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KEYNOTE ADDRESS AND PLENARY PAPERS
Health is not just a result of development and poverty reduction, but actually a pre-condition for development. The WHO Commission on Macroeconomics and Health (December 2001) confirmed that effective investment in health is vital to economic growth, human development and poverty reduction. We are now moving into the second decade of the 21st century and yet, all over the world, many continue to suffer needless illness, disease and pain; some even dying prematurely. Much of this tragic suffering and deaths that we are witnessing can be prevented, using known and affordable technologies. The provision of modern medicine in the form of essential drugs and vaccines in sufficient quantity and at a reasonable cost, timely and appropriate information and other forms of prevention, and, basic care and treatment to those who need them – remains a perennial problem. At the centre of this gap between modern medicine and the people who need it is most, is the need for improved health systems. Health systems must be able to provide quality services that are effective at improving health and health equity, be responsive to people’s needs and desires, be financially fair, and use resources efficiently with minimum waste.

Despite these commendable achievements for achieving health equity, multiple issues threaten the performance and sustainability of Malaysia’s health system. Inequalities undeniably do exist in some pockets of the country as reported in past National Health and Morbidity Surveys (NHMS). An additional concern of the government is inefficiency in the targeting those in need from limited funds. Our public sector services are provided free specifically for those who cannot afford. However, such privileges are often abused by those who can afford. Concerns of inequity and inefficiency have created tremendous pressure for the government to strengthen our health system. Redesigning of our health care delivery system without damaging the foundations upon which they were originally built is needed. There has been strong consensus calling for the introduction of a comprehensive healthcare system that is equitable, affordable, effective and efficient. The 10th Malaysia Plan is set to address the need for such reforms. The future healthcare requires reshaping from a system that was largely disease-based medical care to a personalised healthcare that is focused on wellness, people and the capacity to deliver services into people's homes.

A health system that is restructured in its delivery and complemented by good governance is expected to address most of the desired outcomes. An integrated delivery system is in the pipeline whereby services can be obtained from both public and private sector. Such integration will result in more efficient resource use; improve access and better response from service providers. Success at strengthening the public health system will require a transformation agenda addressing the pertinent building blocks said earlier. The government through good governance and stewardship, will be responsible for policy, quality and safety, enactment, amendment and enforcement of laws. It will be looking to the Public Health Physicians to assist in the transformation process. Towards this, they must have a clear understanding of the challenges, the rationale and philosophy behind the need for changes. In addition, the Public Health Physicians must acquire new competencies so as to be able to undertake the new roles of stewardship, clinical, financial and corporate governance. Appropriate training programmes must be introduced by academic institutions.
OPERATIONALISING THE NSP-NCD: ROLE OF PUBLIC HEALTH PHYSICIANS

Cherian Varghese

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Prevention and control of NCD, such as cardiovascular diseases, cancer, diabetes and chronic respiratory diseases, are a public health priority for the Western Pacific Region (WPR). Almost four in five (80%) deaths in the region are due to NCD. Four modifiable risk factors are responsible for two-thirds of the NCD in the region: tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol. Together these risk factors lead to the intermediate physiological risk factors—elevated blood pressure, cholesterol and glucose levels, and obesity. Significant gains can be made in the WPR by addressing all of these risk factors. The National Strategic Plan for Noncommunicable Diseases released by the Ministry of Health, Malaysia, provides a comprehensive approach to address NCD prevention and control. The presentation titled 'Operationalising the NSP-NCD-Role of Public Health Physicians' will address the burden, risk factors, multi-sectoral action and other aspects of NCD prevention and control. The role of public health professionals will be highlighted.
EMPOWERING THE COMMUNITY IN MALAYSIA IN THE NCD COMMUNITY INTERVENTION PROJECTS FOR “BORDERLINE GROUPS” INVOLVING CVD RISK FACTORS

Miha O, Omar ZA, Rozanim, Feisol4, Nohayati5

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Introduction
This program is aimed to empower community members to adopt a healthy lifestyle for prevention of non-communicable diseases and to increase the accessibility of rural communities to non-communicable diseases prevention services, besides creating an integrated program for effective and sustainable prevention of non-communicable diseases. Effort had been made to establish of the committee at community level at all the selected community with the involvement of Head of the Community, Nutrition Officer (NO), Health Education Officer (HEO) and Medical Officer of Health (M&HO). Usually a building will be been identified as the Community Health Center and a group of volunteers will be trained for the purpose of implementation of the screening and intervention cardiovascular risk factors of the borderline group which had been identified through the screening process.

Methodology
All the projects scheduled for 2010 had begun since November 2010 and the intervention programs have been running since January 2011. In each project, “Soft launching”, currently named “Olek Sekampong” was organised for the purpose of public awareness and usually was officiated by the Members of Parliament and simultaneously, screening program for the risk factors of Cardiovascular diseases (CVD) namely blood pressure, blood glucose, blood lipid, weight & height and waist circumference had been carried out among the community. In addition, screening for Mental Health using DASS, screening for Alcohol related harm were also being carried out where ever appropriate. Following those screenings, intervention activities were carried out to those who had the risk factors using packaged modules which had been previously tested and validated. The implementation of interventions had been carried by the volunteers and facilitated by health personnel (NO, HEO and M&HO). Monthly, regular activities relevant to physical activities and diet modification were being carried out. Equipments to encourage the physical activities and health diet practices were provided. Innovation such of the “healthy mobile kitchen “for the purpose of cooking demonstration was introduced. In addition, several exercise-related equipments such as fitballs, odometer, skipping ropes, exercise mats and gymnasium tool ects were provided. Scheduled exercise activities such as aerobics, poko-poko, yoga, and taici , “10,000 steps Brisk walking” were organized within the six months period. Each individual will be monitored for their progress at least for every six months.

Result & Conclusion
Since 2010, six pilot projects had been launched which were followed by another 35 additional projects had been implemented throughout the country and a total amount of RM 1.3 million had been spent. For the year 2011, another total of 140 project s, involving about 3 million have been approved for implementation involving all the states in Malaysia. A total of 3,320 people amongst the “borderline group” from the 41 previous projects have agreed to participate in the intervention programs at the various community centers.

Keywords: CVD Community Intervention, Borderline Groups
ACCELERATING IMPLEMENTATION OF FCTC: THE “BEST BUY” FOR NCD PREVENTION

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Non-communicable diseases (NCD) constituting mostly of cardiovascular diseases (CVD), cancers, diabetes and respiratory diseases impose serious threat to public health. Currently these diseases contribute over 60% of deaths globally and place heavy toll on the economies of countries. Yet, these burden can be alleviated when the main risk factors for NCD namely tobacco use, inappropriate eating habits, physical inactivity, mental stress and alcohol misuse are effectively controlled through lifestyle modifications. As nations and regions gear up for the UN High-Level Meeting on NCD in September 2011, there seem to be unanimous call for accelerated implementation of the Framework Convention on Tobacco Control (FCTC). Execution of this legal tool, positioned top on the priority list for NCD prevention is the world’s most widely embraced international treaty with over 170 countries now Parties to it. The FCTC came into force in 2005 and comprises of evidence-based tobacco control strategies stated in 38 Articles; where 1/3 are provisions for core demand and supply reductions. Parties are obliged to carry out all the provisions of the FCTC by enacting domestic laws and policies. The Malaysian Government became a Party to the FCTC in 2005 while the Ministry of Health as its local secretariat.

IMPORTANCE OF MENTAL HEALTH AS A COMPONENT IN NCD PREVENTION

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Mental health and well being is as equally important as physical well-being. Mental and physical health and illness represents crucial part of any individual’s life that are deeply interdependent. Mental health is defined as a state of well being in which the individuals realizes his or her own abilities, can cope with normal stresses of life, can work productively and fruitfully and is able to make contribution to the society. A mentally healthy person is a person who feels good about themselves, feels good about others, has the ability to maintain harmonious relationship with others, ability to take part in community’s activity and ability to contribute to the community. Studies have shown that each has major impact on the other, as such, non-communicable diseases i.e diabetes, hypertension, cardiovascular diseases and cancer should not be viewed in isolation from the possible mental and psychological issues of an individual. A person’s mental health has a profound effect on his or her behaviour in view of diet, exercise, smoking, sleep pattern, sexual practices etc. which may further the chances of adverse physical illnesses. Most physician often acknowledge the importance of smoking, diet and exercise in NCD prevention but often overlooked the importance of life stresses. Severe stress leading to anxiety and depression often can cause adverse changes in a person’s immune system thus leading to physical illnesses. Reports from World Health Organization has also emphasized that there is growing evidence supporting the strong link between mental disorders and physical illness. A person’s emotional health is one of the contributing factors to the development of physical illness and its outcome. Several studies have shown that those who were depressed were more than twice as likely to develop diabetes. Anxiety and depression have been reported to double or triple the risk of developing high blood pressure, whereas the risk of heart disease is double in people with depression. Mental stress and depression can have a profound effect on cardiovascular disease, as causation and implications of recovery. Mental stress increases oxygen demand because blood pressure and heart rates are elevated. It was also found that depressed persons are three times more likely to develop heart damage from blockages of blood and are at higher risk for subsequent episodes than those who do not suffer from depression. As stress creates specific symptoms in different individuals, individuals can benefit greatly from education in stress management and coping skills. Individuals need to develop skills in recognizing signs of physical tension, skills of breathing exercise and relaxation techniques. In addition, the presence of social support and social networks as contributing factors to positive mental health are as important physical risk factors (not smoking, exercise, healthy diet) in improving health and preventing non-communicable diseases and premature deaths. Mental health is an essential component in non-communicable disease prevention. As such, it is of importance to promote good mental health as well as to develop positive methods of coping with stress as this would provide a beneficial effect in the prevention of non-communicable diseases. Addressing worries and mental stress by promoting positive thinking, good lifestyle habits including diet, exercise, relaxation, sleep and acquiring social support can indeed improve an individual’s quality of life.
COMMUNITY ENGAGEMENT IN DISEASE CONTROL IN A CLOSE KNIT HOMOGENOUS COMMUNITY

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Community engagement and participation has played a critical role in successful disease control and elimination campaigns in many countries (5). It is a very important activity, because the affected community needs to play their roles effectively, in order that the planned control measures / activities or elimination programs could be implemented and to achieved the desired outcome.

To engage the community in our programs or project, they have to be well informed of the objectives programs or project, the (our) roles of the implementer and their own roles and the benefits of the project or programs.

With the application of principles of Community Engagement Strategy, the community reception of the project was very good as they understood the objectives of the project or programs. Good rapport was established with all the community leaders including informal leader and community at large. The strategy was strengthened with the application concept of Health Belief Model (HBM) in convincing community of the effect of disease on health.

SPORT AND RECREATION: APPROACH TO HEALTH PROMOTION

Wan Azrin bin Mohd Zain
Malaysian Health Promotion Board

The Malaysian Health Promotion Board (MySihat) is using sports and recreation as a vehicle to promote healthy lifestyle among the public. In this context, local NGOs as agents of change in society, working hand in hand with MySihat under the banner of partnership in health promotion; need to be empowered in terms of knowledge and skills to implement programs to the community.

Therefore, MySihat formulated a few capacity building training modules as a basic step in order to enable these organizations to implement their programs according to the Ottawa Charter 1986 health promotion strategies. However, new strategies and action plans beyond the capability of our NGOs are needed in order for the rakyat to practice physical activity as part of their lifestyle.

This paper aims to look at the extent of the role and achievement of MySihat in promoting physical activity, as well as looking at the needs to devise a macro strategy that cuts across organizations and societies based on international consensus such as the Ottawa Charter 1986.
ROLE OF NGOs IN RISK COMMUNICATION

Thavaraj S, Subramanian S

Malaysian Health Promotion Board

NGOs can play a vital role in Crisis Management. They have the potential to contribute effectively and efficiently in crisis situations. They are able to mobilize the community within their reach for community efforts in containing the crisis and often reach the marginalized and vulnerable sections of society. We need to establish smart partnerships with the NGOs in order to better manage crisis through collaborative efforts.

A basic prerequisite for NGO participation in containing disaster will be Capacity building so that the affected community with the support of NGOs is able to cope with crisis. In this aspect a Risk Communication Training Module need to be developed especially tailored to NGOs. The module could be adapted from existing Risk Communication modules already developed by the Ministry of Health. The Malaysian Health Promotion Board could then train specific and relevant leaders identified among the NGOs as facilitators who could in turn build capacity among their members to communicate risk to the community.

NGOs can also play a significant role for Coordination, Collaboration and Networking amongst themselves and with the Government and the community. This should be spelt out in all disaster and crisis management strategic plans. Any strategic plans for crisis situations should take into account the role of relevant NGOs. The Ministry of Health has already developed Risk Communication Strategic plans for major disasters and the role of NGOs has been spelt out. Perhaps an effective mechanism to operationalise the plan through simulation exercises engaging the NGOs will motivate them to participate in full force.

There are about 7000 registered NGOs in Malaysia and they have a significant presence in almost all regions of the country and their role as an important partner of the Lembaga Promosi Kesihatan is being increasingly recognized with about 200 NGOs currently participating in various health promotion projects throughout the country sponsored by the Board itself. This number is expected to increase over the coming years with more NGOs becoming aware of the functions of LPKM made possible by its aggressive marketing strategies. This in turn will see more community projects underway. At the same time the NGOs will be co-opted to participate in any disease outbreaks and disasters affecting the community and the nation.
MDG 4 & 5: WHERE ARE WE?

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Malaysia has done well compared to other developing nations on reducing maternal mortality, from the time of its independence. However the decrease from 44 per 100,000 live births in 1990 has flattened at around 28 per 100,000 live births almost a decade ago and has not changed since. Compared to the group of developed countries that Malaysia aspires to join, this is still high. In OECD countries the figure is around 6 per 100,000. The target is to reduce the maternal mortality ratio by three quarters between 1990 and 2015, but the ratio in the average Asian developing country has only declined from 395 to 342. Even more alarming, of the 42 countries for which data are available, maternal mortality has gone up in 22. Around two thirds of Asian maternal deaths, 164,000, take place in India and Pakistan, both among the regressing countries.

The figures for Malaysia, on one hand may be wanting; on the other, have our strategies wane? This paper will share the various key interventions along the continuum of care from pre-pregnancy, to pregnancy, to childbirth, to infancy and early childhood, that have been revitalized. Programs on pre-natal care; attended childbirth; postpartum care; sexual and reproductive health care and services, including voluntary family planning; health education; treatment and prevention of diseases including infectious diseases; prevention of mother-to-child transmission of HIV; immunizations; basic nutrition and relevant actions not forgetting a safe and facilitating environment has been given new emphasis. Can these strategies bring new hope of better care and greater reduction in mortality, with the MDG period ending just round the corner?

ADOLESCENT HEALTH: A HOLISTIC APPROACH FOR IMPROVED OUTCOMES

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Three basic paradigms in public health which is applicable to all stages of the life cycle are particularly true of adolescents

1) Prevention is better than cure: Adolescents engage in behaviours that affect their health, not only during the adolescent years but also in adulthood. Prevention is crucial because so much of the disease burden is preventable. Effective prevention includes a wide range of strategies. Primary prevention and to some extent secondary prevention holds most promise; tertiary prevention has a limited role.

2) Health as a state of complete physical, mental and social well being and not merely the absence of disease or infirmity: Adolescent’s health calls for a truly holistic approach, one that addresses not only the medical aspects, but also the social aspects. Adolescence is a period of a wide array of risk behaviour, many of which are in the social environment

3) The “social” aspects can be both the determinants and the consequences of the “medical” aspects: The social and medical problems of adolescence arise out of the physiological and anatomical changes; and form a myriad of consequences on health, which influence one another. Some examples are cited, especially in the context of sexual and reproductive health.

Arising out of these three is a fourth paradigm - interventions require a holistic, comprehensive, inclusive and multi-sectoral approach, optimizing both the social and medical aspects, which is the only approach to achieve the objectives of the National Adolescent Health Policy.
THE HEALTH OF THE ORANG ASLI FAMILY

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The indigenous people of Malaysia also known as the Orang Asli (OA) represent 0.5% of the total Malaysian population, of which 72.1% of them stay > 25km from static healthcare facilities; hence making the access to healthcare an issue, with the mobile clinic being the sole and major healthcare provider. Despite this challenge in geographical access to static health facilities, the coverage for maternal and child health services is commendable with increasing trends of early booking of pregnant mothers, safe deliveries, childhood immunization and reducing trends of perinatal and neonatal mortalities. However, there remain gaps as compared to national averages for health status indicators, especially among the OA populations staying in hard-to-reach areas. The maternal mortality ratio among the OA is higher than the national average at 20.9 to 63.3/100,000 livebirths although the numbers are small, with 2-5 cases per year and a total of 16 cases over 5 years period; and with post partum haemorrhage during home deliveries remaining as the main cause.

The incidence of infectious diseases, like malaria, has declined while on the other hand, life style related diseases are making an increasing impact. While the current delivery of health care have contributed much to the increasing health status of the OA, the scope and comprehensiveness of these services have now to be reviewed to meet the current challenges facing the OA population. A primary health care approach, with its focus on community participation and inter sectoral action for health among all government and non-governmental agencies, is needed to bring the health status of the OA into the mainstream.
DISEASE SURVEILLANCE IN MALAYSIA

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Surveillance is the ongoing systematic collection, analysis, interpretation and dissemination of data. In the field of Public Health, disease surveillance is a crucial and important component since it provides valuable information for various purposes with an ultimate aim of reducing morbidity, mortality and improves health of the population. A functional surveillance system is a critical instrument for public health decision making by providing information for action on priority communicable diseases. It should be able to provide timely and good quality information so as appropriate action or response can be initiated. As such there is a need to ensure surveillance data is being analysed in a timely manner and interpreted with intelligence so as to ensure its objectives are met. Disease surveillance in Malaysia has been well established consisting of the case based or indicator based disease surveillance system and the event based surveillance system. Case based or Indicator based surveillance system in the country consist of Mandatory notifiable diseases surveillance, syndromic surveillance system, Influenza-Like Illness (ILI) surveillance and the lab based surveillance system. Meanwhile the event based surveillance system, which needs further strengthening comprise rumour surveillance and the cluster notification. There is a need to further enhance the country’s surveillance system especially to ensure its capacity and ability to detect early warning signals of emerging infectious diseases as required under the International Health Regulations (IHR2005).

ILI SURVEILLANCE - CAN IT PREDICT INFLUENZA OUTBREAK?

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Introduction

The global outbreak of Avian influenza A/H1N1 and emergence of pandemic Influenza A in 2009 has demonstrated the importance of establishing and strengthening influenza surveillance system. In view of the imminent situation, Malaysia has produced the Malaysian Influenza Surveillance System (MISS) guideline in 2004 and further enhanced in 2009.

Aim

The aim of this study was to review the effectiveness of the influenza surveillance system as an early warning tool for detection of influenza outbreaks.

Method

The influenza daily and weekly returns and records from 2007 to week 3 of 2011 were reviewed by the assessment team. Key health personnel manning the systems at sentinel clinics, district, state and central level were interviewed by telephone calls and emails. The data were analyzed by sentinel sites at district, state and central levels and threshold levels calculated using SPSS version 15.
Result
MISS was well documented with presence of guidelines and circulars but re-enforcement of newer circulars without prior deletion or clarification of existing circulars has led to confusion, redundancy and deferring practices at implementation levels. ILI reporting system has been established in the health centers but due to different activities of data managing conducted at different levels, immediate action cannot be taken. Analysis was done at state and central level. There was no clear instruction or guidelines provided to implementers on actions to be taken upon reaching alert and action threshold. There was no retrieval system for data verification and investigation at any level and no feedback loop from the Central to State or likewise on the performance and action to be taken.

Conclusion and Recommendation
MISS meets its objective as a mechanism to monitor geographic trend of influenza in the country but to work effectively as a mechanism to detect or predict early outbreaks of influenza, many of its operational tools need to be reviewed. There is a need to look at ILI surveillance in combination with other sources such as abnormal workplace or institution absenteeism, sARI, ARI and cases in the intensive care units. A process of recognizing and notifying trigger criteria such as an event based surveillance system for influenza could supplement the current ILI monitoring.

Key words: ILI surveillance system, threshold, sentinel sites
ENHANCING EQUITY AND EFFICIENCY FOR WORKERS: CHALLENGES FOR OCCUPATIONAL HEALTH PRACTITIONERS

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A healthy workforce is fundamental to social and economic development. The nature of work and their work environment are major determinants of health. Most occupational deaths, injuries and diseases are preventable. However, WHO estimated that about 430,000 lives and 14 million disability adjusted life years (DALYs) were lost in 2000 in Asia and the Pacific from occupational hazards excluding those attributed to psychological stressors and infections at health care institutions. This translates into a huge impact on the socioeconomic status of nations in this part of the world in terms of lost productivity and the burden of work-related accidents and diseases. Therefore, an important measure to minimize the work-related exposures and risks is by ensuring that health care systems promote health and safety at the workplace and provide good quality occupational health services to the workforce. However, this effort can be very challenging due to the presence of significant health inequities among different classes of workers and labour sectors and compounded by the impact of globalization. Increasing global movement of workers, products, technologies and information can result in rapid transfer of solutions to minimize occupational risks while providing opportunities for new occupational risks and the re-emergence of traditional work-related hazards affecting less advantaged working populations that include migrant workers and the informal sector. In recognition of this new threat to the working populations and the limits of national actions in an increasingly globalized economy to promote workers’ health and to prevent occupational diseases, the WHO Regional Framework for Action for Occupational Health 2011-2015 (WHO Framework) was developed to guide member nations to implement the WHO Global Plan of Action for Workers’ Health 2008-2017 (WHO Plan) based on 5 main objectives: (1) to devise and implement policy instruments on workers’ health, (2) to protect and promote health at the workplace, (3) to improve performance of and access to occupational health services, (4) to provide and communicate evidence for action and practices, and (5) to incorporate workers’ health into non-health policies and projects. These objectives were driven by 5 overarching principles: (1) using evidence for action, (2) fostering intersectoral collaboration and networking at all levels, (3) facilitating worker and community participation to create healthy workplaces, (4) implementing a systematic and iterative process to ensure that successes and failures contribute towards strengthening and refining the Framework and national action plans, and (5) recognizing and reducing social inequity for all workers. In relation to the Malaysian workplaces, the issue of enhancing equity and efficiency for workers will be examined based on the 5 principles above as follows: (1) using good evidence and good practices to guide the development of policies and programmes, (2) collaboration between the Ministry of Health, Ministry of Human Resources, SOCSO as well as engaging representatives from the private sectors that include workers and employers, private insurance companies, and health providers, (3) impact of workers’ participation in decisions regarding occupational health policies and interventions using the “healthy workplaces” approach, (4) continuous feedback to improve and revise strategies and interventions based on the ongoing and iterative assessment, capacity building, prioritization, implementation, and evaluation of occupational health services, and (5) devising a strategy to address social inequities and efficiency that directly or indirectly impact on workers’ health, safety and quality of working life.

ENHANCING EQUITY AND EFFICIENCY FOR PUBLIC: CHALLENGES FOR ENVIRONMENTAL HEALTH PRACTITIONERS

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Equity in health is an ethical issue, grounded in the ethical principle of distributive justice which is consonant with human rights principles. Equity in health can be defined as the absence of disparities in health and its key social determinants that are systematically associated with social advantage and disadvantage. Health inequities systematically put populations who are already socially disadvantaged by virtue of being poor, female or of certain racial, ethnic or religious groups, at further disadvantaged with respect to their health (Braveman and Gruskin, 2003). Efficiency is a component of productivity referring to the comparison between actual and optimal amounts of inputs and products (Lovell, 1993). Health care efficiency refers to how well health care resources are used to obtain health improvements. It comprises two components. Technical efficiency refers to whether health care interventions for particular health states are each performed with the least amount of inputs. Allocative efficiency refers to whether a set of technically efficient interventions is chosen to yield the greatest possible amount of health improvements (Peacock et al., 2001)

Health services including environmental health service demands a delivery system of the highest standard to promote a healthy environment and avoid costly environment-related diseases and health impairments. Enhancing equity and efficiency in environmental health service to the public are two of the prerequisites needed to ensure this. Environmental health practitioners play a pivotal role in ensuring that the general public are protected against a hazardous or health-threatening environment whether in their homes, schools, institutions, work places or the ambient environment. These efforts require efficient use of manpower, financial and material resources, as well as administrative and legislative mechanisms. More often than not, segments of the population that are impoverished, socially and economically disadvantaged, and highly urbanised, suffer more from the impacts of environmental degradations. Sometime, the generators of environmental risks may not also be the risk recipients. The ‘not in my backyard’ or NIMBY syndrome has long plague environmental health issues in developed nations and is now becoming a concern in Malaysia. This has brought issues of equity and justice to the forefront of environmental health concerns.

EQUITY AND EFFICIENCY IN PRIVATE OCCUPATIONAL HEALTH SETTINGS

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The International Labour Organization (ILO), World Health Organization (WHO) and the Department of Occupational Safety and Health (DOSH) Malaysia all support the premise that every person at work should do so in a safe and healthy environment. This should include protection of particularly vulnerable segments of the working population - women, foreign workers, workers in the informal sector, etc. In Malaysia, DOSH is responsible for legislating and enforcement of laws protecting all persons at work in Malaysia. However, presently, there are gaps in the law that has allowed particular segments of the working population (e.g. foreign workers, self-employed, etc.) to fall through the cracks. The implementation of the existing occupational health regulations in the private sector is still uneven in its coverage as well as its quality. Some of the reasons for the inequitable provision of care are attributed to ignorance of the business owners, costs, lack of competent occupational health service providers, lack of enforcement, etc. Unfortunately, adverse occupational health effects often have a long lag period. Hence, business owners may not fully appreciate the likely adverse outcome that their workers may face in some time in the future. It has also been observed that in some work settings discrimination may exist where skilled workers are more likely to be protected than that of an unskilled worker. The same has been observed for local workers compared to foreign workers and between full-time workers versus part-time or contract workers. There are still areas of concern of inequitable and efficient provision of occupational health services in the private setting in Malaysia.
ORAL PRESENTATIONS
1. ROUTINE USED OF ACETAMINOPHEN FOLLOWING CHILDHOOD IMMUNIZATION

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Introduction
Acetaminophen is very widely used as an antipyretic as well as analgesics because of its high efficacy and good safety profile. It is used to relieve mild to moderate pain and to reduce fever. In children, it is considered as a safer antipyretic compared to other drugs including in fever after receiving immunization. Even in many cases, acetaminophen is administered to relieve possible risk of high fever or febrile convulsions in children after routine infant vaccinations. However, there was claimed that acetaminophen may reduce the immunogenicity of vaccine in children.

Objective/Aim
The objective of this technology review was to assess the safety, efficacy or effectiveness and cost-effectiveness of routine used of acetaminophen following childhood immunization.

Methods
A comprehensive search strategy including electronic databases such as PubMed, Ovid Medline (R) from 1990-2006 (EBM Reviews - Cochrane Databases of Systematic Reviews), National Horizon Scanning, INAHTA and FDA, NIOSH website, for published reports. There was no limit in the search. Additional articles were identified from reviewing the bibliographies of retrieved articles.

Findings
There was only one good level of evidence to show that routine prophylactic use of acetaminophen after vaccination was effective to reduce fever. However, this trial also showed that the routine prophylactic use of acetaminophen may reduce the antibody response. No study was retrieved on the cost-effectiveness.

Conclusion
The acetaminophen can be used for fever treatment following vaccination. However routine prophylactic use of acetaminophen to prevent fever following vaccination is NOT advocated as one evidence showed that such practice reduce the immunogenicity of the vaccine. More quality evidence is required to support the effect of acetaminophen in the immunogenicity of the vaccine such as multicentre randomized controlled trials (RCT) in many countries.

Key words: Acetaminophen, childhood, immunization, immunogenicity

2. ZAZEN FAR INFRARED RAY (FIR) THERMAL SYSTEM

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Objective
To assess the safety, effectiveness/efficacy and cost-effectiveness of Zazen FIR Thermal System for treatment of patient with cardiovascular disease.

Methods
A comprehensive search strategy including electronic databases such as PubMed, Medline, OVID EBM Reviews, Horizon scanning databases, USFDA website, and from non scientific database - Google search engine was performed. Relevant articles were critically appraised and evidence graded using US/Canadian Preventive Services Task Force.

Findings
There was limited and poor level of evidence to show that FIR Thermal System technology is safe for treatment of patient with cardiovascular disease. Besides, there is no information on USFDA approval or CE mark was obtained.
for this technology. There was also limited and fair level of evidence on the effectiveness and no retrievable evidence on the cost-effectiveness of this device.

Conclusions
Based on the review, Zazen FIR Thermal System for treatment of patient with cardiovascular disease is not recommended to be used in Ministry of Health clinics and hospitals in Malaysia until there is sufficient high quality scientific evidence to demonstrate its safety, effectiveness and cost-effectiveness when applied in clinical setting.

Key words: Zazen sauna, Zazen Far Infrared Ray (FIR) Thermal System, far infrared sauna, sauna treatment, safety, adverse events, effectiveness, cost-effectiveness.

3. CIRCUMCISON CLAMPS

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Introduction:
Circumcision is one of the oldest and commonest elective surgical procedures performed by man. Moskovich was the first to practice bloodless circumcision, when he invented circumcision forceps. Subsequently, more clamps (disposable and non disposable) were invented.

Aim
To assess the safety, effectiveness and cost-effectiveness of circumcision clamps.

Methods
Electronic databases such as MEDLINE, PubMed, Ovid Full text, Proquest, EBSCO Host, (CINAHL), EBM Reviews-Cochrane Database of Systematic Reviews, EBM Reviews-HTA databases, Horizon scanning databases (Defra-UK, Euroscan), FDA and MHRA database were searched. No limits were applied to the search. Additional articles were identified from bibliographies of retrieved articles and from documents submitted by companies. All relevant literature was appraised using the Critical Appraisal Skills Programme and evidence was graded based on guidelines from U.S./Canadian Preventive Services Task Force.

Results and conclusion
There was fair level of evidence to suggest the safety of Gomco, Mogen, Plastibell and Tara KLamp. The evidence to support the safety of Sunathrone™ is still insufficient. There was also fair level of evidence to suggest the effectiveness of Gomco, Mogen, Plastibell and Tara KLamp. However, more randomised controlled trials should be conducted involving larger number of subjects. Currently, the evidence to support the effectiveness of Sunathrone™ is still insufficient. There was no retrievable evidence on the cost-effectiveness of circumcision clamps.

Recommendation
Based on the above review, disposable circumcision clamps such as Tara KLamp and Sunathrone™ can be used for research purpose. More clinical research such as randomised clinical trials is warranted to provide better quality evidence.

4. ROUTINE IRON SUPPLEMENTATION FOR CHILDREN UNDER FIVE YEARS OF AGE: A SYSTEMATIC REVIEW

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Introduction
Babies, toddlers, preschoolers and teenagers are at a higher risk of iron deficiency, mainly because their increased needs for iron may not be met by their diets.
Aim
To assess the safety, effectiveness and cost-effectiveness of routine iron supplementation for children under five years of age.

Methods
Electronic databases such as MEDLINE, PubMed, Ovid Full text, Proquest, EBSCO Host (CINAHL), EBM Reviews-Cochrane Database of Systematic Reviews, EBM Reviews-HTA databases, Horizon scanning databases (Euroscan) and FDA database were searched. The search was limited to children. Additional articles were identified from bibliographies of retrieved articles. All relevant literature was appraised using the Critical Appraisal Skills Programme and evidence was graded based on guidelines from U.S./Canadian Preventive Services Task Force.

Results and conclusion
There was good level of evidence to show that routine iron supplementation in preschool children in population with high rates of malaria resulted in an increase risk of severe illness and deaths. Iron supplementation reduced the prevalence of anaemia among children with iron deficiency anaemia and increased haemoglobin concentration especially for children with lower baseline haemoglobin level. There was good level of evidence to show that iron supplementation did not have positive effect on any anthropometric variable. Instead, iron supplementation in iron-replete children may retard growth. There was no retrievable evidence on cost-effectiveness.

Recommendation
Iron supplementation should not be given routinely to children under five years of age. Instead, iron supplementation should be given to children who are iron deficient or having iron deficiency anaemia.

5. FACTORS ASSOCIATED WITH GLYCAEMIC CONTROL AMONG ELDERLY TYPE 2 DIABETES ATTENDING A SELECTED HEALTH CENTRE

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Aim
To determine the prevalence of glycaemic control and factors associated with poor glycaemic control among elderly type 2 diabetic patients attending a selected health center in Peninsular Malaysia.

Methodology
A cross-sectional study was conducted in July till October 2009. A structured and pre-tested interviewer administered questionnaire was used for data collection. The respondents were type 2 diabetic patients 60 years and above. Two hundred and thirty respondents were selected in the study.

Results
Majority of the respondents were female (56.5%), housewives (47.8%) and 60.4% have completed primary education. Seventy-four percent of the respondents had poor glycaemic control. Polytherapy, younger elderly (<75 years), age of first diagnosis at 50-60 years, duration of diagnosis of more than 5 years, eating non-home cooked food, having companion during dinner and living arrangement showed a significant association with poor glycaemic control (p<0.001). Biochemical profile such as serum triglycerides (p=0.011) and fasting blood sugar (p=0.010) were significantly associated with poor glycaemic control. Multiple regression analysis concluded that age of first diagnosis at 50-60 years (OR= 4.738 95% CI 1.267-17.719), eating non-home cooked meals (OR=0.030 95% CI 0.002-0.419), on polytherapy (OR=0.247 95% CI 0.064-0.946) regime and uncontrolled fasting blood sugar (OR=0.244 95% CI 0.071-0.843) were significantly contribute to the risk of poor glycaemic control, after adjusting for potential covariates.

Conclusion
Majority of the respondents had poor glycaemic control. Awareness in diabetic self management and education programme will help to educate the elderly and their caregivers on the important of self health management.
6. THE DETERMINATION OF LOVASTATIN AS A NATURALLY OCCURRING SUBSTANCE WITH CHOLESTEROL LOWERING EFFECT IN SELECTED HERBAL MEDICINES CONTAINING RED YEAST RICE

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Aim
Red yeast rice has been increasingly used as traditional herbal medicine. As a result, some countries have begun regulating this product due to the presence of naturally occurring cholesterol lowering effect compound that is similar to the poison list drug lovastatin. The aim of the study is to determine and quantify the presence of lovastatin in selected herbal medicine products containing red yeast and provide a validated method.

Methods
Twenty five registered herbal medicines with stated labels containing red yeast rice and 5 raw materials of red yeast rice powder were provided by NPCB and analysed for the presence of lovastatin. The analytical method involved a solid phase extraction system using SPE C8 column, detection by gas chromatography mass spectrophotometry (GC-MS) with DB5MS capillary column, and quantification by High Performance Liquid Chromatography (HPLC) with Hypersil ODS column.

Results
From all samples analysed, 29 (97%) samples were found positive with lovastatin and only 1 (3%) sample showed negative result for lovastatin. The concentration of the lovastatin presence in finished products varies from 0.0008% w/w to 2.05% w/w. The result of method validation was found specific to determine lovastatin in herbal medicine with acceptable data of specificity, linearity and range, precision and accuracy.

Conclusions
This study showed the amount of lovastatin present in selected herbal medicine containing red yeast rice can be measured using the HPLC method.

7. DETECTION AND DETERMINATION OF HYDROQUINONE AND ARBUTIN IN WHITENING COSMETIC SKIN CARE PRODUCTS BY USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

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Aim
The main aim of this study is to detect and determine hydroquinone and arbutin in cosmetic skin care products (CSCP) by using High Performance Liquid Chromatography (HPLC). It was reported that arbutin maybe hydrolysed to form hydroquinone. The presence of hydroquinone, a banned substance and acts as a whitening agent in CSCP is closely monitored in Malaysia market.

Method
A testing method of Reversed-Phase HPLC with Photodiode Array Detector was used in this study to detect and determine both compounds in CSCP. A method validation was carried out to demonstrate that the testing method was reliable and fit for the detection and determination of the compounds.

Results
The result of method validation was found to be satisfactory and specific to detect hydroquinone and arbutin with acceptable data of linearity, repeatability and accuracy for the determination testing. A number of CSCP samples were collected from the market and tested for both compounds. The result showed that the absence of hydroquinone in tested samples containing arbutin.

Conclusion
It may conclude that CSCP containing arbutin marketed in Malaysia are free from hydroquinone and arbutin is a stable compound during the testing.

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8. COMPARING LEVEL OF AWARENESS ON THE IMPORTANCE OF PRIMARY DENTITION AMONG PRE-SCHOOL TEACHERS AND HEALTH NURSES IN PAHANG

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Introduction
It is important to have a healthy deciduous teeth amongst children. Comprehensive and systematic oral health promotion activities had been in placed in Pahang since 2004 for pre-school teachers and followed by health nurses in 2008 as front liners in improving oral health status of young children.

Aim
The study would like to compare level of awareness towards the importance of deciduous dentition between pre-school teachers and health nurses after such activities had been carried out.

Methods
A cross-sectional study using a validated self-administered questionnaire contained 14 questions with a 5-Likert scale. It was divided into 2 categories, part A include the knowledge, function, oral health care and neglected effect of deciduous teeth; while part B include respondents' self information. The questionnaire were distributed to 155 government pre-school teachers and 88 health nurses in maternity and Child Health Clinic in district of Pekan and Bentong respectively between Jun to September 2009. Data were entered in SPSS v.15.0 and analyzed using descriptive statistics and Multiple Linear Regression.

Results
There were 147 respondents and 88 health nurses recruited in the study. The study showed that there was significantly different mean score on level of awareness between pre-school teachers and health nurses (p value < 0.0001) where their mean score was (55.4 (4.81)) and (32.3 (5.17)) respectively.

Conclusions
Awareness level on the importance of primary dentition was higher amongst pre-school teachers than health nurses regardless of their socio-demographic factors. It was proved that a comprehensive and systematic Dental Health Promotion activities being carried out in Pahang had achieved the goals and should be continued.

9. HEPATITIS B SEROPREVALENCE AMONG SCHOOL CHILDREN AGED 9 AND 10 YEARS OLD

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Aim
The study is to evaluate the impact of the hepatitis B Vaccination Program on chronic hepatitis B virus infection rates among children born after the introduction of program in 1989.

Methods
A nationwide cross sectional study was conducted in January until March 2009 among selected children aged 9 and 10 years old. Children were taken from national and national-type schools, randomly selected from pools of large and small group schools. A total of 253 schools and 9,242 were invited to participate in the study.

Results
The response rate of schools was 79.8% (202 of 253) with 7,520 students consented (81.4%). A total of 6,595 students were bled. The ethnic distributions of respondents were corresponding with the Malaysia ethnic distribution. The ratio of male: female students and aged 9 and 10 years old respondents were 1:1. Only 19
children (0.3%) were HBsAg positive. A total of 2479 (38.1%) were positive for HBsAb with seropositivity (> 10 mlU / ml). It was noted that it was more in 10 years old (40%) as compared to 9 years old (35.9%) but not significantly different (p = 0.11). There was a statistical significant relationship between the completion of hepatitis B vaccination and seroconversion of the children (p > 0.001).

Conclusion
Seroprevalence of Hepatitis B surface antigen (HBsAg) among children born in 1989 and 2000, who were supposed to have received hepatitis B vaccination, was only 0.3%.

10. PREVALENCE, AWARENESS, TREATMENT AND CONTROL OF HYPERTENSION AMONG THE ELDERLY: THE 2006 NATIONAL HEALTH AND MORBIDITY SURVEY (NHMS III), MALAYSIA

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Aims
The objectives of this study were to estimate the prevalence of hypertension and to determine factors associated with awareness, treatment and control among the elderly population in Malaysia.

Methods
Analysis of secondary data from a national population based cross-sectional study (NHMS III) collected from adults aged 60 and older participating in the survey.

Results
From the 34,539 respondents aged 18 years and above for hypertension module in NHMS III, 4954 respondents were elderly (14.3%). A total of 4933 elderly subjects had their blood pressure examined; giving a response rate of 99.6%. The overall prevalence of hypertension among elderly was 74.0% (CI:72.8-75.2), higher in elderly female [77.4% (CI: 75.8-79.0)] than men [70.1% (CI: 68.2-72.0)]. About half of them (49.3%) were aware of their hypertensive status, less than half (42.4%) were currently treated and less than a quarter (22.6%) of those being treated were under control. Females were more likely than men to be aware for hypertension (OR=1.43). The results of multiple logistic regression showed determinants associated with higher awareness and treatment rates were females, young-old age group (age 60-74), urban residents, Chinese ethnic group and higher education. For those elderly who were on treatment, determinants associated with controlled hypertension were Chinese and Indians ethnic groups and higher educational level as compared to their counterparts.

Conclusion
There was a high prevalence of hypertension among the elderly in Malaysia but with low control rate. Reliable knowledge of factors associated with awareness, treatment and control is crucial in the development of health policies to improve disease management and patient education programs especially among elderly in Malaysia.

Key words: hypertension, elderly, prevalence

11. APPROPRIATE AGENTO DELIVER SCHOOL-BASED SEX EDUCATION—EARLIER OR LATER?

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Aim
To explore the perspectives of Science teachers regarding appropriate age to deliver school-based sexual and reproductive health (SRH) education in secondary schools in the Klang-Valley, Malaysia.
Method
A qualitative study using in-depth interview technique was conducted among science teachers in secondary schools in the Klang Valley.

Results
A majority of participants believed that this course should be presented earlier than in Form Three because nowadays students mature earlier. These findings are also supported by the results of other studies where the target age for the introduction of SRH education by the majority of the teachers is between 10-14 years. This may be related to the fact that most adolescents have their first sexual intercourse before the age of 15 years when they are probably in lower secondary school. However, another group believed by introducing and teaching this course later, sexual curiosity and promiscuity of students could be reduced.

Conclusion
This study highlighted the need to start sexual and reproductive health education at an earlier age than currently taught now, preferably in primary school. This is especially true when many students do not progress to secondary school education, and in places where fewer girls than boys progress to secondary school level. There is a need to revise the age at which sexual and reproductive health education is provided to students and the content of that education.

12. RISK FACTORS FOR SMOKING RELAPSE AMONG MALAYSIAN SMOKERS ATTENDING WORKSITE SMOKING CESSATION PROGRAMME

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Introduction
Many smokers attempt to quit but very few succeed. This is largely attributed to high relapse cases that occur in an early quit attempt. This study aims to identify the factors involved in smoking relapse, and examine how this influences the relapse process.

Methods
We conducted a prospective cohort study in two public universities. All smoking staff was invited to participate in this study. Baseline information was sociodemographic characteristics, smoking history and environmental effects. Behaviour therapies with free Nicotine Replacement Therapy (NRT) were given as treatment. Participants were followed up for six months. Relapse was defined as returning to smoking after having quit for at least 24 hours.

Results
One hundred and eighty five smokers volunteered to participate. A total of 120 smokers achieved at least 24 hour abstinence, of which 80% had relapsed. Relapse was shown to decline as time passed by. The majority had occurred within the first two weeks, extending to approximately two months. Compared to attending a single smoking cessation session, joining at least two sessions, smokers had significantly longer time to relapse within six months of quitting [hazard ratio (HR)= 0.615; 95% CI= 0.39-0.96]. In contrast, smokers with a much longer exposure to cigarette smoking at the workplace of between 3-8 hours [HR= 2.72; 95% CI=1.31-5.67] and nine hours or more [HR= 2.86; 95% CI= 1.34-6.07] relapsed quicker.

Conclusions
Frequent attendance to clinic sessions and lesser exposure to other people smoking at the workplace can potentially reduce relapse among former smokers.

Key words: Smoking relapse; environment; worksite; Smoking cessation; Malaysian
13. IMPACT OF ISONIAZID AS EARLY PREVENTIVE THERAPY FOR TUBERCULOSIS IN MALAYSIA: AN AGE-STRUCTURED MODEL

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Aims
Tuberculosis remains as one of the highest unresolved disease burden among re-emerging diseases in Malaysia for the last twenty years. With current treatment protocol emphasizing among infectives, we seek to find if combination treatment with Isoniazid Preventive Therapy for high risk latent tuberculosis infection groups in Malaysia would give greater impact on reducing incidence.

Methods
We apply infectious disease modelling and present a deterministic compartmental age-structured tuberculosis model which assumes latently infected individuals develop active disease as a result of primary infection, endogenous reactivation and exogenous reinfection. We start by formulating and analyzing the model without any intervention strategy then, we extend to incorporate the preventive therapy and treatment of infectives. Epidemic threshold, equilibria and stabilities of the model determined and analyzed. Reproduction numbers of the model achieved by treatment of infectives, preventive therapy and a holistic approach of combination of both intervention strategies are compared. The model further quantifies effectiveness of preventive therapy for early latent tuberculosis infection and demonstrates how effective the therapy has to be to eliminate tuberculosis, when use in conjunction with treatment for active tuberculosis.

Results
Our analyses show treatment of infectives more effective in first years of implementation of preventive therapy as treatment results in clearing active tuberculosis immediately and will do better in controlling number of infectives due to reduced progression to infectious state.

Conclusion
Our model suggests Isoniazid Preventive Therapy which identify and treat persons recently infected may have substantial effect on controlling tuberculosis epidemics in Malaysia.

14. ARE TB MICROSCOPISTS AT HEALTH CLINICS PROFICIENT TO DETECT MYCOBACTERIUM TUBERCULOSIS

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Introduction
Direct sputum smear microscopy (DSSM) remains the mainstay for diagnosing infectious Tuberculosis (TB). The method is operator dependent. Microscopic errors may affect true incidence.

Aim
This study aims to determine the proficiency level of TB microscopist at Pusat Rawatan 1 (PR1).

Method
This cross sectional study involved 3 states identified based on their TB burden. A set of 7 predetermined graded slides was given to the microscopist to stained and read. Self administered questionnaire was used to elicit contributory factors affecting proficiency. The staining quality, correctness and quantification of AFB of the microscopist were matched against readings from referenced microscopists. Kappa Agreement was conducted. Correctness and quantification of grading and quality of staining were scored. The proficiency level of 80% set by WHO was used as reference. The scores were matched with responses from questionnaire.
Results
A total of 124 microscopists from 82 PR1 were listed. Three microscopists had cataract and red green defect. 65% predetermined scanty AFB slides had quantification error. 53% showed good staining. 66% achieved the 80% proficiency level. Multiple logistic regressions showed no significant contributory factors. Kappa Agreement was 80% and 87% for grading and staining.

Conclusion and Recommendation:
The level of proficiency was low when bacilli load was low. The poor staining quality may affect their ability to read low density AFB slides. There is a need to review strategies to improve the staining quality and reading of the slides especially for low density AFB if DSSM is still the mainstay for diagnosing TB.

Key words: Proficiency testing, mycobacterium tuberculosis, Kappa Agreement, TB microscopist

15. GENDER DIFFERENCES IN SMOKING PERCEPTION AMONG MEDICAL STUDENTS IN A UNIVERSITY IN MALAYSIA

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Aim
The aim of this study was to identify the differences in smoking perception between male and female medical students in University of Technology MARA (UiTM), Malaysia.

Methods
We conducted a cross-sectional study in three branches of the Medical Faculty of UiTM. All medical students (Year 1-Year 5) were required to fill up a questionnaire on socio demographic characteristics, smoking perception and media influences.

Results
A total of 522 students responded (59.66%). This comprised of 127 (24.3%) male and 395 (75.7%) female respondents. Male students tend to have a higher tendency to smoke when offered by their peers, compared to the female students. Although the majority was not planning on smoking later in life, 9.4% of male students planned to start smoking in a year. Being female, students believed that smoking may have beneficial effect on body weight, but they perceived higher disadvantage of smoking effects on health and environment. There were no significant gender differences in terms of cigarette exposure, knowledge on smoking rules in the campus and perception on the effectiveness of the anti-smoking campaign through media.

Conclusion
Male medical students have a greater risk of smoking in later life and are less aware of smoking related risks on health and environment. Whereas, female medical students still have erroneous beliefs on issues pertaining to body image and smoking. Efforts should be geared towards changing these future doctors’ perceptions towards smoking and enhancing their knowledge in the area of prevention and control of tobacco.

16. SCHOOL BASED QUIT SMOKING FACILITIES IN BATU PAHAT

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Introduction:
Tobacco companies need adolescents to sustain their businesses. Batu Pahat Health Office is strong in creating awareness on the dangers of tobacco since 2007. Imams, teachers and women are the targets. This resulted in teachers sending students for quit smoking sessions at health centers. Quit smoking sessions in schools then came up. This study identified factors influencing the success rate of quitting among students.
Methodology
In 2008, a quit smoking module was developed based on MOH training module for primary health care and the American Lung Association named as Not on Tobacco (NOT) Cessation Program. In Mac 2009, smokers among the schoolchildren were identified using questionnaires distributed to 9 selected schools. Smokers enrolled were introduced to the module, conducted by the trained teachers and monitored by the staff nurses. It is a 1-2 hour session per week for 8 consecutive weeks within the school hours. Students were then assessed for their smoking status by the teachers for another 6 months starting from week 1. Factors associated to the status of quit smoking were studied.

Results
1231 students (year 4, 5 and 6 and secondary 1, 2, and 3) answered the questionnaire. The prevalence of smoking was 16.5% (204). Average duration of smoking was 4.7 years and mean age of initiating smoking was 13.3. 61.3% (125) quitted smoking. Students with low fagerstrom score and with non-smoking family members had significant chance of quitting compared to students with moderate fagerstrom score and family members who smoked. (p<0.01)

Conclusion
This project showed that adolescents smokers were able to quit smoking especially those with low addiction status and good modeling from family members. Making quit smoking activities accessible resulted in higher success rate of quitting.

17. IMPACTS OF ADOLESCENT PREGNANCY ON ADOLESCENTS RESIDING IN A GOVERNMENT SHELTER HOME

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Aims
Adolescent pregnancy results in negative impacts in all biological, psychological and social aspects of adolescents. This study aimed to identify the impacts of pregnancy on biological, psychological and social aspects in the adolescents’ lives and supports they received throughout the pregnancy. Through a study in this area, areas requiring intervention can be identified which is important to reintegrate the adolescents into the mainstream society.

Methods
Twenty-six adolescents participated in this study. A cross sectional study was conducted in a government shelter home in November 2010. Using universal sampling all pregnant adolescents residing in the centre who agreed to participate was included in this study. The adolescents responded to a self administered questionnaire which was modified from the HIV/AIDS Malaysia PAF Project to assess the bio-psycho-social impacts. Data was analyzed in frequencies. Chi square test was used to determine the association between characteristics of the adolescents and bio-psycho-social problems.

Results
Emotional (96.2%) and sleeping problems (61.2%) were the highest reported problems faced by the adolescents. Most of them received help for biological, psychological and social problems that they faced. One third (30.8% - 42.3%) of the adolescents reported to seek help from their parents for different problems in their pregnancy. Although adolescents from rural areas were more likely to receive help for stigma and discrimination ($\chi^2=5.247$, $p=0.022$) compared to those living in urban areas, they experienced more dissatisfaction in school during pregnancy ($\chi^2=4.887$, $p=0.027$).

Conclusions
Important issues of emotional and sleeping difficulty need to be considered when one is managing adolescent pregnancy. As parents remain as an important source of help, involving parents in the overall management would definitely aid in the rehabilitation process of these adolescents. There appears to be a need for better support of adolescent pregnancy in schools, especially in rural areas.

Key words: Adolescent pregnancy, impacts, problems, help
18. SUBSTANCE USE AMONG YOUTH IN MALAYSIA

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Introduction
Youth routinely engage in behaviour that put their health at risk. WHO stated that nearly two thirds of premature deaths and one third of the total disease burden in adults are associated with conditions or behaviours that began in youth, including substance abuse. This article aims to describe substance usage among youth in Malaysia.

Methods
This study is a nation-wide cross-sectional study using secondary data from Adolescent Health Screening Form (BSSK/R/1/2008). Data from randomly selected participants of a national program aged between 18 and 25 years was analyzed using SPSS. Substance used is defined as ever consumption of tobacco, alcohol or drug.

Results:
A total of 22810 data was analysed, with almost equal distribution by sex. Substance use was noted among 25.8% of youth; with 22.1% smoked tobacco, 8.1% consumed alcohol and 1.3% admitted to drug abuse. By socio demography, substance use was noted as higher among males, and among Malays compared to other ethnicities. There is also relationship between substance use and anti-social behavior, sexual-reproductive problems, religiosity and family connectedness. Multivariate analysis using logistic regression noted that substance use was higher among males (Adjusted Odds Ratio: 7.92; 95% Confidence Interval: 6.70-9.37), higher among ‘other ethnicities including Sabahan and Sarawakian’ compared to Malays (Adj OR: 1.38; 95% CI: 1.11-1.73), higher among youth with anti-social behavior (Adj OR: 3.84; 95% CI: 3.40-4.33), higher among youth with sexual reproductive health problems (Adj OR: 3.85; 95% CI: 2.81-5.29), higher among youth with depression (Adj OR:1.53; 95% CI: 1.27-1.85), higher among youth who lack of family connectedness (Adj OR: 1.92; 95% CI: 1.47-2.50), higher among youth who are ‘not religious’ (Adj OR: 1.34; 95% CI: 1.11-1.63) while controlling for age and education level.

Conclusion
The prevalence of substance use was high among males and ‘other’ ethnic and significantly associated with anti-social behavior, reproductive health problems, depression, ‘not religious’ and lack of family connectedness.

19. THE ASSESSMENT OF 1MALAYSIA CLINIC IMPLEMENTATION: PATIENT UTILISATION PATTERN

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Aims
To describe patients’ attendance pattern which included attendance by month, day and time of day, socio-demographic characteristics and diagnosis.

Methods
This was a retrospective study of secondary data. From each of the north, south, east and west zones of Peninsular Malaysia and Sabah and Sarawak, one clinic was randomly selected to be the study site. From the clinic, we selected 4 weeks of daily patients’ attendance; 1 week in each month of May, June, July and September. Data management and analysis for quantitative information was carried out using Microsoft Excel and SPSS version 18.0 while SPPS Text Analysis for Survey software was used to analyse qualitative information such as patient’s diagnosis.

Results
Patient attendance was highest in Sarawak and lowest in Sabah. Weekends were the busiest days and evenings the busiest times for clinics with relatively high utilisation. Patients aged 25-49 years old had the highest attendance in all clinics except Sarawak whereby the highest attendance was among patients aged 5 and below. Malays were
the highest group of patients who came to the clinic except in Penang, where the highest number of attendance were among Chinese. Not many Chinese utilised clinics in Kuala Lumpur. More than 40% of cases were for URTI.

Conclusions
1Malaysia Clinics are fairly utilised by the surrounding community. Differences in utilisation rates among clinics may be due to geographical settings or services offered.

20. LAWS AND POLICIES - ARE THEY BARRIERS TO ACCESS OF SEXUAL HEALTH SERVICES FOR ADOLESCENTS?

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In Malaysia the adolescents comprise about 20% of the population and the number is increasing each year. Issues on adolescent health are becoming increasingly important and statistics have shown that adolescents and young people are becoming sexually active at a younger age and many are having sex outside marriage with inadequate protection against pregnancy and sexually transmitted infections. Malaysia has made commitments to international conventions such as CEDAW, IPCD and MDG and affirmed the rights to quality sexual and reproductive health services of adolescents and young people. While there are 642 health clinics of the Ministry of Health providing adolescent health care, dealing with sexual health problems of the adolescent at the primary care settings remains a challenge by virtue that they are minors. Health professionals sworn by the Hippocratic oath, are confronted with policies, regulations, guidelines, rights issues, religious views, and their own personal beliefs, that can influence the way cases are being managed. On the other hand ignorance of these provisions can lead to ineffective and inappropriate care being administered, or, at its worst scenario, have litigious implications, regardless of how noble the intentions may be. This paper discussed the existing provisions and its implications on the sexual and reproductive health services of the adolescents, and outlined the development of comprehensive guidelines to ensure access to sexual-health friendly adolescent services.

21. MANAGING AN OUTBREAK OF ADENOVIRUS IN A POLICE TRAINING CENTRE IN KUALA LUMPUR, 2011

Rohani Ismail, Othman Warijo, Marina Kamaruddin, Anita Suleiman, Norhaida Ujang

Background
In 5 March 2011, Crisis Preparedness and Response Centre for Kuala Lumpur and Putrajaya Federal Territory Health Department received notifications of 43 cases of Influenza-Like Illness and severe Acute Respiratory Infection among trainee police by Kuala Lumpur Hospital (HKL). The investigation was done to assess the extent of the outbreak, identify the source and risk factors involved and implement control measures.

Methodology
A case was defined as a trainee or worker of Kuala Lumpur Police Training Center (Pulapol KL) presented with fever (oral temperature >37.2 °C), with or without cough, sore throat, runny nose and/or diarrhea from 10th January to 19th March, 2011. Active case detection and reviews of medical records from surrounding clinics and HKL were done to detect cases. Environmental assessment was carried out to determine the extent and risk factor of the outbreak.

Results
A total of 2,758 trainee and trainers were at risk. 851 cases was detected (attack rate 26.8%) with 3 deaths (CFR 0.35%), 98.2% of cases was either inspector or constable trainee and predominantly male (74.0%) aged 21-30 (89.4%) years. All cases presented with fever with 89.2% had cough, sore throat (76.2%) and runny nose (57.6%). Epidemic curve shows single-peak outbreak. Otherwise, analysis shows there was propagation from constable trainee to inspector trainee groups. 74 cases (85.1% of those tested for) was confirmed for adenovirus infection while 51.2% of blood samples were positive for Leptospira. Adenovirus Serotype 7 (China) was identified. Overcrowding of dormitory, physical stress, unhygienic condition and practices of food preparation and contaminated water were found to be the risk factors.
Conclusions
The mixed adenovirus and leptospirosis outbreak was occurred at the beginning of police training. Hygiene practices and relocation of trainee to avoid overcrowding were implemented and successfully controlled the outbreak.

22. PERINATAL LIFE’S CHARACTERISTICS AND ITS RELATION TO PEDIATRIC ASTHMA

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Background
Asthma is one of the most common important chronic diseases of children. Its prevalence has risen sharply over the past 40 years in many parts of the world. The reasons for this dramatic increase in asthma are not yet clear and likely include multiple contributing factors. Intrauterine and infant environment may have increased risk of childhood asthma.

Aim
To investigate the relationship between asthma occurrence perinatal life characteristics and to detect if perinatal life status acts as a risk factors to asthma.

Materials and Methods
Cross-sectional study was conducted in Baghdad (Capital of Iraq) on 2262 primary school children, collected from all over Baghdad. A well constructed standardized questionnaire was distributed be completed by their parents. Our questionnaire concentrated on the possible risk factors for development of asthma, including type of delivery, birth weight, breast feeding and its duration, as well as cigarette smoking exposure.

Results
Our study detected that asthma was significantly higher among children; who born prematurely compared to those who born at a full term of gestation (38.7% vs. 28.1%), having history of LBW than those with no such a history (45.4% v 25.7%), and children with history of intrauterine exposure to Cigarette smoking by their mothers (60.2%) or their father (39.1%) compared to their counter group. Moreover, prematurity, LBW were detected as significant risk factors for having asthma OR= 1.61, OR= 2.41, respectively. On the other hand insignificant association was found between asthma occurrence with the type of delivery whether normal or cesarean section (28.6%, 27% respectively) and history of exclusive breast feeding compared to those with no such history (29.2% v 26.4% respectively).

Conclusion & recommendation
Cigarette smoking, prematurely, LBW act as risk factors for asthma during early childhood. Therefore a good antenatal care and quitting smoking are highly recommended to overcome this problem.

23. 1MALAYSIA CLINICS: COMMUNITY ASSESSMENT

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Introduction
The 1Malaysia Clinics were established in January 2010 to improve accessibility of the urban poor to affordable healthcare facilities. This study was carried out to assess the community’s perception towards these clinics.
Methodology
A total of 332 respondents within 1.5 km of six 1Malaysia Clinics, one each from the north, central, east and south zones of Peninsular Malaysia, Sabah and Sarawak, were included in the study. Face-to-face interviews using a pre-tested structured questionnaire were conducted.

Results
About 75% of respondents were aware of the existence of the 1Malaysia Clinics in their communities. All respondents gave high ‘good’ and ‘very good’ scores for all eleven measures of responsiveness. How they felt about the space in the waiting area and examination room had the highest ‘less than good’ score. The reason for future use of the 1Malaysia Clinics were ‘near’ (53.6%) and ‘cheap’ (15.5%). All respondents felt that they were not discriminated because of sex, age, lack of money, social status, race or skin colour, type of illness or nationality, except for three females who felt they were discriminated because of either gender or age.

Conclusion
The 1Malaysia Clinics were well accepted by the surrounding communities.

24. 1MALAYSIA CLINICS: QUALITATIVE ASSESSMENT OF NEEDS

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Introduction:
The 1Malaysia Clinics were established in January 2010 to improve accessibility of the urban poor to affordable healthcare facilities. This study was carried out to identify possible areas for further improvement of these clinics.

Methodology:
Six 1Malaysia Clinics, one each from the north, central, east and south zones of Peninsular Malaysia, Sabah and Sarawak, were included in the study. We conducted ten group interviews with personnel of these clinics using an interview guideline. Permission was sought to record all discussions. The recordings were transcribed, coded, categorised and divided into themes following a reductionist approach.

Results:
Personnel in all clinics expressed the need to prescribe a wider range of medications, including antibiotics. The Hi DATA software, working hours, size and location of the clinics, as well as in-service training were other areas the personnel sought to be improved.

Conclusion:
The study helped to identify areas of weakness for top management to give priority to in future improvement efforts as well as in establishing new 1Malaysia Clinics.

25. 1 MALAYSIA CLINICS: CLIENTS’ PATTERN AND ASSESSMENT

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Aims
The 1Malaysia Clinics were established in January 2010 to improve accessibility of the urban poor to affordable healthcare facilities. This study was carried out to assess the usage pattern and user’s perception towards these clinics.

Methods
A total of 385 respondents participated in this study. They were patients or persons accompanying patients to six 1Malaysia Clinics, one each that were randomly sampled from the north, central, east and south zones of Peninsular Malaysia, Sabah and Sarawak. Respondents were selected through systematic random sampling. A pre-
tested structured questionnaire was administered through face-to-face interview. Data was analysed using STATA SE 10 with survey weights applied.

Results
All 6 clinics were located in urban areas. Overall response rate was 92.3%. Mean patient age was 28 years with a majority being females and Malays. 18.3% (n=38) were unemployed, and mean personal income of respondents were RM 1214.15. Almost two-third respondents were repeat visitors and majority came to get care for fever and respiratory symptoms. Majority (60.4%) knew they were being treated by assistant medical officers. On their perception of the responsiveness of 1Malaysia Clinics based on 6 domains, travelling times, cleanliness and clear explanation by provider were perceived as good. Space of clinic and waiting time was less than good in certain clinics, like Sarawak with high patient load. There, privacy during consultation was deemed as less than good.

Conclusion
1Malaysia Clinics are being visited by the target population for simple medical care and is generally perceived to be responsive to their needs.

26. PREVALENCE OF HAND ARM VIBRATION SYNDROME (HAVS) AMONG HAND HELD VIBRATING TOOL AUTOMOBILE WORKERS

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Aims
To determine the prevalence Hand Arm Vibration Syndrome (HAVS) and the associated risks among vibrating hand held tool among automobile workers.

Methods
A cross sectional study was conducted among 109 randomly sampled workers in an automobile company who were exposed to hand arm vibration. Data pertaining to socio demographic factors, exposure and associated risks were collected using a structured questionnaire, measurement of the acceleration magnitude of power tools, grip strength and the invasive measurement of vibrotactile perception threshold (VPT) at the fingertips.

Results
The mean age of the workers was 32.9 years ± 6.82 SD and the mean daily vibration exposure for 8-hours (A(8)) was 1.41m/s². Approximately 11% of the workers tools measured above the Action Level (EU Directive 2002). The overall prevalence of HAVS based on reported symptom was 67%, none hand white fingers but complaints of tingling and numbness sensations in their hands were 36.7% and 57.8% respectively. Majority (98.2%) of workers had weak grip strength with positive threshold shift indicating deterioration in finger tactile perception. There were significant associations at 31.5Hz and 125Hz VPT levels with daily vibration exposure (t=3.685, p=0.001) and grip strength (t=2.944, p=0.005). In addition there was significant correlation between daily vibration exposure A(8) and VPT at both frequencies tested which were 31.5Hz (r = 0.417, p = 0.002) and 125Hz (r = 0.480, p = 0.001). Further analysis showed that the model fits the data, (F=10.501, sig-F < 0.05) and 29.6% of the variance in the VPT value was explained by it (R² = 0.296).

Conclusions
The prevalence of HAVS was high even though the mean daily vibration exposure for 8-hours was below the recommended level. The changes in VPT value was associated with daily vibration exposure A(8) and reduction in grip strength among the vibrating hand held tool workers.

Key words: Hand arm vibration, vibrotactile perception threshold, automobile workers
27. MANAGING A MALARIA OUTBREAK IN A PREVIOUSLY NON-MALARIOUS AREA

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Background
In April 2010, Segamat District Health Office (DHO) received 6 notifications of confirmed malaria from a malarial free area. The investigation was done to assess the extent of the outbreak, identify the source and risk factors involved.

Methodology
A case was defined as a person with confirmed microscopic blood for malarial parasite (BFMP) with or without symptoms and signs of malaria from 10th March to 5th June, 2010 residing or working at Felda P. Case finding activities was conducted through contact tracing, active case detection, mass blood survey, passive case detection and reviews of medical records from surrounding clinics. Environmental and entomological assessments were carried out to determine the extent of the outbreak.

Results
A total of 3,168 rubber tappers, logger and settlers in Felda P were at risk. Fifty-five cases (1.6%), one death (CFR 1.8%), male (98.2%) aged 20-40 years. Attack rate among foreigners was 90.7% with Indonesian being the highest (89%). All cases presented with fever, 80% had chills and rigors and seven had splenomegaly. The incidence rate among rubber tappers was highest at 9.1/1000 population. 3,502 BFMP slides taken and 1.54% found positive. Plasmodium vivax was predominant (88.9%). No malaria case was reported from the Malaria Surveillance Programme in the district since 2004. Entomological study showed presence of Anopheles maculatus with peak biting time between 8:00-9:00 pm. Living condition, social and rubber tapping at night were risk factors identified.

Conclusions
The malaria outbreak was introduced when the ecosystem was disturbed during the land clearing and night activities. Even though this is a malaria-free area, vigilant surveillance of vector and human should be emphasized especially when it involves immigrant workers from malaria endemic countries.

28. A STUDY ON MEDICAL CERTIFICATE AMONG HEALTH WORKERS

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Introduction
Staff absenteeism may affect productivity and quality of work in any institutions. Workers abuse medical certificate (MC) by not turning up for work despite being fit. MCs are obtained untruthfully in order to extend the period of public holidays, their annual leave or when their annual leave is used up. The trend of MC taking and factor associated with it is the aim of the study.

Methodology
A cross sectional study was conducted at 6 health clinics, selected randomly in Batu Pahat district from 1st January 2011 to 31st April 2011. Data from each medical certificate issued to staff was input into individual clerking form and analyzed using SPSS version15.0.

Results
34.6% (145) from total 419 staff took MC totaling 217 MCs. 11% staff took MC more than once. 68.7% (149) of MC produced were issued to female staff, 42.9% (93) to staff with working duration of less than 5 years and 36.4% with diagnosis of URTI. Mean duration of MC was 2.01 ± 2.86 days. Mean age of staff with MC was 37.4 ± 10.6 years and the mean duration of work was 13.3 ± 11.7 years. Male staff significantly took longer duration of MC (p= 0.006). 65% (141) MCs were related to weekend, public holiday or annual leave.
Conclusion
Health staffs must be truthful when they took sick leave using MC. They need to appreciate the fact that in their absence their colleague had to double up performance so that services can still be rendered efficiently. Finding from this study will be used to motivate and counsel staff indentified to have problems at work.

29. IMPLEMENTATION AND EVALUATION OF CLINICAL PATHWAYS IN UNIVERSITI KEBANGSAAN MALAYSIA MEDICAL CENTRE

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Aim
Clinical pathway (CP) is a multidisciplinary plan of care based on best clinical practice for specified groups of patients with particular diagnosis designed to minimize delays and optimum resource utilization and to maximize the quality of care.

Methods
UKMMC in collaboration with UNU-IIGH has developed, implemented and evaluated four clinical pathways namely ST Elevation Myocardial Infarction, Chronic Obstructive Pulmonary Diseases, Elective Lower Segment Caesarean Section and Elective Total Knee Replacement. This non randomized single blind controlled study had enrolled patients from January 2008 to December 2008 as a control group (non CP group). The CP has been assigned to all new patients’ admission of the above diseases from year 2009 until 2010.

Results
There was a significant different in average length of stay (ALOS) of COAD CP group (5.85±1.92) compared to the non CP group (7.31±2.75, Z= -3.893, P < 0.001). In STEMI CP, the ALOS prior to implementation of CP is 8.15±2.25 days while in the CP group is 5.52±1.42 (t = -4.85, P<0.001). There was a significant different in ALOS of LSCS CP group 4.04±0.61 compared to the non CP group 4.99±2.94 (Z = -3.221, P<0.001). The non CP group of TKR has shorter ALOS (9.05±3.59) compared to CP group (9.93±4.32,Z = -1.027,P = 0.3). In all the CPs there was no difference between the co-morbidity, readmission and complication rates.

Conclusions
The study concluded that the implementation of CP has a positive impact and therefore, the use of CP in these diseases is recommended in UKMMC and in public hospitals in Malaysia.

Key words: clinical pathway, quality of care, average length of stay

30. A SYSTEMATIC REVIEW OF FRONTIER ANALYSIS ON HOSPITAL EFFICIENCY STUDIES

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Introduction
Many countries in the world currently is facing the increasing demand for health care services and escalation in medical costs. The governments in most countries especially the developing nations had limited ability to respond to such pressure in the health system. Increasing healthcare costs has been one of the most hotly debated policy issues in developed and developing countries in recent years. Hospitals comprise the largest expenditure category of health system of both developed and developing countries.

Objective
To review and describe obtainable literature on hospital efficiency studies using frontier analysis in order to facilitate a general understanding about the application of frontier method in measuring hospital efficiency.
Method
Review of the MedLine and EconLit databases for articles published from 1984-2010, as well as search of the “gray” literature for additional measures. We performed a systematic review for existing efficiency measures. We classified the efficiency measures by perspective, outputs, inputs, methods used, and reporting of scientific soundness.

Result
The majority of the published literature on health care efficiency has been related to the production of hospital care. Of the 347 efficiency measures abstracted, 58 percent measured the efficiency of hospitals. Studies of efficiency among physician were second most common. Other articles focused on the efficiency of nurses, health plans, other providers, or other entities.

31. ATTITUDES TOWARDS SMOKING AND TOBACCO CONTROL AMONG PRE-Clinical MEDICAL STUDENTS IN A MIDDLE INCOME DEVELOPING COUNTRY, MALAYSIA

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Introduction
Medical students’ attitude towards smoking and tobacco control will have vast influence on their future work as doctors. Their attitudes will determine the extent of their involvement in the preventive and intervention programmes. This paper aims to determine the attitudes of preclinical medical students towards smoking and tobacco control measures.

Methods
A cross sectional survey of 310 preclinical medical students at the Faculty of Medicine, University Malaya (UM) were conducted using a pre-tested, self-administered questionnaire; modified based on questionnaire used for health professionals developed by the World Health Organization and International Union against Cancer, American Cancer Society. Smoking refers only to the cigarette smoking.

Results
More than 75% of the students disagreed that “People who smoke cigarettes are popular and glamorous”, “Passive smoking is not dangerous to others” and “It is annoying to be near a smoker when he is smoking”. Over half of the students knew the health effect of smoking. More than 75% agreed to “restrict sales of cigarettes to minors”, “making all public places smoke free” and “ban on advertising of tobacco related merchandise”. A total of 55.5% students agreed that “more prominent health warning messages be put on cigarette packets”. However, 50% disagreed to a doctor’s duty advising smokers to stop smoking; even though 76.8% agreed doctors should not smoke before advising others not to smoke.

Conclusion
Preclinical medical students at UM had positive attitudes towards perceived benefits and health effects of not smoking, as well as regulations and laws on tobacco use. However, they had not grasped their future responsibilities in tobacco control measures. A tobacco-specific education focusing on the tobacco control measures and training in smoking cessation techniques should become a module in the Malaysian medical education curriculum.

Key words: smoking, preclinical medical students, tobacco control measures, Malaysia
32. FOCUSING HEALTH EQUITY: EFFICIENCY AND HEALTH MAXIMIZATION

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Abstract
Over the past fifty years, the world has been growing enormous health achievement in many countries with increased life expectancy at more than fifty percent between 1950 and 2009. With economic growth and technological advances in health sectors, many countries develop both aggregate outcomes in health services and individual wellbeing of people. However, increasing gap in health inequity between countries and within countries asked for further reform in health system to achieve both equity and efficiency. Health is basic need for survival and it is essential for human capability. Capability is not only the prime factor for wellbeing but also the foundation for human development.

Objective
In this article, we will explore, discuss and report about why need and how to maximize health services, equity in health, efficiency and effectiveness.

Search Methodology
This is public health review article exploring health equity and efficiency in maximizing health. Literature review and web browsing covering public health, social science, humanity and development through WHO, pub-med, Medline and google engine have been done and reference as and when required.

Conclusion
We recommend four functional changes in health system to achieve equity and efficiency in maximizing health outputs. They are coverage reform to achieve universal access to health, people-centered service delivery through centering health services around the people needs, public policy change targeting integrated and multi system health planning, and community empowerment in maximizing health outputs.
POSTER PRESENTATIONS
1. STEM CELL THERAPY FOR NEUROLOGICAL DISEASES

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Objective
To determine the safety, efficacy and cost implication of stem cells transplantation for neurological diseases.

Methods
A systematic review was conducted. Literature were searched through electronic databases which included Medline, Cochrane Library, Science Direct and general databases such as Google and Yahoo. Quality of the studies was assessed using Critical Appraisal Checklist Project (CASP) checklists and the data was extracted and summarized in evidence table.

Findings
There was insufficient and inconclusive evidence on the efficacy and safety of stem cell therapy for neurologic diseases in adult. The evidence on stem cells therapy for multiple sclerosis showed that it is still at experimental stage. Similarly, the evidence for stroke and spinal cord injury was insufficient and showed that it was still in the developmental stage. There was no evidence retrieved on motor neuron disease, femoral head necrosis, diabetic foot, lower limb ischaemia, and optic nerve hyperplasia. As for paediatric neurological disorders such as cerebral palsy, autism and spinal muscular atrophy, no evidence could be retrieved on the use of stem cell therapy with regards to its efficacy, safety and cost-effectiveness. Adverse events are common and range from minor to severe adverse events. There was no evidence retrieved on cost effectiveness of stem cells therapy for neurologic diseases.

Conclusion
Stem cell therapy for the neurological diseases is still at developmental stage. More evidence is required before it can be recommended as standard practice.

2. INVENTION OF PRE-TEST QUESTIONNAIRE FOR QUICK REFERENCE: AN EXAMPLE OF IMPLEMENTING GUIDELINE RECOMMENDATION FROM A NATIONAL GUIDELINE ON THE USE OF GROWTH HORMONE (GH) IN ADULTS

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Introduction
A national guideline on the use of GH in adults was developed as the enthusiasm for its use has far exceeded medical evidence, ranging from normal physiological changes (antiaging) to acute physical insults (severe burns) despite the clear indications for use in GH deficient adults. Quick Reference (QR), a pocket guide summary extracting recommendations from the guideline has been developed as the guideline implementation tool. Selecting an appropriate implementation tool that meets the target user needs therefore is crucial in ensuring the guideline recommendation will be utilized and benefits the users.

Methods
An informal discussion with few stakeholders was undertaken to determine expected key requirement in a QR. A questionnaire was invented to pre-test the developed QR and assess its robustness for use among target user. Pre-testing to selected target user was done as part of QR development process before it is being disseminated for nationwide use.
Results
An open ended questionnaire assessing the QR was developed consisting of sets of question on the overall quality arrangement of QR including adequacy of highlighting key messages, appropriate flow and arrangement of the sections, provision of a comprehensible algorithm, applicability in daily clinical practice and rating of the QR. Pre-testing of the QR using this questionnaire is currently ongoing, but the preliminary results showed that adapting the newly developed questionnaire allows customizing of the QR according to target user needs, hence increasing the acceptance and utilization.

Discussion (Conclusion)
QR basing from the above guideline recommendation is widely accepted as a tool to guideline implementation. A newly invented questionnaire to assess the robustness of the QR creates an essential first step in ensuring the recommendations from the guideline being accepted and utilized by the target user.

Key words: pre-test, questionnaire, quick reference, guideline, implementation

3. ASTHMA CONTROL AND ITS DIRECT HEALTHCARE COST: INHALED CORTICOSTEROID/LONG-ACTING β₂-AGONIST (ICS/LABA) VERSUS CONVENTIONAL MAINTENANCE AND RELIEVER THERAPY

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Aims
To compare the inhaler technique, compliance, asthma control, and direct healthcare costs between patients with combined ICS/LABA, and patients with conventional maintenance and reliever therapy.

Method
Patients were included if they were aged ≥ 12 years and has been taking combined ICS/LABA or conventional therapy for at least one month. Patients’ inhaler techniques were assessed using a guide entitled “Handling of Inhaler Devices” developed by the Ministry of Health Malaysia while patients’ compliances were evaluated using Morisky scale. For categorisation of asthma control, Asthma Control Test (ACT) was recruited and the direct healthcare costs were ultimately estimated in accordance to asthma control.

Results
The number of patients with good inhaler technique is significantly higher in ICS/LABA group compared to conventional therapy group (p=0.027). However, there was no significant difference in terms of compliance between the two therapeutic options (p=0.144). Despite relatively more patients with conventional therapy were having uncontrolled asthma compared to those with ICS/LABA [n=12(43%) vs. n=5(23%)], the overall outcome of asthma control between conventional therapy and ICS/LABs groups was not significantly different [partially controlled: n=11(39%) vs. n=11(50%); well controlled: n=5(18%) vs. n=6(27%)]. Likewise, the difference in mean annual healthcare cost per patient between conventional therapy and ICS/LABA groups was not significant (RM553.68 vs. RM448.79; p=0.522).

Conclusions
In HoSHAS, patients with ICS/LABA tend to demonstrate better inhaler technique compared to conventional group. Nevertheless, no significant differences were observed in terms of compliance, asthma control, and direct healthcare cost between the two groups.

Key words: asthma, ICS/LABA, conventional therapy, asthma control test, healthcare costs
4. STUDY OF MEASURING PATIENT SATISFACTION ON MANUFACTURING OF COMPLETE DENTURE IN GOVERNMENT CLINIC AT TEMERLOH AND BERA AND THE INFLUENCE FACTORS

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Introduction
Increasing demand of full denture consistent increase of elderly population in Malaysia. Problem that arise of dissatisfaction on manufacturing full denture not only disappointing patient but also dental practitioner.

Objective
The purpose of this study to describe sosiodemografi among the respondents. Then study the factors that influence patients satisfaction on their full denture manufactured Government Clinic at Temerloh & Bera.

Methodology
This is a cross-sectional study. 100 patients who completed treatment of full denture were selected in this study. Questionnaire distributed which include patients sociodemografi data and questionnaire regarding some factor than influence patients toward their full denture. SPSS version 17 was used to analyzed the data.

Results
85% respondents were satisfied of their full denture. Factors affecting patient’s satisfaction is the gender, comfort factor, pain, esthetics, retention, mastication and speech ( P< 0,001) post operative instruction also relate to patients’ satisfaction (p<0.034). While the other factors not influence patients’ satisfaction were age, education level, monthly income, pre-operative instruction, and dietary advice after issuing the complete denture.

Conclusion
Good quality of complete denture is affecting the level of patient satisfaction including gender and post-operative instruction.

Keywords: patient satisfaction, complete denture

5. AWARENESS AND PRACTICES ON SUCCESSFUL AGEING AMONG THE COMMUNITY OF SECTION 19, SHAH ALAM.


Discipline of Population Health and Preventive Medicine (PHPM), Faculty of Medicine, Universiti Teknologi MARA, Selayang.

Aim
To determine the level of awareness and practices on successful ageing in the Malaysian community.

Methods
A cross sectional survey was done from November 9th through 12th, 2010 at Seksyen 19, Shah Alam. Houses were stratified according to the types and simple random sampling was employed to select the respondents. A structured close ended interviewer guided questionnaire in dual language was used to collect the data. Descriptive statistics was produced, t-test and ANOVA were used to compare mean difference.

Results
A total of 278 respondents with age ranging from 18 to 82 years (Median= 31.50; IQR=23) were interviewed in which 40.65% were males and 59.35% were females. Younger age group reported significantly better awareness (p<0.001). There were also significant difference found on practices of successful ageing between agegroups (p< 0.001) and between those with and without illness (p=0.027). However, there was a very weak correlation between awareness and practices on successful ageing with r² = 0.021.
Conclusions:
Younger age groups have better awareness level. The level of awareness is directly proportionate with practices on successful ageing. People with illness have better practices on successful ageing compared to those without illness. Awareness does not correlate well with practice on successful ageing.

Keywords: awareness, practices, successful ageing, community

6. HEALTHY LIFESTYLE PRACTICES AND EFFECT OF AGEING ON PHYSICAL FUNCTIONS AMONG MEMBERS OF KELAB WARGA EMAS IN SECTION 24, SHAH ALAM.


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Aim
To determine the level of healthy lifestyle practices and effect of ageing on physical functions among the members of Kelab Warga Emas Shah Alam.

Methods
A cross-sectional survey was done from September 21st through 24th, 2010 among members of Kelab Warga Emas at Sekseny 24, Shah Alam. Convenient sampling was employed to select the respondents from the member’s namelist excluding those with physical disability. A structured close ended interviewer guided questionnaire in dual language was used to collect the data.

Results
A total of 268 respondents with age ranging from 54 to 82 years (Mean age = 65.97 ± 5.38 years) were interviewed in which 64.9% were males and 35.1% were females. 85.4% were non-smokers. 83.6% reported actively doing brisk walking; 65.3% in other form of exercise; 48.1% in gardening; 32.5% were active in sports; and 11.5% in swimming.
Arthritis seem to be the most debilitating illness that prevents or limits physical activities among the elderly (p=0.008; mean rank=160.74) compared to other chronic diseases. Female have poorer physical function than male (p=0.007).

Conclusions
Healthy lifestyle are still practiced by the elderly community in Malaysia despite chronic diseases they have, as long as they are not limited by the disease and have good physical function. Effort must be put to promote better physical function in elderly females.

Key words: healthy lifestyle, practices, physical function, ageing, community

7. KNOWLEDGE OF HIV TRANSMISSION AMONG MALAYSIANS: A POPULATION BASED STUDY

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Introduction
Public knowledge of HIV transmission is crucial in the strategy for effective prevention and control of HIV/AIDS. Global data on HIV knowledge indicates that 40% of population aged 15-24 years had accurate knowledge about HIV transmission (UNGASS Indicator 13).

Aim
To determine the level of knowledge and associated sociodemographic factors on the risk of HIV sexual transmission in the youth and adult Malaysian population.
Methods
A nationwide community based survey was conducted in 2006 among respondents aged ≥ 13 years with a self administered questionnaire. Complex sample module was used to analyze the data using SPSS Version 17 Software. Logistic regression and multivariate analysis was conducted.

Results
More than half of the respondents (54.2%) were aged between 20 to 44 years. Majority of them were Malaysians (95.7%), females (53.3%), Malays (59.6%), urban background (62.0%), completed secondary education (57.7%), married (58.9%), and earned RM 1000 to < RM 4999 (60.2%). The knowledge variables were if people could protect themselves from HIV by abstaining from sex and by the correct use of condom. Poor knowledge was noted among 72.4% [95% CI 71.6 - 73.1] respondents, extremes of age, 13-14 years [91.36% (CI 89.9 - 92.5)] and ≥ 80 years [93% (63.0 - 99.1)], females [73.5% (72.6-74.3)], Indians [(80.3 % (78.1 -82.7)], divorcees [80.2% (CI 74.9 -84.6)], no education [86.0% (CI 79.4 - 90.7)], urban population [71.2% (70.2 - 72.1)] and household income level <RM 400 [81.1% (78.2 - 83.7)]. The variables studied were found to be significantly associated with poor knowledge. However, in the multivariate model, age, sex, ethnicity, educational level, marital status and household income were found to be significant. (Adjusted OR 1.1 - 4.1 (95% CI 1.0 -5.2).

Conclusion
The study has highlighted high risk populations with poor knowledge on sexual transmission of HIV/AIDS. A multipronged public health approach is required to target this subpopulations.

Key words: HIV/AIDS sexual transmission, knowledge, sociodemography, Malaysian population.

8. THE PREVALENCE OF DEPRESSION AND ASSOCIATED FACTORS AMONG PROSTATE CANCER PATIENTS IN UNIVERSITY MALAYA MEDICAL CENTRE (UMMC), KUALA LUMPUR

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Background
Prostate cancer is the second most common cancer in men and the second leading cause of cancer death in man. Prostate cancer patients experience levels of depression that are elevated above those of their fellows, with a greater incidence of clinically significant depression overall than men without prostate cancer. However, the mean depression among prostate cancer clinically reduced from 24% to 12.5% from the time of diagnosis to the time of survey with the prominent changes being associated with reductions in psychomotor, agitation, weakness, fatigue and pessimism.

Objectives
The aim of this study is to determine the prevalence of depression among the prostate cancer patients in University Malaya Medical Centre (UMMC). We also aim to ascertain the associated factors between socio-demographic, past medical history and cancer status that contribute to the depression among this population.

Methods
A hospital based, cross sectional study using Depression, Anxiety and Stress Scale (DASS) score was conducted at the Surgical Clinic, UMMC over a period of 6 months. The urologist, medical officer and staff nurses were involved in recruiting the patients while the principal investigator conducted the interview. Universal sampling was used in this study.

Results
A total of 109 patients were recruited. The mean age of the patients was 71.77 ± 6.74 years old and the median life in cancer was 2.28 (3.79) years. The prevalence of depression among prostate cancer patient was 10.1% (95%CI: 4%-16%). The depression rating was: Mild depression (5.5%), moderate depression (3.7%) and severe depression (0.9%). The only significant associated factors that contributed to the depression among this population
was only history of prostatectomy (adj. OR: 8.23 (95%CI: 1.57, 43.03, p=0.013) and the total quality of life (SF-36) (adj. OR: 0.94 (95% CI: 0.90, 0.98, p=0.003). The ROC curve was 0.82 (95%CI: 0.66, 0.98, p<0.001)

Conclusion:
This study has shown that the prevalence of depression among prostate cancer was relatively low. Some non-pharmacological treatment can be applied to low the level of depression among this population.

9. P KNOWLESI: SPESIS MALARIA KE 5 DI LIPIS?

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Pejabat Kesihatan Daerah Lipis

Pendahuluan

Tujuan
Satu kajian irisan lintang dijalankan dengan mengambil kesemua kes yang disahkan P Knowlesi melalui PCR oleh IMR tahun 2007-2010 di daerah Lipis bagi mengkaji epidemiologi jangkitan dan mencadangkan tindakan sesuai bagi memantapkan aktiviti kawalan dan pencegahan P Knowlesi.

Hasil kajian
Sebanyak 95 (84.6%) kes disahkan P Knowlesi dari 112 kes P Malariae. Ianya mula meningkat dari 55.0% (2007) kepada 64.9%(2010) dan P Falciparum serta P Vivax pula menurun secara drastik. Lebih dari 95% adalah kes tempatan dan berlaku di kawasan bebas malaria (>90%) dan kesemua mukim (11) telah pernah melaporkan kes. Sekitar rumah/kebun (64.0-93.0%) merupakan tempat jangkitan utama. Lebih 85% kes dikesan melalui slaid PCD dan mengambil rawatan sendiri diperkingat awal onset (45.0-55.0%). Kesemua kes sembuh dengan rawatan tanpa komplikasi.

Kesimpulan
walaupun P Knowlesi semakin meningkat tetapi ia respon dengan rawatan sedia ada tanpa komplikasi dan penggunaan alat perlindungan diri semasa melakukan aktiviti di sekitar rumah/kebun kemungkinan mampu melindungi diri dari jangkitan malaria ini.

10. OVERWEIGHT AND OBESITY AMONG YOUTH IN MALAYSIA

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Introduction:
Overweight and obesity is a known risk factor for cardiovascular disease. High prevalence among youth is associated with higher burden for the country. This article aims to describe the association between overweight and obesity, and certain risk factors.

Methods:
This study is a nation-wide cross-sectional study using secondary data from Adolescent Health Screening Form (BSSK/R/1/2008). Data from randomly selected participants of a national program aged between 18 and 25 years was analyzed using SPSS. Overweight and obesity is defined as Body Mass Index of 25 and above.
Results
A total of 16985 data was analysed, with almost equal distribution by sex. The prevalence of overweight and obese was 17.7%. The problem was significantly higher among Indian, and youths who did not exercise and also associated with family history of obesity and cardiovascular diseases such as hypertension, diabetes, and heart problems. Multivariate analysis using logistic regression noted that the problem was higher among youth aged 20 to 25 years compared to 18 to 20 years old (Adjusted Odds Ratio: 1.83; 95% Confidence Interval:1.35-2.49), higher among males (Adj OR: 1.12; 95% CI: 1.01-1.25) and higher among youth who did not exercise (Adj OR: 1.18; 95% CI: 1.07-1.31), higher among youth with family history of obesity (Adj OR: 2.37; 95% CI: 2.00-2.81) and higher among youth with family history of diabetes (Adj OR: 1.42; 95% CI: 1.25-1.62) while controlling for ethnicity and education level.

Conclusion
The prevalence of overweight and obesity was significantly associated with older youths who were male, did not exercise, and have family history of obesity and diabetes.

Key words: Healthy lifestyle, practices, physical function, ageing, community

11. HIV TESTING PRACTICE AMONG MALAYSIANS: A POPULATION BASED STUDY

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Introduction
Global coverage of HIV testing and counseling remains low. This is a critical entry point to life-sustaining care for people with HIV, and essential for prevention of vertical HIV transmission.

Aim
To determine the prevalence of HIV testing practice and associated sociodemographic factors in the adult Malaysian population.

Methods
A nationwide community based survey was conducted in 2006 among respondents aged ≥ 13 years with a self administered questionnaire. Complex sample module was used to analyze the data using SPSS Version 17 SOFTWARE. Logistic regression and multivariate analysis was conducted.

Results
More than half of the respondents (54.2%) were aged 20 to 44 years. Majority were Malaysians (95.7%), females (53.3%) Malays (59.6%), urban background (62.0%), completed secondary education (57.7%), married (58.9%), and earned RM 1000 to < RM 4999 (60.2%). From the 24,858 respondents, only 11.9% (95% CI 11.4% -12.4%) had undergone HIV testing more than 1 year ago [61.6%,95% CI 59.6%- 63.6%]. Highest HIV testing practice was noted in 25-29 years [23.4%( 95% CI 21.7-25.1%), females [13.3% (12.6-13.9%)], Chinese [16.6 % ( 95% CI 15.3-18.0%)], Buddhists, [16.2 % (95CI 14.8-17.7%)], tertiary educated [24.0% (95CI 22.4 - 25.8%)], married [17.4% (95CI 16.6 - 18.3%)], household income >RM5000, [20.0% (95CI 18.3 -22.0%)] and urban locality [13.2%(95CI 12.5 -13.9%)]. All the 8 social economic variables studied were found to be significantly associated with HIV testing practice. In the multivariate model, age, sex, ethnicity, religion, educational level, marital status, household income and locality were found to be significant. (Adjusted OR 1.0- 4.5 (95% CI 0.7-5.4).

Discussion & Conclusion
Majority of people are still unaware of their HIV status. HIV testing services need to be expanded in clinical settings and through outreach programmes for most at risk populations.

Key words: HIV testing, sociodemography, Malaysian population
12. KAJIAN KELANGSUNGAN COMBI DENGGI DI SARAWAK

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Objektif
Kajian bertujuan mengkaji faktor-faktor yang menyumbang kepada kelangsungan aktiviti COMBI denggi dalam masyarakat.

Rekabentuk Kajian

Hasil Kajian
Antara tema-tema dikenalpasti ialah kefahaman rendah tentang COMBI, perpindahan pemimpin dan ahli, penglibatan masyarakat yang kurang aktif, pemantauan kurang, tiada dana khusus, kurangnya publisiti dan kurang melihat faedah COMBI.

Kesimpulan

13. KNOWLEDGE REGARDING PANDEMIC (H1N1) 2009 INFECTION AND ITS ASSOCIATED SOCIO-DEMOGRAPHIC FACTORS IN RURAL COMMUNITIES

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Background
Among the challenges in a pandemic situation is handling risk communication to the public. Understanding the factors associated with knowledge will improve communication strategies to curb pandemic situation later.

Aim:
To determine the level of knowledge regarding the recent pandemic (H1N1) 2009 and its associations with socio-demographic factors.

Methods
A cross-sectional study involving clients who were 18 years old and above (convenient sampling), attending selected health clinics in rural areas in Teluk Intan and Sabak Bernam. Data were collected from January to April 2010, using pre-tested questionnaire. The 8-items knowledge question had Cronbach’s alpha of 0.706. Non-parametric statistical analyses were performed using SPSS version 16 with significance level set at p<0.05.

Results
A total of 1323 respondents with median age 33 (mean 37.1 ± 14.8) years old, predominantly females (61.3%) and Malays (85.4%). The median and mean score for knowledge were 7.0 and 6.8±1.6. There was negative significant relationship between knowledge score and age (R= -0.195). The knowledge scores were lower in older age, never
attended school, males, widows / divorcees, Indian and those who work in agriculture field as compared to other groups in each socio-demography factors.

Conclusions:
The study identifies vulnerable segment in the rural communities to be targeted for educational intervention particularly if the similar situation arises

14. ENVIRONMENTAL TOBACCO SMOKE AS RISK FACTOR FOR ASTHMA IN PERLIS

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Aim
A matched case control study was conducted in Perlis to identify exposure to micro-environments which might be related to asthma between January 1, 2008 and April 30, 2008.

Methodology
Cases were among those with asthma who attended the selected health clinics and the controls were those without asthma. ETS exposures at five microenvironments were identified in the study. A total of 304 patients were recruited (ratio case: control = 1:1). Data was analysed using paired t-test, Wilcoxon signed rank test, McNemar test and Conditional Logistic Regression.

Results
Those who were exposed at own home and others’ houses had higher risk for asthma than those who were not (OR=4.3, 95%CI 1.5-12; OR=3.3, 95%CI 1.5-7.1, respectively). Those who traveled by car with smokers also have higher risk of asthma (OR=3.1, 95%CI 1.2-8.0). Risk factors which were found to be significantly related to asthma were allowing people smoking at home, the presence of people smoking at home and living with smoker, being able to smell cigarette smoke at other houses and in a car during a journey and at public places. Exposure to ETS at work place was only significant if one could smell the smoke.

Conclusion:
The study had shown that the exposure to ETS at different micro-environments has significant association with asthma in Perlis. Thus, it is suggested that patients with asthma and their family are advised to quit smoking and the treating doctor should include a referral to the quit smoking clinic.

15. KAJIAN PREVALEN DAN FAKTOR RISIKO KARDIOVASKULAR DI KALANGAN KAKITANGAN KESIHATAN DI DAERAH BERA, PAHANG

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Pengenalan
Penyakit jantung adalah pembunuh nombor satu di Malaysia dan dipengaruhi oleh paras kolesterol yang tinggi, diabetes, hipertensi, obesiti, merokok, aktiviti fizikal, faktor jantina, sejarah keluarga dan umur.

Objektif
Mengenal pasti prevalen dan faktor risiko penyakit kardiovaskular di kalangan kakitangan kesihatan di daerah Bera.

Metadologi
Tempoh kajian bermula Mac hingga Jun 2009 dan sampel adalah universal. Setiap individu melalui ujian risiko kardiovaskular (Framingham Skor) yang melibatkan faktor umur, merokok, jantina, tekanan darah, paras kolesterol darah. Faktor lain termasuk sejarah keluarga, obesiti dan paras gula.
Keputusan
Daripada 281 responden (83.9%), median umur ialah 30 tahun. 92.2% responden merupakan golongan berisiko rendah, 5.7% berisiko sederhana dan 2.1% berisiko tinggi untuk penyakit kardiovaskular dalam tempoh 10 tahun akan datang berdasarkan skor Ujian Framingham. Golongan lelaki (> 55 tahun) merupakan kumpulan yang berisiko rendah (50%, p<0.05) berbanding wanita (<45 tahun) merupakan golongan berisiko sederhana (50%, p<0.05). Kumpulan berisiko tinggi untuk mendapat penyakit kardiovaskular seperti merokok seramai 4.3% (p<0.018), pertalian sejarah keluarga 7.1% (p<0.034) dan hipertensi 14.6% (p<0.05). Median paras LDL bagi golongan yang berisiko tinggi untuk mendapat penyakit kardiovaskular adalah 1.67 (p< 0.05) dan bagi paras Trigliseride adalah 1.50 (p<0.05).

Rumusan
Majoriti kakitangan kesihatan di daerah Bera merupakan golongan berisiko rendah untuk penyakit kardiovaskular untuk tempoh 10 tahun akan datang berdasarkan skor Ujian Framingham.

Kata kunci: kardiovaskular, Framingham, LDL, Trigliseride

16. ANTI-SOCIAL BEHAVIOURS AMONG YOUTH IN MALAYSIA

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Introduction
A Study among adolescents in rural land development scheme in Peninsular Malaysia, noted a prevalence of 14.4% for bullying (Hidayah et al, 2003), while another study among secondary school children in Negeri Sembilan noted a prevalence of 27.9% for physical fight (Lee et al, 2007).

Aim
To describe anti social behaviour among youth in Malaysia.

Method
This study was a cross-sectional study using secondary data from Adolescent Health Screening Form (BSSK/R/1/2008). Data from randomly selected participants of a national program aged between 18 and 25 years was analyzed using SPSS. Anti-social behaviour is defined as being involved in bullying and fighting.

Results
A total of 21279 data was analyzed, with almost equal distribution by sex. Antisocial behavior was noted among some of the adolescents, where 6.2% revealed that they had been involved in bullying and 13.2% admitted of involvement in fights. Multivariate analysis using logistic regression noted that anti-social behavior was higher among those aged 18 to 20 compared to 21 to 25 years old (Adjusted Odds Ratio: 2.10;95% CI:1.45-3.04), more among other ethnics (Adj OR: 1.10;95% CI:0.96-1.32), higher among youth with anti-social behavior (Adj OR: 3.84;95% CI:3.40-4.33) more among youth with sexual reproductive health problems (Adj OR: 2.52;95% CI:1.10-3.19), higher among youth with substance abuse (Adj OR: 3.84;95% CI:3.40-4.32), lower among youth who are religious (Adj OR: 1.36;95% CI:1.10-1.67), higher among youth with suicidal tendencies (Adj OR: 1.36;95% CI: 1.15-1.60), higher among youth with anxiety (Adj OR: 1.48;95% CI: 1.30-1.69), more among youth with depression (Adj OR: 1.64;95% CI: 1.38-1.96).

Conclusion
The prevalence of anti-social behavior was higher among younger youth who were males and significantly associated with substance use, reproductive health problem, not religious and depressed.
17. MENTAL HEALTH PROBLEM AMONG YOUTH IN MALAYSIA

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Introduction
Mental illness is recognized as one of a major cause of morbidity among youth in the community. This article aims to describe mental health problem among youth in Malaysia.

Methods
This study is a nation-wide cross-sectional study using secondary data from Adolescent Health Screening Form (BSSK/R/1/2008). Data from randomly selected participants of a national program aged between 18 and 25 years was analyzed using SPSS. Mental health problem is defined as having either depression, anxiety or suicidal ideation.

Results:
A total of 20732 data was analysed, with almost equal distribution by sex. Mental health problem was noted among 27.5\% (5697) of youth; with 9.8\% (2007) depression, 20.7\% (4345) anxiety and 11.8\% (2442) confessed of having suicidal ideation. By socio demography, mental health problem was noted as higher among females (73\%). There are also relationship between mental health problem and anti-social behavior, substances used, history of sexual and physical abuses, sexual-reproductive problems, religiosity and family connectedness. Multivariate analysis using logistic regression noted that mental health problem among youth was two times higher among females, 21\% lower among Indians compared to Malays, two times higher among youth with anti-social behavior, two times higher among youth with reproductive health problems, 2.5 times higher among youth with history of sexual and physical abuse, 31\% higher among youth with substances used, 50\% higher among youth who lack of family connectedness, 40\% higher among youth who are ‘not religious’ while controlling for age and education level.

Conclusion
The prevalence of mental health problem was high among females and significantly associated with anti-social behavior, reproductive health problems, history of physical and sexual abuse, substances used, ‘not religious’ and lack of family connectedness.

18. PELAKSANAAN PROGRAM ‘INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS’ DAN IMPAKNYA DI NEGERI PAHANG

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Pendahuluan

OBJEKTIF
Meningkatkan pengetahuan dan kemahiran anggota paramedik terutama jururawat masyarakat untuk merawat pesakit kanak-kanak dengan segera dan tepat bagi mengelakkan komplikasi dan kematian.

Kaedah
Jabatan telah mengenalpasti klinik-klinik di kawasan pendalaman khususnya kawasan Orang Asli dan klinik bergerak untuk melaksanakan program IMCI. Semua anggota yang terpilih perlu menjalani kursus selama 11 hari dengan berpandukan 7 modul dan 1 ‘chart booklet’ meliputi tutorial dan praktikal (in-patient and out-patient). Hanya anggota yang telah lulus kursus ini boleh melaksanakan program IMCI. Mereka dibenarkan merawat kanak-kanak yang mengidap penyakit jangkitan respiratori akut, ciritis, demam malaria dan kekurangan zat makanan. Pemantauan program dilakukan melalui penyeliaan dan reten bulanan.
Keputusan
Seramai 173 orang telah dilatih sebagai pelaksana dimana majoriti (64.7%) adalah terdiri daripada jururawat masyarakat. Seramai 27 orang telah dilatih sebagai fasilitator yang terdiri daripada pakar perubatan keluarga, pegawai perubatan, penolong pegawai perubatan dan jururawat. Program ini telah dilaksanakan di kawasan pendalaman melibatkan 33 buah klinik desa, 18 buah klinik kesihatan, 2 buah klinik kesihatan ibu dan anak serta 12 buah pasukan klinik bergerak. Seramai 8 orang bayi berumur bawah 2 bulan (sick young infant) dan 2117 orang kanak-kanak berumur 2 bulan hingga bawah 5 tahun (sick child) telah dirawat oleh anggota paramedik program IMCI pada tahun 2010. Kadar kematian bayi dan kanak-kanak bawah 5 tahun di Negeri Pahang telah menunjukkan penurunan sejak program ini dilaksanakan.

Kesimpulan
Pelaksanaan program IMCI telah berjaya mengurangkan kematian bayi dan kanak-kanak bawah 5 tahun di Negeri Pahang.

19. QUALITY ASSURANCE PROGRAMME: WHERE ARE WE?

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Introduction
The National Quality Assurance Programme in Malaysia was established in 1985 with the intention to improve the quality, efficiency and effectiveness of the delivery of health services. This study was carried out to explore the gap and areas of improvement in the implementation of the program and to identify factors contributing to non-closing QA/QI loop.

Methodology
Focus group discussions were conducted among mid-level managers from 14 states in Phase 1. Following that, face-to-face interview with selected top level managers from MOH and state level were carried out using an interview guideline in Phase 2. Permission was sought to record all discussions. The recordings were transcribed, coded, categorised and divided into themes.

Results
Findings from Phase 1 among others showed variations in structure for quality, problems in indicators and reporting mechanism. Nine areas of concerns were discussed in Phase 2 including views on QA/QI activities, structure and Term of Reference, leadership and role and responsibility within the players that affect the success of the programme.

Conclusion
The study helped to identify areas of improvement and recommend strategies to strengthen the current implementation of the programme.

20. AN OUTBREAK OF TYPHOID FEVER IN MUKIM SG. KARANG, KUANTAN

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Pejabat Kesihatan Kuantan Pahang

Background and objectives
Outbreak of typhoid fever has been reported in Mukim Sg. Karang Kuantan. We investigated an outbreak of typhoid fever in industrial and construction site in Mukim Sg. Karang.

Method
The information of the outbreak was collected and describe in time, place and person characteristics to arrive at aetiological hypothesis.
Results
In early March till end of April 2011 a total of 27 male construction workers and industrial laborers were confirmed for blood and/or stool C&S culture for S.typhi. The cases were from 10 different industrial or construction sites. A case control study suggested that consuming foods/drinks from mobile Cambodian motorcycle food seller in a higher likelihood for the disease. The spouse of the mobile food seller was IgG and IgA positive by Typhidot.

Conclusion
Consuming foods/drinks from a mobile Cambodian food seller was found significantly associated with the disease. Preventive and control measure undertaken helped in terminating the outbreak. We recommend having a vaccination programmed and medical check up for all mobile food handlers.

21. ROVE BEETLE (STAPHYLINIDAE) PUSTULAR CONTACT DERMATITIS AMONG STUDENTS OF MARA POLY-TECH COLLEGE, KUANTAN

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An outbreak of pustular contact Paederus dermatitis has been reported among college students of MARA Poly-Tech College in Kuantan early April, 2010. Field investigation was carried out to ascertain the cause, entomological and environmental situation in view controlling the rove beetle population below nuisance threshold. This outbreak occurred among 15 college female students boarding in hostels. The first case was reported in late March, 2010 and within one (1) week, followed by other similar cases. Itchiness was the first presenting symptoms followed by inflammation of the skin. All cases received out-patient treatment. There were 11 blocks of hostel in the college and all were equipped with florescent lighting. However cases only reported from two (2) blocks (Block T and Block U) which were located next to grassland and swamp. Rove beetle or its scientific name Paederus fuscipes Curtis was easily found on grassland, bathrooms, washing rooms, hostel rooms, corridors, water outlets, cracks and crevices in walls. P. fuscipes Curtis excretes pederin which caused irritation to the skin. Several control measures had been taken accordingly to suppress the rove beetle (Staphylinidae) population below the nuisance threshold. Integrated approach to control the rove beetle (Staphylinidae) P. fuscipes Curtis, including space spraying, spot spraying, insecticide residual spray, impregnated treated cloth and installing double-layered mosquito netting as well health education among residents.

22. DENGUE FEVER IN PUTRAJAYA IN 2010

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A descriptive study to describe a dengue situation in the district of Putrajaya was done in the year 2010. The information was obtained from Putrajaya Health Office. All data was collected and collated into Excel 8 and analysed using the same software.

There were 100 cases with one death registered in Putrajaya Health Office in 2010 as compared to 271 cases without any death in 2009 and this showed a 63% reduction in the number of cases in 2010. Dengue infection was commonly seen among adult aged 21-60 years old (70%) while the rest of the cases were in the school age group (7-17 years old). Almost of the cases (96%) were Malays and this is reflected in the distribution of the races in Putrajaya which is majority Malays.

Most of the cases (93%) were notified about 5.4 days from the onset of fever. Only 7% were notified within 3 days. All of the dengue cases reported was based on the classical clinical features of dengue fever. About 65% were IgM positive for dengue.

A total of 12 clusters (10 localities) involving 34 epidemiologically linked cases were identified in year 2010 as compared to 41 clusters (25 localities) involving 181 cases in year 2009, a reduction of 70.7% for the year 2010. The median number of cases in each cluster was two (range 2-6) and the median duration of transmission was 14 days (range 14-27 days). A maximum of three clusters occurred repeatedly in one locality while others with only one cluster.
23. RISK FACTORS FOR TYPHOID OUTBREAK IN SUNGAI CONGKAK RECREATIONAL PARK, SELANGOR 2009

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Background
Typhoid fever continues to pose public health problems in Selangor where cases were found to be sporadic with occasional outbreaks were reported. In February 2009, Hospital Tengku Ampuan Rahimah (HTAR) reported a cluster of typhoid fever among 4 children in pediatric ward. We investigated to identify source of the outbreak, risk factors for the infection and to propose control measures.

Methods
We conducted case-control study to identify the risk factors for the outbreak. A case is defined as a person with s. typhi isolated from blood, urine or stool and had visited Sungai Congkak recreational park on 27th January 2010. Controls were healthy household members of cases who have similar exposure but no isolation of s. typhi in blood, urine or stool. Cases were identified from routine surveillance system, medical record searching from the nearest clinic and contact tracing other than family members including food handlers and construction workers in the recreational park. Immediate control measures were initiated and followed up.

Results
Twelve (12) cases were identified from routine surveillance with 75 household controls. Case control study showed cases were 17 times more likely to be 12 years or younger (95% CI: 2.10, 137.86) and 13 times more likely to have ingested river water accidentally during swimming (95% CI: 3.07, 58.71). River water was found contaminated with sewage disposal from two public toilets which effluent grew salmonella spp.

Conclusion
Typhoid outbreak in Sungai Congkak recreational park resulted from contaminated river water due to poor sanitation. Children and accidental river water ingestion were highly susceptible. Immediate closure and upgrading of public toilet has stopped the outbreak.

Key words: Typhoid fever, case-control, risk factor

24. MATERNAL KNOWLEDGE AND PERCEPTION ON NEONATAL CARE AMONG ANTENATAL MOTHERS

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Purpose
A hospital survey was conducted to assess knowledge and perceptions regarding care for their new babies among antenatal mothers in UKMMC

Design
A cross sectional survey was conducted.

Methods
A structured questionnaire was used to collect information from the mothers who were interviewed during their antenatal visit. Descriptive statistics were used to summarize the data.

Results
A response rate of 86.2% (N = 355) was achieved. There were 52.7% (N =187) of the respondents scored good knowledge level. Prevalence of positive perception was 59.2% (N =210). Factors shown significantly associated
were: lower among the primigravida, attended health education and counseling class, strong family support and interest in obtaining knowledge through mass media or internet surf.

Conclusion
The results of this study suggest that efforts should be made to raise community awareness regarding neonatal morbidity, the importance of seeking care from trained personnel and the availability of health education services for these conditions.

25. PACIFIER AND ITS ASSOCIATION WITH EARLY BREAST FEEDING CESSATION AND INFECTION IN CHILDREN LESS THAN 2 YEARS OLD: FINDINGS FROM NHMS 2006

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Introduction
Pacifier has been perhaps the most convenient companion of babies in the world. While pacifiers are soothing to baby, it also has disadvantages. Extensive literature review showed that pacifier usage is associated with early cessation of breast feeding, as well as respiratory and gastrointestinal infection.

In view of the above issues, data relating to pacifier use among Malaysian of 2 years old and below from National Health and Morbidity Survey (NHMS) 2006 was reviewed and analyzed.

Material and Method
This study was a part of the bigger study of NHMS 2006. Therefore, this survey was conducted as per described in NHMS 2006 report. Complex data analysis was done using SPSS ver. 15.0.

Results
There were 2166 respondents for this study. The prevalence of pacifier use was 32.2%. Chinese children reported significantly higher usage of pacifier. Those resided in rural area reported significantly higher usage than those in the urban area. The prevalence of those who stop breast feeding among pacifier user at 6 months of age was 34% with CI (27.9,42.0). The crude odd ratio (OR) for cessation of breast feeding with pacifier usage at 6 months of age was 0.87. There were no significant association between usage of pacifier with acute respiratory infection and gastrointestinal infection.

Conclusion
Although these finding does not point toward the listed disadvantages of pacifier usage, it is recommended that pacifier use be initiated after breastfeeding is well established, as suggested by the American Academy of Pediatrics (AAP).


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Aims
Data of stillbirth (SB) and neonatal deaths (ND) are routinely collected in tertiary hospital in Malaysia. The objective of this study is to analyze the trend of SB and ND in UKMMC from 2004 until 2010.

Methods
A retrospective cross-sectional study was conducted by analyzing The Rapid Reporting Format of SB and ND.
Results
The total deliveries in the seven year period were 45,277. The total live births were 44,994 and the total cases of SB and ND were 526. Stillbirth consisted of 54% of total deaths and 46% of the deaths were made up from neonatal deaths. The major cause of death in SB was normally formed macerated stillbirths (53.2%). The perinatal, stillbirths and neonatal mortality rates in UKMMC were higher than the Annual Report of Stillbirth and Neonatal Deaths in Malaysia and from the Department of Statistics Malaysia. In the analysis, there was an improvement in the perinatal, stillbirth and neonatal mortality rates in year 2006 but the rates seemed to be plateaued after year 2008.

Conclusion
As maternal health improves, there is generally a greater reduction in neonatal deaths, increasing the proportion of perinatal deaths attributed to stillbirth. Further data collection is needed to analyse the ongoing trend of SB and ND.

27. FAKTOR-FAKTOR YANG MEMPENGARUHI KEJADIAN LAHIR MATI MASERASI NORMAL: SUATU KAJIAN KERATAN RENTAS DI PUSAT PERUBATAN UNIVERSITI KEBANGSAAN MALAYSIA

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Objektif
Dari perspektif kesihatan masyarakat terlihat perlunya untuk menyelidiki faktor-faktor penyebab kejadian lahir mati maserasi normal. Ini kerana ia merupakan indikator kesihatan yang penting dalam mencapai keberhasilan program dan kualiti penjagaan kesihatan ibu.

Metodologi
Kajian keratan rentas telah dilakukan berdasarkan pengumpulan data kematian perinatal dan neonatal selama 7 tahun dengan menggunakan borang ‘Stillbirths and Neonatal Deaths Rapid Reporting’.

Keputusan
Kadar insiden lahir mati di PPUKM adalah 6 dari 1000 kelahiran hidup dan 28.6% daripadanya diklasifikasikan sebagai lahir mati maserasi normal. Analisa menunjukkan kumpulan usia ibu 21-34 tahun serta kaum Cina mempunyai hubungan dengan lahir mati maserasi normal. Kejadian pecah ketuban mempunyai hubungan yang signifikan dengan kematian perinatal, namun faktor-faktor lain ditemukan sebaliknya.

Kesimpulan
Kajian terhadap laporan kes lahir mati secara terperinci boleh dilakukan di masa hadapan. Dengan demikian, kes dapat dikenalpasti dengan lebih tepat serta evaluasi dapat dilakukan bagi menangani kematian perinatal di peringkat nasional.

28. A COMPARISON STUDY OF RECURRENCE FREE SURVIVAL RATE BETWEEN SURGICAL VERSUS NON SURGICAL AMONG HEPATOCELULAR CARCINOMA (HCC) PATIENTS IN LIVER CENTRE, MALAYSIA.

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Introduction
A decade ago, surgery was the only satisfactory treatment modality for hepatocellular carcinoma (HCC) which gives a good recurrence free survival rate, but it was limited only to selected cases. Now days, non-surgical also
give some alternative to the HCC patients. Therefore the main objectives of the study were to compare the recurrence free survival rate of the patients between surgical and non surgical treatment.

Methods
A retrospective cohort study measuring the recurrence free survival of HCC patients who received treatment in Selayang Hospital was conducted from 1 January 2003 to 31 December 2006. The recurrence free survival time was measured from the date of treatment until the subjects had intrahepatic recurrence, or failed to follow-up at the end of the study period (31 December 2007).

Results
Of 209 HCC patients, 101(48.3%) had intrahepatic recurrence with median 29 months of survival rate. Surgical treatment significantly (p=0.002) contributed 58.4%(66 patients) to intrahepatic recurrence while nonsurgical treatment only 36.5%(35 patients) in which TACE; 37.0%(30 patients), RFA;36.4%(4 patients) and PEI;25.0%(1 patient only). Kaplan Meir analysis showed that non-surgical significantly gave a recurrence free survival of median 26 months(95CI% 23.35-28.65) compare to surgical with median 19 months(95CI% 13.48-24.52). Non-surgical became the only predictive factor of recurrence free survival which contributed 1.5 times not to have it compared to surgical treatment ( cHR 1.8, 95CI% 1.10-2.74 ;aHR 1.5, 95CI% 1.02-2.32).

Conclusion:
HCC patients need to educate and promote more in view of choice of treatment as non-surgical also give a better recurrence free survival rate.

Key words: HCC, recurrence free survival, surgical, non-surgical, predictive factor

29. ANALISA SITUASI DENGGI DAERAH KUANTAN MINGGU EPID 1 HINGGA MINGGU EPID 31 TAHUN 2010

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Objektif
1. Mengenalpasti situasi denggi melalui analisa epidemiologi kes denggi
2. Mengenalpasti faktor-faktor penyumbang kepada wabak tidak terkawal serta memperbaiki kelemahan dan seterusnya meningkatkan kualiti program pencegahan dan kawalan denggi.

Metodologi
1. Menganalisa data vekpro, borang siasatan kes dan borang pemantauan wabak (Cpbv-cprc 001/07).
2. Analisa menggunakan SPSS Versi 16.

Keputusan
Bermula minggu epidemiologi pertama hingga minggu ke 31 tahun 2010, terdapat 523 kes demam denggi berbanding 286 kes bagi tempoh yang sama tahun 2009 (peningkatan 83%) dengan jumlah lokaliiti wabak denggi sebanyak 40 lokaliti berbanding 38 lokaliti pada tahun sebelumnya. Kaum Melayu menyumbang kepada 60.6% dari keseluruhan kes denggi diikuti oleh kaum China 30.4% dan kaum India 5.0%. Sebanyak 358 kes (69%) pergi mendapatkan rawatan dalam tempoh tiga hari dari onset demam, 121 kes (23%) dalam tempoh 4 hingga 5 hari dan selebihnya selepas lima hari. Hanya 150 kes (28.7%) di notifikasikan dalam tempoh 3 hari selepas onset, 258 kes (49.3%) di notifikasikan selepas hari empat dan lima, 93 kes (17.8%) selepas hari keenam dan ketujuh dan 17 kes (3.3%) selepas hari keenam. Notifikasi kes yang di terima dari Hospital Kerajaan adalah 285 kes (54.5%) berbanding 118 kes (22.6%) dari Hospital Swasta. Kes yang di notifikasi oleh Klinik kerajaan sebanyak 76 kes (14.5%) berbanding 44 kes (8.4%) Klinik Swasta. Sebanyak 12 lokaliti wabak tidak dapat dikawal dalam tempoh 14 hari berpunca daripada faktor-faktor kelemahan dalam melaksanakan aktiviti kawalan kes indeks (9 lokaliti), kawalan awal wabak (10 lokaliti) serta kawalan sepanjang tempoh wabak (12 lokaliti).

Kesimpulan
Meningkatkan kesedaran masyarakat untuk mendapatkan rawatan awal serta penglibatan pihak pemimpin masyarakat dan NGO dalam membentengers penyalit demam denggi sementar media cetak, ceramah dan penglibatan idola sebagai ikon. Meningkatkan pemeriksaan premis aedes (PPA) di luar waktu pejabat iaitu waktu malam dan juga hujung minggu bagi mengatasi masalah rumah tutup (penghuni bekerja) terutamanya di lokaliti yang berisiko tinggi bagi memastikan liputan PPA yang tinggi tercapai.
30. ADOLESCENTS’ RESPONSES OF TOBACCO-RELATED CANCER PATIENT’S TESTIMONIAL

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Introduction
Although the use of anti-smoking advertisements were perceived to have greater impact on curbing tobacco consumption by communicating the risk from smoking, evidence suggests that the content of the advertisements play a major role. Advertisement with a personal testimonial and visceral negative characteristic were found to be effective in getting the attention of adolescents besides educating and motivating them to stay free from cigarettes.

Aim
This study explored how male adolescents (aged 13 -17) respond to the developed personal testimonial of tobacco-related cancer patient.

Methods
Six focus group discussions were conducted from May to June 2010 with male adolescents selected purposively from three schools in Kuantan area. Discussions aimed at exploring participants’ responses to the developed testimonial in which the main focus was on the participants’ feelings, understanding and perceived effectiveness towards the testimony. In addition, the participants were also asked to provide their opinion on the testimonial as compared to the current graphic health warning on Malaysian cigarette packs. Data analysis was conducted using NVIVO 9 software.

Results
Participants viewed the personal testimony used as anti-smoking advertisement perceived it to be more effective in educating, motivating and promoting smokers to quit, as compared to the current graphic health warning displayed on packs. Although they agreed to the use of personal testimonial characteristics for anti-smoking advertisements, the participants thought that it would be significantly effective if the ‘reality show’ theme is included into the advertisement.

Conclusion
These findings provide further evidence to support the use of personal testimonial as anti-smoking advertisement in educating and promoting quitting as well as preventing cigarette uptake among adolescents, however, the testimonial need to be improvised to ensure maximum impact.

31. FACTORS ASSOCIATED WITH PHYSICAL ACTIVITY LEVEL AMONG ELDERLY IN DISTRICT OF SEGAMAT, JOHOR

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Background
Elderly involvement in physical activity is important towards healthy aging. However the prevalence of the elderly who’s being active in Malaysia is still low and this situation is influence by many factors.

Aim
A cross sectional study had been carried in the District of Segamat Johor starting from Mac until Mei 2008. This study was carried out to study the factors associated with physical activity level among elderly.

Methodology
A total of 229 respondents were recruited via convenience sampling. The study was carried out using questionnaires. The data were analyzed using SPSS version 13.0.
Results
The mean age of the respondents was 68.7 ± 6.31. Majority were female, Malays, married, living with their family with primary education. 46% of the elderly is active as compared to the less active which is 54%. The significant factors associated with level of physical activity were age (SK 95% 87.4% - 97.7%), sex (SK 95% 1.109-3.807), jobs status (SK 95% 0.171-0.641), functional status (SK 95% 1.037-17.071) and perception towards physical activity (SK 95% 2.181-13.338).

Conclusion
To encourage elderly's involvement in physical activity, their perception towards physical activity need to be change together with maintaining functional status.

32. THE OUTCOME OF SHORT TERM INSPIRATORY MUSCLE TRAINING (IMT) AMONG HOSPITALIZED COPD PATIENT AT MALAYSIAN ARMED FORCES HOSPITAL TERENDAK, MELAKA

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Introduction
Inspiratory muscle weakness is significant in COPD and contributes to dyspnea, poor exercise tolerance and diminished quality of life. The outcomes of inspiratory muscle training as tool to strengthen inspiratory muscles was not clearly established. As a result, it was rarely used by physiotherapist as an additional modality in chest physiotherapy interventions.

Objective
The aim of the study was to identify the outcomes of short term inspiratory muscle training (IMT) on lung function, inspiratory muscle, exercise tolerance and quality of life of COPD patient.

Methods
This is a randomized controlled trial involving 18 COPD patients from Terendak Armed Forces Hospital Melaka. The patients were divided into intervention group (IMTG) and control group (CPG) via systematic randomization. The IMTG received inspiratory muscle training (IMT) and chest physiotherapy treatments whilst CPG subjects only received chest physiotherapy treatments of 4 weeks duration. Assessment of lung function (FEV1/FVC), inspiratory muscle strength (Pimax), exercise tolerance (6MWT) and quality of life (SGRQ score) were taken as outcome measures. Pre-test data were carried out prior to the study and the post-test data done after 4 weeks intervention.

Results
Paired sample t test shows significance on the study outcomes on both groups. There was increased 19.4% FEV1/FVC (p<0.05), 54.7% increased in Pimax (p<0.05), 33.2% increased in 6MWT (p<0.05) and 52.6% improvement in quality of life (p<0.05) in IMTG compare to CPG.

Conclusion
This study demonstrates that by combining inspiratory muscle training (IMT) and chest physiotherapy have increased lung function parameter, inspiratory muscle strength, exercise tolerance and health related quality of life in COPD patient.

Keywords: Inspiratory muscle training, COPD, Lung function, inspiratory muscle strength, exercise tolerance, health related quality of life.
33. CLUSTERING OF CARDIOVASCULAR RISK FACTORS IN A MIDDLE-INCOME COUNTRY; A CALL FOR URGENCY

Selvarajah S\textsuperscript{1,2}, Haniff J\textsuperscript{1}, Kaur G\textsuperscript{3}, Hiong TG\textsuperscript{3}, Cheong KC\textsuperscript{4}, Lim CM\textsuperscript{1}, Bots ML\textsuperscript{2} for the NHMS III Cohort study group

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Aims
This study aimed to estimate the prevalence of cardiovascular risk factors and its clustering. These findings are to help shape the Malaysian future healthcare planning for cardiovascular disease prevention and management.

Method
Data from a nationally representative cross-sectional survey was used. The survey was conducted via a face-to-face interview using a standardised questionnaire.

Results
37,906 eligible participants aged 18 years and older were identified, of whom 34,505 (91\%) participated. Focus was on hypertension, hyperglycaemia (diabetes and impaired fasting glucose), hypercholesterolemia and central obesity. Overall, 63\% (95\% confidence limits 62, 65\%) of the participants had at least one cardiovascular risk factor, 33\% (32, 35\%) had two or more and 14\% (12, 15\%) had three risk factors or more. The prevalence of hypertension, hyperglycaemia, hypercholesterolemia and central obesity were 38\%, 15\%, 24\% and 37\%, respectively. Women were more likely to have a higher number of cardiovascular risk factors for most age groups; adjusted odds ratios ranging from 1.1 to 1.26 for the presence of one risk factor and 1.07 to 2.00 for two or more risk factors.

Conclusions
The prevalence of risk factors increased with age. Cardiovascular risk factor clustering provides a clearer impression of the true burden of cardiovascular disease risk in the population. Women displayed higher prevalence and a younger age shift in clustering was seen. These findings signal the presence of a cardiovascular epidemic in an upcoming middle-income country and provide evidence that drastic measures have to be undertaken to safeguard the health of the nation.

34. PROFIL ‘UNMARRIED SINGLE MOTHERS’ DI DAERAH KUANTAN TAHUN 2010

Nurly Zahureen bt Mustapha, Amirullah bin Mohd Arshad, Wan Saidatul Balqis bt Meor Abdul Malik

Pejabat Kesihatan Daerah Kuantan, Pahang

Pengenalan:

Objektif
Untuk mengenalpasti latarbelakang sosio demografi, masa booking, punca kehamilan, tingkah laku seksual, faktor risiko serta ‘outcome’ dari segi kelahiran selamat dan penjagaan bayi, wanita hamil tanpa nikah di Daerah Kuantan pada tahun 2010.

Metodologi
Maklumat dari kad antenatal serta Borang Maklumat ‘SM’ kes-kes ibu hamil tanpa nikah di Daerah Kuantan pada tahun 2010 telah dianalisa.
Keputusan
Pada tahun 2010 terdapat seramai 113 kes wanita hamil tanpa nikah yang menerima jagaan ante natal di klinik-klinik kesihatan di daerah Kuantan iaitu 1.38% dari jumlah kes ante natal baru di daerah Kuantan. Separuh (58.4%) kes dari Klinik Kesihatan Ibu dan Anak JG. Majoriti (90.2%) adalah berbangsa Melayu. 72.6% berumur 18 tahun ke atas. Majoriti (87.6%) tidak mempunyai faktor risiko eg. Jangkitan HIV, penyakit kelamin, alkohol, merokok atau dadah. 58.4% ‘unsure of date semasa booking’. Majoriti (90.3%) hamil akibat dari hubungan seks secara sukarela. Majoriti (92.9%) tidak mengamalkan hubungan seks berbilang pasangan. 99% kes telah dirujuk kepada Pakar Perubatan Keluarga dan Pegawai Kerja Sosial Perubatan. Kesemua kes telah bersalin di hospital kerajaan. Tiada kejadian kes pembuangan bayi.

35. SEX AND YOUTH: WHO DID IT?

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Introduction
The rising trend of youth premarital sex has created concern especially among researchers, policy makers and community. Therefore this study was done to describe the prevalence of youth premarital sex and to determine factors influencing it. This study was part of a bigger study conducted in a national youth programme.

Methods
A nationwide cross sectional study was done using secondary data from Adolescent Health Screening Forms (BSSK/R/1/2008). Data was analyzed using SPSS with descriptive analysis, chi square test and logistic regression. The variables measured were socio demographic, risky behavior, history of abuse, anti-social behavior, substance abuse, religiosity, family connectedness and academic performance.

Results
A total of 22,750 youth participated with almost equal ratio by sex. Mean age was 19.0 years old. Nearly seven percent of youth reported had premarital sex. The results showed that age (OR=1.24, 95%CI 1.11, 1.38), ethnicity (OR=1.9, 95%CI 1.60, 2.34) and substance abuse (OR=12.33, 95%CI 8.05, 18.89) were the risk factors for premarital sexual experience. While no history of abuse, no anti-social behavior, no risky behavior and practiced religiosity were found to be protective factors. There was no evidence to show that academic performance and family connectedness influenced premarital sex.

Conclusion
Youth programmes should be directed towards prevention of risky behavior, anti-social behavior and substance abuse in order to indirectly curbing premarital sex. Religiosity element should not be neglected and to be stressed in an approach that is acceptable by the youth. Even though this study does not show the influence of family connectedness and academic performance in premarital sexual experience, further study need to be done to explore on this.

Key word : Premarital Sex, youth, risky behavior, anti-social behavior, substance abuse

36. ADUAN DAN PUJIAN MENGENAI HOSPITAL-HOSPITAL KEMENTERIAN KESIHATAN MALAYSIA

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Bahagian Perkembangan Perubatan, Kementerian Kesihatan Malaysia, Putrajaya

Tujuan
Untuk mengkaji profil aduan dan pujian di hospital-hospital Kementerian Kesihatan Malaysia bagi merancang langkah-langkah penambahbaikan.
Metodologi

Hasil Kajian
Pada tahun 2008, jumlah aduan dan pujian yang diterima adalah sebanyak 523 aduan dan 19 pujian manakala pada tahun 2009 jumlah aduan yang diterima adalah 417 dan 38 pujian. Daripada jumlah aduan dan pujian yang diterima, didapati aspek yang paling banyak diadukan dan dipuji adalah aspek komunikasi, sikap dan etika anggota. Disiplin yang paling banyak menerima aduan adalah Pengurusan Hospital, Kecemasan dan Trauma, Obstetrik dan Ginekologi serta Perubatan manakala kategori anggota yang paling banyak menerima aduan adalah pegawai perubatan dan jururawat.

Kesimpulan
Ketiga-tiga aspek iaitu komunikasi, sikap dan etika anggota adalah elemen yang sangat penting dan amat dititikberatkan oleh pelanggan. Antara tindakan penambahbaikan yang dicadangkan untuk mengatasi isu-isu yang telah dikenalpasti ini adalah meningkatkan kebolehan anggota berkomunikasi secara berkesan, kaedah melayani ‘difficult client’, menanamkan sikap prihatin serta memperkukuhkan budaya korporat. Melalui usaha ini, diharapkan kualiti perkhidmatan yang diberikan kepada pelanggan dapat dipertingkatkan sejajar dengan usaha kerajaan merealisaskan Gagasan 1Malaysia, “Rakyat Didahuluikan, Pencapaian Diutamakan”.
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