association of Paediatric Dentistry. The paper was entitled "Management of severe extrusive luxation with surgical repositioning and splinting: case reports".

Welcome : New Staff in CRC National

Name	Position	Placement	Date reported duty
Ms Rozainah Binti Ibrahim	Administrative Assistant	CRC National	18.02.2013
Mr Mohd Faris Bin Hamzah	Administrative Assistant	CRC National	18.02.2013
Ms Nur'ain Fatimah Binti Mohd Ali	Administrative Assistant	CRC National	18.02.2013
Dr Yeo Siew Lian	Medical Officer	CRC National	08.07.2013
Mr Vilfred Vatalis Jr	Assistant IT Officer	CRC National	13.08.2013
Ms Ong Su Miin	Pharmacist	CRC National	15.08.2013
Ms Norfaizah Binti Mohd Yusof	Administrative Assistant	CRC National	02.09.2013
Ms Nor Fadilah Binti Mansor	Administrative Assistant	CRC National	02.09.2013
Mr Mohamad Adam bin Haji Bujang	Research Officer	CRC National	17.09.2013
Dr Aimi Nadiyah Binti Jamel	Medical Officer	CRC National	01.10.2013
Dr Joseph Ng Soon Heng	Medical Officer	CRC National	07.10.2013
Dr Yasmin Farhana Binti Md Abdul Wahab	Medical Officer	CRC National	14.10.2013

Welcome: New Staff and Change of Staff in CRC Hospitals

Name	Position	Placement
Dr Noram Azlan Bin Ramli Replaced Dr Yeap Ewe Juan who has resigned to join the private sector	Head of CRC Hospital Tuanku Fauziah	CRC Hospital Tuanku Fauziah, Kangar, Perlis
Dr Norhaya Bt Mohd Razali New MO as Deputy Head for CRC Terengganu	Deputy Head of CRC Hospital Sultanah Nur Zahirah	CRC Hospital Sultanah Nur Zahirah, Kuala Terengganu, Terengganu
Dr Kalaivasu Pariasamy Replaced Dr Arulalan	Deputy head of CRC Hospital Sungai Buloh	CRC Hospital Sungai Buloh, Selangor
Dr Mahadevan Deva Tata	Deputy head of CRC Hospital Tunku Jaafar	CRC Hospital Tunku Jaafar, Seremban, Negeri Sembilan
Dr Siti Fadhilah Agos	Medical Officer	CRC Hospital Kuala Lumpur, Kuala Lumpur
Dr Mohd Azizudin Amir Sharifudin	Medical Officer	CRC Hospital Kuala Lumpur, Kuala Lumpur
Dr Wee Hong Chin	Medical Officer	CRC Hospital Pulau Pinang, Pulau Pinang
Dr Chin Wee Loon	Medical Officer	CRC Hospital Pulau Pinang, Pulau Pinang
Dr Dharminy Thurairatnam	Medical Officer	CRC Hospital Pulau Pinang, Pulau Pinang
Dr Sivasangari Subramaniam	Medical Officer	CRC Hospital Pulau Pinang, Pulau Pinang
Ms Ch'ng Chin Chin	Pharmacist	CRC Hospital Pulau Pinang, Pulau Pinang
Dr Teoh Pei Yong	Medical Officer	CRC Hospital Seberang Jaya, Pulau Pinang
Dr Kelvin Beh Khai Meng	Medical Officer	CRC Hospital Seberang Jaya, Pulau Pinang
Dr Michelle M.Samy	Medical Officer	CRC Hospital Seberang Jaya, Pulau Pinang
Dr Loo Ching Ee	Medical Officer	CRC Hospital Seberang Jaya, Pulau Pinang
Mr Mak Wen Yao	Pharmacist	CRC Hospital Seberang Jaya, Pulau Pinang
Dr Madiah Ahmad	Deputy Head of CRC Hospital Sultanah Bahiyah	CRC Hospital Sultanah Bahiyah, Kedah
Dr Tan Wei Leong	Medical Officer	CRC Hospital Sultanah Bahiyah, Kedah
Dr Goh Yihui	Medical Officer	CRC Hospital Sultanah Bahiyah, Kedah
Ms Delarina Frimawati Binti Othman Andu	Research Officer	CRC Hospital Sultanah Bahiyah, Kedah
Dr Netia a/p Jeganathan	Medical Officer	CRC Hospital Raja Permaisuri Bainun, Perak
Dr Arvinder Singh a/l Harbaksh Singh	Medical Officer	CRC Hospital Raja Permaisuri Bainun, Perak
Dr Lionel Chia Dick Hua	Medical Officer	CRC Hospital Raja Permaisuri Bainun, Perak
Dr Lee Li Yuan Replaced Dr Loo Tak Wah	Head of CRC Hospital Sri Manjung	CRC Hospital Sri Manjung, Perak

Welcome: New Staff and Change of Staff in CRC Hospitals

Dr Khaw Keat Ween Replaced Dr Lee Li Yuan who became Head of CRC Sri Manjung	Deputy Head of CRC Hospital Sri Manjung	CRC Hospital Sri Manjung, Perak
Dr Pukunan Renganathan	Medical Officer	CRC Hospital Tengku Ampuan Rahimah, Klang
Dr Lim Chong Hum Replaced Dato' Dr Chang Kian Meng	Head of CRC Hospital Ampang	CRC Hospital Ampang, Selangor
Dr Faizah Bt Khairudin	Medical Officer	CRC Hospital Ampang, Selangor
Dr Mokhlisoh Binti Mohamad Apandi	Medical Officer	CRC Hospital Serdang, Selangor
Dr Chan Suet Teng	Medical Officer	CRC Hospital Serdang, Selangor
Dr Ang Swee Hung	Medical Officer	CRC Hospital Melaka, Melaka
Dr Siti Norbani Binti Ahmad Replaced Dr Akashah Abdullah	Deputy Head of CRC Hospital Sultan Ismail	CRC Hospital Sultan Ismail, Johor
Dr Wong Kun Yee	Medical Officer	CRC Hospital Umum Sarawak, Sarawak
Dr Lau Kent Ter	Medical Officer	CRC Hospital Umum Sarawak, Sarawak
Dr Diana Foo Hui Ping	Medical Officer	CRC Hospital Umum Sarawak, Sarawak
Dr Lee Yi Ming	Deputy Head of CRC Hospital Miri	CRC Hospital Miri, Sarawak
Dr Lorna Chin Kin Tze	Medical Officer	CRC Hospital Miri, Sarawak
Dr Angeline Wong Tze Yin	Medical Officer	CRC Hospital Miri, Sarawak
Dr Sharon Linus Lojikip	Medical Officer	CRC Hospital Queen Elizabeth I, Sabah
Dr Narwani Hussin	Medical Officer	CRC Hospital Queen Elizabeth II, Sabah
Dr Mariyani Bt Mad Said	Medical Officer	CRC Hospital Raja Perempuan Zainab II, Kelantan

Farewell: Resignations and Transfer

No	Name	
1	Dr Nirmala a/p Bhoo Pathy	Epidemiologist resigned to join UMMC
2	Dr Anita Racheal Winfred Harold Ponnu	Medical Officer transferred to Health Clinic
3	Dr Tahrani a/p Periana Kovindear	Medical Officer went to further her studies in Family Medicine
4	Dr Uma a/p Ponnudurai	Medical Officer transferred to KKM
5	Mr Lay Hook Kam	Pharmacist transferred to Perak
6	Dr Ng Wan Nah	Medical Officer resigned and joined private sector
7	Ms Shuahadah Binti M. Halimi	Administrative Assistant transferred to Johor

UPCOMING EVENTS

1. Perak Annual Medical Research Conference 2014 (PRC 2014): 18 Feb 2014
2. CRC Network Meeting: 25 - 26 Feb 2014
3. Basic Research Methodology, CRC Kedah: 6 - 8 Mar 2014
4. Penang Research Day: 23 May 2014
5. 8th National Conference for Clinical Research in Kuching: 30 Sept - 2 Oct 2014
6. Research Camp - 6 camps to be organised at 6 zones
7. Research Retreat - on research gap and research ideas in March 2014-01-30
8. Collaborative research meeting - Dental, Ophthalmology (April)
9. GCP Certification workshop - to be conducted once a month

The Clinical Research Centre (CRC) established in 2000 is part of the Ministry of Health's National Institutes of Health. CRC is a network of 27 centres located in public hospitals across Malaysia. With its nationwide presence, CRC's vision is to be a leading clinical research organisation. The primary aim is to improve patients' health outcomes through ethical and quality clinical research.

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