PHP106
THE COVERAGE WITH CLINICAL EVIDENCE-INFORMED DECISIONS (CCEDS): A NEW HEALTH CARE PAYMENT MODEL IN CHINA
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OBJECTIVES: The traditional payment methods like fee-for-service and capitation were applied to public health in China, the former lead to a problem that health insurance cost rising rapidly, while the latter could result in insufficient funds for covering the cost of services needed. This study aim to suggest a new payment model, based on the coverage with clinical evidence-informed decisions (CCEDs), for overcoming the imperfections and making sustained improvement in the medical insurance policy. **METHODS:** This new health care payment model CCEDs is a single, risk-adjusted, prospective (or retrospective) payment model, used as a tool to bring a new rationale to payment decisions across inpatients and outpatients diagnosed with a specific condition. CCEDs make payment decisions on the basis of the following issues: the resources required to provide care as recommended according to the clinical practice guidelines; the provider performance on measures of clinical process, treatment variation, outcomes of care and reimbursement; the expert advice in specific health care field. **RESULTS:** This new model CCEDs designed to bring down medical costs and enhance the quality of care, CCEDs also come with opportunities to limit both underuse and overuse, eliminate risk selection problems, lower administrative cost, enhance transparency of results may earning patients trust, increase both patient outcomes and patient satisfaction. Incentives of CCEDs could encourage collaborative teamwork, and promote clinical integration between providers across disparate settings. But, meanwhile encroachment of the market could undermine the professional discretion in the long-term. **CONCLUSION:** A new payment model, based on coverage with clinical evidence-informed decisions, might provide new options to get high-quality treatment and low medical cost for patients.

PHP107
CHALLENGES AND OPPORTUNITIES IN THE MALAYSIAN HEALTH CARE SYSTEM
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INTRODUCTION: Malaysia is a multicultural society with a population of over 28 million and classified as an upper middle-income country by the World Bank. Malaysia inherited a health care system at independence from British colonial rule and provides universal and low cost access to the health care needs of all citizens. Improvements in health indices such as reduction in mortality rate and increase in life expectancy using a relatively small amount of GDP (~4%) being spent on health services shows that Malaysians have benefited from a well-developed health care system. **CHALLENGES:** Demographic and disease pattern transition, increasing cost of health care together with increasing demand towards better health outcomes pose challenges in sustaining the system. Historical-based health care financing has also created inequity in access and allocative inefficiency. Equity access issues such as uneven human resource distribution and limitations in secondary access to consult specialists remain a problem despite generally improved access to facilities for rural population. Urbanization however has created vertical inequity and strains to existing public health facilities. The inadequate availability of public health facilities and manpower has led to a proliferation of private health facilities. Unethical prescribers' behaviour, queue jumping and dependence on profit-oriented private health care providers further complicate the issues. **OPPORTUNITIES:** Restructuring of the financial system by introducing national health insurance or co-payment can reduce moral hazards associated with the universal low cost system. Strategizing budget allocation in building facilities, implementing interventions and preventive programmes based on recent transition in health are important measures to be considered. Quality use of medicines concept implementation could improve the procurement, supply and distribution system as well as skills, awareness and knowledge of prescribers and patients. Access and efficiency of the health care system could also be improved through this concept. Practices and facilities sharing nationally and internationally, with neighbouring countries, would also improve access.

PHP108
COLLABORATIVE APPROACH IN ACCESSING HOMOGENEOUS MEDICAL DATA IN GRID-BASED ENVIRONMENT (ENHANCING DISEASES CLASSIFICATION)
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OBJECTIVES: The proposed initiative presents the collaborative approach in classification of preliminary characteristics of diseases using sample clinical data that allows the integration of parallel processing in homogeneous grid-based environment. The research focuses on three objectives mainly: 1. To provide collaborative classification in homogeneous resources. 2. To conduct parallel processing in extraction of preliminary characteristics using electronic medical records (EMR) data. 3. To perform characterization for disease features in grid-based neural network classification. **METHODS:** The study conducted on Globus (Grid) clustering network and interconnected with homogeneous resources as test bed. The integration of homogeneous sample diseases databases for execution of computational application were submitted to the GRAM service to the local scheduling system. The result for time and threads computation was computed on the test bed for homogeneous resources in grid platform with Feed-Forward Neural Networks. **PRELIMINARY RESULTS:** In the training phase, the diversity of clinical data features such as age, gender, race/ethnicity were imported as input to the Globus nodes with the aid of Globus automated scheduling for diseases' characteristics classification. The coordination of resources aims to address the issue of optimization in distributed grid resources. The evaluation of outcome includes response time and co-allocation of multiple resources to meet complex clustering of diseases' characteristics using neural networks classification.

PHP110
ARCHIMEDES: A LARGE SCALE SIMULATION SYSTEM FOR HEALTH CARE RESEARCH AND ITS APPLICATIONS FOR ASIAN COUNTRIES
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The Archimedes Model is a carefully validated, clinically realistic, simulation model of diseases and health care. By using advanced methods of mathematics, computing, and data systems, the Model enables researchers and decision makers to make better informed decisions. The Archimedes Model includes a wide range of diseases/conditions (diabetes, cardiovascular diseases, COPD, obesity, cancers) and detailed descriptions of health care delivery systems, interventions, tests, and treatments and patient and physician behaviors. The Model has been used by many organizations (e. g. goverments, pharmaceutical companies, insurance companies, disease organziations) accross the globe to help answer a wide variety of questions related to clinical trials, policy setting, performance measurement, and health economics and outcomes research. The Model has been adapted to a wide range of settings including US, UK, France, Italy, Sweden, Norway, Poland, Japan, Brazil, and California. We will highlight a number of projects that were supported by EU and Japan, in which the Model was used to guide decision making around management of diabetes. We will also discuss the potential applications of adapting the Archimedes Model to other Asian countries (e. g. India or China) beyond Japan.

PHP111
'SERIOUS ILLNESS INSURANCE' IN CHINA: IMPACT OF NOVEL PUBLIC-PRIVATE PAYMENT MODELS ON ACCESS TO HEALTH CARE AND DRUGS
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OBJECTIVES: In mainland China, a large gap in the funding of catastrophic illnesses has existed for the past decade. In 2012, 'serious illness insurance' was proposed by the Government that involves using a portion of funds from the public insurance and additional financial support from the government to cover major illnesses. Commercial health insurers collaborate with local authorities to provide this coverage through various models in different cities and regions. This research seeks to understand current models in different regions and to evaluate the implications for health care coverage and access to drugs. **METHODOLOGY:** We conducted extensive literature review to understand the current landscape of the serious illness insurance. Primary research with a mix of stakeholders including private health insurers and regulatory authorities was also conducted in different provinces/ cities to further evaluate the regulatory framework, disease-specific coverage, funding pathways and implications for access to drugs. **RESULTS:** Numerous models that vary with regards to design, funding and implementation are being piloted across provinces/ cities. Our research findings suggested that limited experience of the private insurers and uncertainty around profitability places significant challenges on the future development of 'serious illness insurance'. However, implementation of these insurance schemes has positively impacted health care coverage and access to drugs. **CONCLUSIONS:** Our results demonstrate the large degree of variation among models of 'serious illness insurance' in different regions. This new public-private partnership will likely continue to positively impact patient access to health care and medicines, increase provincial coverage and also boost the growth of the private insurance market.

PHP113
BEST POSSIBLE HEALTH OUTCOMES AT DIFFERENT SOCIOECONOMIC LEVELS OF COMMUNITY: THE BETTER CARE PLAN
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OBJECTIVES: Proposal of an ideal model for obtaining the best possible health outcomes at different socioeconomic levels of community/population in India. **CONCLUSION:** Various social inequities viz. race; ethnicity, religions and economic status affect operationalization of health decisions as well as health outcomes invariably. These all inequities define socioeconomic levels of any community. Assessing health equity needs comparing health and its social inequities/determinants within different levels. It is attainable call to standardize the process of health care decision making; to obtain best possible health outcomes. Hereby, we propose an ideal model; a "Better Care Plan" which would help in opting best possible health outcomes at different socioeconomic levels. Foremost, we require to understand the mindset of people on health care needs. We found that one requires clear communication; mutual collaboration between clinician, patient and other health care professionals; professionally competent and compassionate staff and their services; continuity of care and professional excellence required mostly for chronic ailment. In next step "better care plan" undertakes evaluation of the impediment issues that might rise at various points related to patient, staff and system. Diverse quality dimensions proposed by different studies and models would be aimed to standardize the process of health care decision making. The six areas of "Better Care Plan" involves focus on patient; rationale; efficiency; opportune, safety and potency; which would help to obtain optimal health care outcomes at different socioeconomic levels. Privatization; where private organizations are committed to serve people with government schemes; is one of the important issue which needs improvement. Basic implementations such as community services through home medication reviews, awareness programs will be helpful with "Better Care Plan".

INFECTION – Clinical Outcomes Studies

PIN1
IMPACT OF CIGARETTE AND ALCOHOL USE ON ADVERSE DRUG REACTIONS OF HAART THERAPY AMONG HIV/AIDS PATIENTS
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OBJECTIVES: The aim of the current study is to explore and to observe the impact of cigarette smoking and alcohol use on adverse drug reactions occurrence of antiretroviral drugs among HIV/AIDS patients. **METHODS:** Retrospective analysis of all patients diagnosed with HIV infection and on HAART therapy from Jan 2007 to Dec 2012 was conducted at infections disease department of Hospital Pulau Pinang, Malaysia. Patient socio-demographic details along with clinical features were recorded and the susceptible ADRs were observed during the study period. Data was descriptively analyzed by using statistical package for social sciences (SPSS 20). **RESULTS:** Out of 743 patients that underwent HAART therapy, 314 (42.2%) patients had experienced adverse drug reactions. Out of total included patients 571 (76.8%) were male and 172 (23.1%) were female. Among the patients, 512 (68.9%) were smokers and 340 (45.8%) patients were alcohol users. A total number of 425 (57.2%) adverse drug reactions were recorded of which 269 (63.2%) were reported among smokers and 162 (38.1%) were reported among alcohol users. Univariate analysis indicates a statistical significant relationship between the smoker (p-value =0.009, 95% CI=1.111 – 2.079, Odd ratio= 1.520) and alcohol users (p-value=0.008, 95% CI=1.106 – 1.994, Odd ratio=1.485) with the occurrence of adverse drug reactions on HAART in HIV patients. **CONCLUSIONS:** The study indicates the incidence of adverse drug reactions is significant in smokers and alcohol users on HAART therapy. Patient counselling on avoiding smoking and alcohol consumption can reduce ADRs in patients on HAART therapy.

PIN2

ADVERSE DRUG REACTIONS OF HAART THERAPY AMONG HIV/AIDS PATIENTS TREATED AT INFECTIOUS DISEASE CLINIC

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OBJECTIVES: Current study is aimed to explore and to observe adverse drug reactions occurrence of antiretroviral drugs among HIV/AIDS patients. **METHODS:** An observational retrospective study of all patients diagnosed of HIV infection and on HAART therapy from Jan 2007 to Dec 2012 was conducted at infectious disease department of Hospital Pulau Pinang, Malaysia. Patient socio-demographic details along with clinical features were recorded. The reported ADRs were assessed for causality by using Noranjo's algorithm scale. Data was descriptively analyzed by using statistical package for social sciences (SPSS 20). **RESULTS:** Out of 743 patients that underwent HAART therapy, 571 (76.8%) were male and 172 (23.1%) were female patients. Overall 314 (42.2%) patients had experienced adverse drug reactions. A total number of 425 (57.2%) adverse drug reactions were reported among which 311 (73.1%) occurred in males and 114 (26.8%) in female patients. Lipodystrophy 151 (35.5%) was the most common ADR reported; in male 126 (29.6%) and 25 (5.8%) female patients were recorded. Lipodystrophy was followed by skin rashes 80 (18.8%) that included 56 (13.1%) male and 24 (5.7%) female patients. Anaemia was reported 74 (17.4%), of which 49 (11.5%) observed in male and 25 (5.8%) female patients. A statistical significant relationship on Chi-square test was observed between the gender and the occurrence of adverse drug reactions (p-value =0.002). However on univariate analysis the relationship between ADRs with gender resulted in insignificant value (p-value=0.267, 95% CI= 0.862 – 1.712, Odd ratio= 1.215). **CONCLUSIONS:** The study indicates the incidence of adverse drug reactions is higher in male than in female patients. However, a multicenter study with a large sample size may provide us with better understanding of this relationship.

PIN4

IMPACT OF HEPATITIS B ON HUMAN IMMUNODEFICIENCY VIRUS PATIENTS IN MALAYSIA: A RETROSPECTIVE STUDY

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OBJECTIVES: To assess the prevalence and clinical outcomes of Hepatitis B (HBV) patients co-infected with Human Immunodeficiency Syndrome (HIV) in a tertiary care hospital. **METHODS:** A retrospective cross-sectional study was performed, of HBV positive HIV infected patients following HAART therapy from 2007 to 2012 in Infectious disease Unit, Hospital Palau Pinang (HPP), Malaysia. The demographic and clinical data of the patients was collected retrospectively. The collected data was analyzed with SPSS software (Version 20) to measure the correlation of variables and their infection rates. **RESULTS:** A total of 664 HIV infected patients including 495 (74.5%) males and 169 (25.5%) females with mean age of 40 ± 10.35 years were included in present study. Of these, 86 (13%) were co-infected with HBV. The main race involved in current study was Chinese 455 (68.5%) followed by Indians 88 (13.3%), Malay 83 (12.5%) and minorities 38 (5.7%). The route of transmission was mainly male heterosexual contact 464 (69.9%) followed by homosexual 47(7.1%) and Intra-Venous Drug Users (IVDU) 48 (7.2%). The mean CD4 count, ALT and AST levels in HBV-HIV co-infected patients were 385 ± 148.55, 51.48 ± 39.42, 105.581 ± 38.37 respectively. The co-infection is significantly associated with gender (p = 0.05), and IVDU (p = 0.01). The co-morbidities seen in the present study were Pulmonary Tuberculosis (17.9%), Pneumocystis pneumonia (15.4%), Hyperlipidemia (4.1%), Dyslipidemia (4.1%), Anemia (5.1%), Ischemic Heart Disease (1.8%), Diabetes Mellitus (8.7%), Hypertension (6.9%), Asthma (1.5%), Oral Candiasis (5.6%), Syphillus (4.2%), Liver Cirrohsis (0.6%), Cerebral Toxoplasmosis (1.8%), Virological Failure (0.6%). **CONCLUSIONS:** The overall prevalence of HBV among HIV patients were about 13% in which 74.5% was males while 25.5 % females. Raised levels of liver enzymes and lowered CD4 counts were seen in the co-infected patients. There was a significant correlation between co-infection with HBV among HIV patients depending on different variables.

PIN5

CHRONIC HEPATITIS C PREVALENCE AND ITS CORRELATION WITH CD4 CELLS AND LIVER ENZYMES AMONG HIV POSITIVE PATIENTS: A MALAYSIAN SCENARIO

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OBJECTIVES: To evaluate the occurrence and clinical outcomes of Hepatitis C (HCV) patients co-infected with Human Immunodeficiency Syndrome (HIV) in a tertiary care hospital. **METHODS:** A retrospective study of the patients with clinical histories of HIV co-infection with HCV following HAART therapy in Infectious disease Unit at Hospital Palau Pinang (HPP), Malaysia from the year 2007 to 2012. The clinical and demographic data was collected from patient's records. In present study we analyzed the collected data by using SPSS software (Version 20) to determine the correlation of variables and measure their infection rates in a particular population. **RESULTS:** The study involves a total of 708 HIV infected patients with the mean age of 40 ± 10.17 years together with 541(76.4%) males and 167(23.6%) females. There were 130(18.4%) patients co-infected with HCV. The assigned population involve in current study was Chinese 427(60.3%) followed by Indians 96(13.6%), Malay 151(21.3%) and minorities 34 (4.8%). There were three main modes of transmission including male heterosexual contact 506(71.5%), homosexual contact 47(6.6%) and intravenous drug users (IVDU) 114(16.1%). The mean CD4 count, ALT and AST levels in HBV-HIV co-infected patients were 374 ± 150.65, 64 ± 76.15, 129 ± 61.06 respectively. The calculated result shows the significant association of several factors like sex (p = <0.001), IVDU (p = <0.001) with co-infection of HIV-HCV. The co-morbidities observed in the current study were Pulmonary Tuberculosis (23.6%), Pneumocystis pneumonia (14.4%), Hyperlipidemia (4.4%), Dyslipidemia (3.2%), Anemia (4.5%), Ischemic Heart Disease (2.5%), Diabetes Mellitus (8.2%), Hypertension (6.5%), Asthma (1.4%), Oral Candiasis (5.2%), Syphillus (3.1%), Liver Cirrohsis (1.1%), Cerebral Toxoplasmosis (2.3%), Virological Failure (1.1%). **CONCLUSIONS:** The incidence rate of HCV among HIV individuals were about 18.4% including 76.4% males and 23.6% females. There was a significant correlation between HCV among HIV-positive patients depending on various variables like gender, age, exposure to risk factors. (p< 0.001).

PIN6

EFFECTIVENESS OF HAND HYGIENE PROMOTION IN RELATION TO LEVEL OF INVESTMENT: A SYSTEMATIC REVIEW

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OBJECTIVES: Hand-hygiene amongst health care workers is amongst the most effective measures to reduce health care-associated infections, but compliance is often poor and little is known about the relative effectiveness of interventions to improve it. This study aimed to evaluate the effectiveness of hand-hygiene promotion interventions and to study the association between levels of investment in interventions and improved compliance. **METHODS:** A search strategy was developed and electronic databases searched for studies published before March 2014. Studies failing to meet the Cochrane Effective Practice and Organisation of Care Group (EPOC) inclusion criteria were rejected. Where studies had not used appropriate analytical methods, we re-analysed primary data. Information on resources required for interventions was extracted, and graded into three levels. Random effects meta-analysis was performed on studies considered sufficiently homogeneous with regard to interventions, participants and outcome measures. **RESULTS:** Of 3,725 studies retrieved, 125 met inclusion criteria; 35 of these met EPOC criteria (6 randomised controlled trials (RCTs), 25 interrupted time-series (ITS), 2 controlled trials, and 2 controlled before-and-after studies). In four RCTs, hand-hygiene compliance was the primary outcome. Meta-analysis of these showed the intervention was associated with improved compliance (pooled odds ratio [OR], 1.39; 95%CI, 1.15-1.67, I^2= 80.00%). Of the 13 ITS studies, 12 showed significant stepwise increases in hand-hygiene compliance. All but three of these also showed a post-intervention trend for increasing hand-hygiene compliance. Grouping studies by the level of investment, 22 were graded as resource-intensive while 11 and 2 studies had medium or low levels of investment, respectively. We found no evidence of a relationship between the level of investment and effect size. **CONCLUSIONS:** Hand hygiene promotion has a positive impact on hand hygiene compliance, but evidence that increased investment in hand hygiene leads to larger improvements is lacking. Reporting on resources used for interventions was, however, poor.

PIN7

BURDEN OF VARICELLA IN ASIA-PACIFIC COUNTRIES: A SYSTEMATIC REVIEW AND CRITICAL ANALYSIS

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OBJECTIVES: Varicella is a common, vaccine-preventable illness but its impact on public health in Asia-Pacific countries has received little attention. This study aimed to review the epidemiology and economic burden of varicella in Asia-Pacific countries. **METHODS:** A systematic literature review was conducted using PubMed and government web sites. Outcomes included epidemiology of varicella (incidence, mortality, and complication), vaccination policy and coverage, and varicella-related health care resource utilization and costs. Critical analyses of study quality and data gaps were performed. **RESULTS:** Published data were identified from thirteen countries including Australia, China, India, Japan, Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, and Thailand. No studies were identified for Indonesia and Vietnam. Publicly funded universal childhood vaccination against varicella has been implemented in Australia, Korea, and Taiwan, while the remaining countries either recommend vaccination for only high-risk