PRM4

DRUGS IN CONSTRAINT COUNTRIES OF SUB SAHARAN AFRICA

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OBJECTIVES: Being from the very land and a son of the same soil. Africa is the world's second-largest also the most poorest most underdeveloped continent. With great struggles and constraints in provision of essential drugs and program initiatives,its hard to make proper intervention in urgent essential needs of remedies required on a daily basis especially in the wider scope of village population on health priorities. **METHODS:** In 2007, Africa's dialysis population constituted only 4.5% of the world's dialysis population, with a prevalence of 74 per million population (pmp), compared to a global average of 250 pmp. In almost half the African countries, no dialysis patients are reported. The prevalence of peritoneal dialysis (PD) was 2.2 pmp, compared to a global prevalence of 27 pmp, with the bulk of African PD patients (85%) residing in South Africa. In North African countries, which serve 93% of the **RESULTS:** African dialysis population, the contribution of PD to dialysis is only 0% – 3%. Cost is a major factor affecting the provision of dialysis treatment and many countries are forced to ration dialysis therapy. Rural setting, difficult transportation, low electrification rates, limited access to improved sanitation and improved water sources, unsuitable living circumstances, and the limited number of nephrologists are obstacles to the provision of PD in many countries. **CONCLUSIONS:** The potential for successful regular PD programs in tropical countries has now been well established. Cost is a major prohibitive factor but the role of domestic manufacture in facilitating widespread use of PD is evidenced by the South African example. Education and training are direly needed and these are areas where international societies can be of great help.

PRM5

IS CHINESE SYNDROME NECESSARY IN THE EFFECTIVENESS EVALUATION OF CHINESE HERBAL FORMULAS?

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OBJECTIVES: Though Chinese herbal medicine had been proofed effective in clinical practice, due to the lack of suitable outcomes, the current randomised controlled trial studies (RCT) mostly stated that Chinese herbal formulas uneffective, thus the effectiveness are rarely confirmed publicly. In this study we applied Chinese syndromes in the effectiveness evaluation of Chinese herbal formulas and to assess their suitability and necessity. **METHODS:** In an finished RCT research, angina patients with Phlegm and Blood stasis syndrome were randomized into experimental group (Chinese herbal formulas combined with western basic therapy) and placebo group respectively. An Chinese questionnaire TCM-SAQ, Seattle Angina Questionnaire (SAQ), and SF-12 were applied as patients reported outcomes to evaluate the effectiveness. And the results shows that there is no statistical difference in SF-12 and SAQ between two groups after 8 weeks' treatment, while there is significant difference shown in the syndrome domain of TCM-SAQ. On the basis of these results, the deviation value of all the domains in each questionnaire from the baseline to after 8 weeks' treatment were calculated. And then the Pearson correlation of the deviation value among the domains in TCM-SAQ with domains in SAQ and SF-12 were analysed. **RESULTS:** The correlation between angina domain in TCM-SAQ with each domain in SAQ and SF-12 is from 0.045 to 0.237 ($p<0.01$), physical limitation domain is 0.450 to 0.779 ($p<0.01$), sleep quality domain is 0.342 to 0.555($p<0.01$), Chinese syndrome domain is 0.477 to 0.688 ($p<0.01$), worry of disease domain is 0.439 to 0.709 ($p<0.01$), treatment satisfaction domain is 0.298 to 0.689 ($p<0.01$). For Chinese syndrome domain the correlation with domains in SAQ and SF-12 were all higher than 0.4 and lower than 0.7. **CONCLUSIONS:** As an patients reported outcome, Chinese syndrome can reflect the effectiveness of Chinese herbal formulas. And it is in some degree suitable and necessary in the effectiveness evaluation of Chinese herbal formulas.

PRM7

A NOVEL BROADLY APPLICABLE RISK SCORE FOR PREDICTING MORTALITY OF PATIENTS WITH CIRCULATORY SYSTEM DISEASES WITHIN HOSPITALIZATION DURATION

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OBJECTIVES: The common comorbidity indexes was developed about two decades ago and were not appropriate for inpatients risk adjustment nowadays. Our objective was to develop a risk stratification model that broadly predicts mortality risks in hospitalized patients with circulatory system diseases. **METHODS:** The risk score model was generated by using inpatient summary report of electronic medical record dataset from 2006 to 2010 among 50 tertiary hospitals in Beijing, and validated by same dataset of 65 tertiary hospitals in the whole country in 2012. The patient diagnosis as identified by using the International Classification of Diseases, 10th Revision. Risk score was developed with individual major diagnostic codes. Receiver operating characteristic (ROC) analysis was used to evaluated the predictive effect of risk score, and the Charlson Comorbidity Index (CCI) was used to compare with the risk score in validation data sets. **RESULTS:** The diagnosis code of total 4,216,375 patients were used to generate the risk scores which comprise 293 items out of more than 4,000 categories and ranged from 96 to 1. In the validation data set, the ROC was 0.845 compared with the CCI ROC of 0.748 among myocardial infarction inpatients, and in coronary artery bypass grafting(CABG) inpatients the ROC was 0.729 to CCI ROC of 0.626, in percutaneous coronary intervention(PCI) inpatients the ROC was 0.847 and 0.648 respectively. The ROC of novel risk score was improved 12.7, 16.4 and 30.1 percent among inpatients with circulatory system disease. **CONCLUSIONS:** This study generated a broadly applicable tool for risk adjustment that predicts circulatory system diseases inpatient mortality with more reliability than current risk indexes. This risk index will allow comorbidity-adjusted outcomes broadly in surgery, hospitalization and drug efficacy evaluation.

RESEARCH ON METHODS – Cost Methods

PRM8

DISEASE BURDEN OF MULTIPLE MYELOMA IN CHINA

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OBJECTIVES: Multiple myeloma (MM) is known as an incurable cancer of plasma cells, which incurs significant burden on patients. There are estimated 27,000 MM patients in China in 2013, and the incidence is 1–4 per 100,000 people per year. However, the disease burden of MM in China has not been well studied. Using Guangzhou claim data, this article estimated the economic burden on patients with MM from a societal perspective. **METHODS:** 2009-2011 databases of Urban Employee Basic Medical Insurance and Urban Residents Basic Medical Insurance were used to estimate the direct medical cost of MM and the determinants of medical cost. The direct medical costs of bortezomib-based therapies and regular chemotherapies were compared. Disability Adjusted Life Year (DALY) was used to estimate the indirect cost. **RESULTS:** For a patients with MM conditions in Guangzhou, the direct cost was RMB 8.45 million in 2009, 8.52 million in 2010, and 13.90 million in 2011, while the indirect cost was RMB 12.18 million, 13.11 million, and 19.46 million, respectively. Moreover, the MM medical cost was higher with age, increasing reimbursement rate and length of stay. The average hospitalization expenditure for bortezomib-based therapies and regular chemotherapies were RMB 60,945.84±38,335.12 and 16,465.62±19,695.13 ($P<0.001$). The out-of-pocket (OOP) cost for per treatment cycle were significantly higher for patients treated with bortezomib-based therapy (RMB 43,773.57±12,415.07) than for those treated with regular chemotherapies (RMB 3,720.74±4,060.65). **CONCLUSIONS:** MM conditions have serious economic burdens, and was significantly increased overtime in China.MM patients would pay over 12 times more OOP cost for the use of bortizomib-based therapy than for the use of commonly-used chemotherapies.

PRM9

HEALTH CARE USE AND ORAL MEDICATION PATTERNS FOR TYPE 2 DIABETES PATIENTS IN CHINA: THE ROLE OF TRADITIONAL CHINESE MEDICINES

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OBJECTIVES: To investigate the health care utilization and cost, focusing on the use of oral anti-diabetic drugs (OADs) for type 2 diabetes patients in China. **METHODS:** A large scale, prospective, and observational study was conducted in 5 cities of China. Subjects on any OAD were enrolled. The data was collected from longitudinal interviews and diary following-up with the enrolled patients. Primary data information included socio-demographic characteristics, health care and medication utilization and costs, laboratory assessments, and quality of life. The baseline interview and 4 times of following-up were conducted within 12 months. HbA1c, fasting blood-glucose and blood lipids were assessed. Multivariable regression and propensity score matching methods were used to control for confounding factors in the study. **RESULTS:** 2886 patients enrolled at baseline, 2322 of them completed the full study. The average age of enrolled patients at baseline was 61.71(sd=11.27) years. The number of OADs per patient was 1.66 (sd=0.80) with a median of 2. The mostly used 4 OADs are: Metformin (44.01%), Acarbose (28.64%), XIaoke Pill (a traditional Chinese medicine, 20.54%) and Gliclazide (18.26%). On average, a patient spent CNY 8,867.56 (sd=17,642.51) on health care annually, where OADs cost CNY 2,645.82 (sd=3,123.30). When controlling for other confounding variables via statistical models, further analysis finds that patients on XIaoke Pill as the major regimen ended up with a reduction in total health care cost by CNY 2,151 ($p<0.01$), where OADs cost was reduced by about CNY 626 ($p<0.01$). **CONCLUSIONS:** Type 2 Diabetes patients in China bear a heavy economic burden. Among OADs, traditional Chinese medicine Xiaoke Pill appears to be a quite cost effective treatment regimen for diabetic patients in China. Future analysis is warranted to investigate mechanisms and conditions through which oral Chinese OADs may be cost effective for some diabetic patients in China.

PRM10

HEALTH ECONOMICS METHODOLOGIES INVOLVING PARKINSON'S DISEASE TREATMENT IN CHINA

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OBJECTIVES: To describe the methodologies used in health economics (HE) studies on Parkinson's disease (PD) in China. **METHODS:** A structured literature review was conducted to describe the methodology used to generate HE evidence for PD treatment in China. The review was conducted in both English and Mandarin languages using four databases: PubMed, Cochrane, WAN FANG and VIP, for articles published between 2000 and 2013. Study selection was limited to Chinese population based in China and those which reported cost-effectiveness ratio (CER) or incremental cost-effectiveness ratio (ICER) of PD pharmacotherapy. **RESULTS:** Six studies were selected, all in mandarin. The studies were conducted using different study designs including cohort, randomised controlled trials (RCT) and retrospective observation. None of the studies utilised any HE modelling. Cost-effectiveness comparisons were made between levodopa monotherapy with or without benserazide against other adjuvant PD pharmacotherapies. Two studies were conducted based on health system perspectives, 2 studies on societal perspectives and the remaining 2 studies did not report any. Cost components calculated differed between studies. Only 2 studies investigated the cost-effectiveness of PD treatment using both direct and indirect costs. The effectiveness outcomes were mostly determined using either Unified Parkinson's disease Rating Scale (UPDRS), followed by Parkinson's disease Questionnaire (PDQ) or Visual Analogue Quality of Life (VAS-QOL) scale. Only one study reported ICER value whereas the remaining studies only reported CER. All studies conducted primary data collection for the purpose of the cost-effectiveness