may increase the difficulty of demonstrating cost-effectiveness of a new treat-
ment (NEW) of NEW from year 1 to emulate generic entry. 30 cohorts were run-
through the model, each commencing in subsequent years. ICERs for each cohort
and an aggregate ICER across all cohorts were calculated. Whilst no ICER thresh-
old is applied in Australia, $50k/LY was assumed for analysis purposes.
RESULTS: For inpatient care, the cost-effectiveness of NEW improved over time. ICERs
ranged from $714k/LY for Cohort 1 to $100k/LY for Cohort 22 onwards. The thresh-
old was crossed between Cohort 10 and 11. For all cohorts over 30 years the aggregate
ICER was >$100k/LY and only 19 cohorts crossed the threshold (16.1-30.0 years) to
cross the threshold at an ICER of $494k/LY.
CONCLUSIONS: TTraditional CEA only supports funding of NEW from Cohort 11 onward, suggesting a potential 10 year delay to access. Aggregate CEA however supports funding of NEW immediately over a time horizon of 19 or more years. Clearly future price changes affect CEA of new treatments; failure to appropriately account for them may result in delayed access to new medications.

HIV
WHY DOES ANTI-INFECTIVE DRUG EXPENDITURE INCREASE?- A DECOMPOSITION ANALYSIS ON CHINA DATA
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OBJECTIVES: China spent approximately $150 billion US dollars on prescription drugs in 2015, up 47% of its annual growth. Due to the high drug expenditure, private
health insurance in China, we decomposed drug expenditures to document reasons for this
increase. The costs of 207,758 inpatient basic medical insurance patients in Tianjin, China
were collected through a cohort of 2007-2014, Employee Basic Medical insurance system covering 626 hospitals and 545 health care community centers from 2006 to 2010 in Tianjin, China. We found that 264 anti-
infector drug products with 79 ingredients from 16 narrow therapeutic categories were
involved. We applied factor analysis and six-factor exponential analysis and index-theoret-
ical methodology. In three-factor analysis, drug expenditure was decomposed into quantity effect, price effect and therapeutic choice. To further explore underlying causes of drug spending soaring, six-factor exponential methodology was applied to
measure the change and contribution of each dominant.
RESULTS: Using exponen-
tial-based decomposition analysis to elucidate important factors driving prescription
drug expenditure growth (which increased 163% during five years), we found that the price effect was the most important factor (53%) and followed by the quantity effect
(46%) and the therapeutic effect (7%). Moreover, the quantity effect and the price effect increased by 6% only. Six-factor analysis revealed that 2010 impatient admission volumes increased 76% and this was the most critical spending driver. Therapeutic mix and drug mix within the therapeutic choice was the second most important factor (36%) and the third (14%) factor among these factors. In contrast,
pure unit price was a negative factor (declined 10%) with respect to drug expendi-
tures.
CONCLUSIONS: The selection of more innovative/more expensive drugs over cheaper drugs on the basis of therapeutic usefulness was the most critical spending driver. Admis-
sion patterns and clinical prescription behavior should be a focus of drug spending controls. Health providers, insurance agencies, and policy makers can use these data to systematically intervene in health care service improvements instead of solely focusing on drug price regulations.

INFECTIOUS DISEASE OUTCOMES RESEARCH STUDIES
IN1
COMPARATIVE SAFETY AND EFFICACY OF FOCUSED ULTRASOUND FOR CERVICAL ECTOPY: A META ANALYSES WITH 16180 PATIENTS
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BACKGROUND: Sexually transmitted infections(STIs) are serious public health prob-
lems and lead to tremendous burden of health and economy worldwide(account for 17% of economic loss caused by diseases in developing countries). Cervical
ectopy is a common risk factor of STI(including HIV and human papilloma virus infections), especially in developing countries. OBJECTIVES: To assess the com-
parative safety and effectiveness of focused ultrasound(FU) and microwave(MW) for
cervical ectopy. METHODS: We searched Chinese Biomedical Literature data-
base (CBM), the Chinese Scientific Journals database (VIP),the China Academic Journals Full-text database (CNKI), MEDLINE, EMBASE, and Cochrane Library to July 31, 2013. Randomized controlled trials(RCTs) or
clinical controlled trials(CCTs) were included. Two reviewers independently screened for eligi-
bility studies, extracted data and assessed risk of bias. We assessed the quality of included studies using criteria from Cochrane Handbook 5.0.5 Statistical analysis was performed using RevMan 5.02. Results showed that new interventions dominated drug expenditure growth. Inpatient admission patterns and clinical prescription behavior should be a focus of drug spending controls. Health providers, insurance agencies, and policy makers can use these data to systematically intervene in health care service improvements instead of solely focusing on drug price regulations.

CONCLUSIONS: FU and MW are common physical therapies for cervical ectopy. Although available evidence suggested that FU is more safe and effectiveness than MW for treating cervical ectopy and preventing STIs. However, potential publication bias and low quality evidence will reduce the reliability of our results. More careful designed studies are needed to provide further clarification.

IN2
EFFECT OF VACCINATION AGE ON COST-EFFECTIVENESS OF HUMAN PAPILLOMAVIRUS VACCINATION AGAINST CERVICAL CANCER IN CHINA
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OBJECTIVES: The cost-effectiveness (CE) of human papillomavirus (HPV) vaccination in women with cervical cancer has been demonstrated in many countries. The aim of this study is to estimate the CE of a 3-dose bivalent HPV vaccination at ages 12 to 55 year in both rural and urban settings in China. METHODS: A previously published Markov model was modified and linked to the Chinese national cancer registry simulating the natural history of HPV infection and including the effect of screening and HPV vaccination over the lifetime of a 100,000 female cohort for ages 12 to 55 in rural and urban China. Transition probabilities and utilities were obtained from published literature. Cost parameters were derived from the 2013 China health statistics bulletin. RESULTS: Vaccine cost was assumed as Hong Kong listed price. Vaccine efficacy (VE) was based on the PATRIOT trial data assuming VE irrespective of HPV type at all ages on incident HPV. Costs and outcomes were discounted 3%. Cervical cancer (CC) cases and incremental cost-effectiveness ratio (ICER) for vaccination and screening com-
pared with screening alone were estimated for each vaccination age. Reduced VE in women post-sexual debut were investigated in scenario analyses. RESULTS: With 70% vaccination coverage, a reduction of CC cases varying from 585 to 32 in rural and 659 to 32 in urban were estimated at ages 12 to 55, respectively Vaccination remains CE up to age 23 in rural and age 25 in urban, as the discounted ICERs were lower than base case. DISCUSSION: The NHPD 2013/capita=20,2501SD, 125,723RB). Scenario analyses with lower VE post-sexual debut confirmed the results with age 20 in rural and 21 in urban to remain CE. CONCLUSIONS: HPV vaccination program could be valuable in China. HPV vaccination program could be valuable in urban and rural areas.

IN3
COST-EFFECTIVENESS ANALYSIS OF CASPOFUNGIN COMPARED TO CONVENTIONAL AMPHEROTICIN B (C-AMB) FOR EMPERIAL ANTIFUNGAL THERAPY IN FEBRILE NEUTROPenic PATIENTS IN THAILAND
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OBJECTIVES: The effectiveness of caspofungin versus C-AMB for empirical antifungal therapy in patients with neutropenic fever from health care provider perspective in Thailand. METHODS: A decision-analytic model was used to project costs and outcomes of caspofungin versus C-AMB from treatment initia-
tion until hospital discharge. Since there has not been a head-to-head compara-
tive trial, an indirect treatment comparison was developed based on clinical trials that used the same 5-end point composite outcomes, including resolution of fever, resolution of neutropenia, time to definitive source of bloodstream infection, and no premature discontinuation. Patients were stratified by the presence or absence of baseline infection. Discontinuation because of nephrotoxicity or other adverse events were not included in the model. Efficacy and safety data were collected from two randomized trials (2004 Scenario I) and Walsh 1999 Scenario II). Life expectancy, quality of life, medical resource utilization and disease-related costs were obtained from the literatures and projections. Drug price data were published in Thailand. All costs were expressed in THB 2013 values. RESULTS: Treatment with caspofungin increased life expectancy (LY) by 0.87 and 0.58 years, and resulted in additional 0.63 and 0.41 quality-adjusted life years (QALYS) when compared to C-AMB in Scenario I and II, respectively. In the base-case, use of caspofungin was cost saving in both scenarios. The results showed that caspofungin is cost-saving as long as the cost of treating nephrotoxicity is higher than 361,830 and 299,742 THB for the respective scenarios. The incremental cost-effectiveness ratio (ICER) increases if the cost of
treating nephrotoxicity or the relative rate of nephrotoxicity decreases. Probabilistic sensitivity analysis supported the robustness of these findings.
CONCLUSIONS: This is the first cost-effectiveness of caspofungin as empirical treatment in Thailand. Caspofungin reduces costs and is more cost effective and less costly compared to C-AMB, and the use of caspofungin is anticipated to have both budgetary and health benefits.

IN4
IMPACT OF MATERNAL EDUCATION ON CHILD IMMUNIZATION PROPENSITY IN CHINA
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OBJECTIVES: To estimate the effects of maternal education and other associ-
ated factors on the immunization propensity for children and adolescents in China.
METHODS: A longitudinal study of 2,541 households (5,109 children) in 2005 and 2,050 households (6,012 children) in 2006 was done. The study was designed to analyze the relationship between the immu-
nization receipt status and the potential determinants, including children’ char-
acteristics, family characteristics and the influences. The recommended immunization schedule for persons aged 0 through 18 in China is similar to that from Centers for Disease Control and Prevention in the U.S. Descriptive statistics were reported for the sample from 9 provinces of China in an analysis of Student t tests were conducted for the analysis of categorical data for immunization propensity as the dependent variable (i.e., any immunization received by your children during the past 12 months). Independent variables include children’s age, gender, whether preventive health care services covered by insur-
ance, their parents’ education level, the household income, transportation time to