health policy issues. The effects of each policy category were disentangled into Price, Volume and Quality; and where an effect was identifiable, by comparing to the intent of the policy, it was qualified by 3 sets of parameters: Direct-or-Indirect Effect, Desired-or-Undesired Effect and Decreasing-or-Increasing Effect. **RESULTS:** The identified 10 policies were grouped into 5 main categories: Essential Drug Listing & Price Control (3), Essential Drug Usage Promotion (2), Reimbursed Drug Listing & Price Control (2), Hospital Drug Price Controls (2), and Prescribing-Dispensing Separation (1). The majority (4/5) of the policy categories were targeted directly at lowering drug prices, and did achieve certain Direct-Desired-Decreasing effects on Price. Three of these four policy categories, however, also had indirect-undesired effects, mainly manifested as encouraging over-prescribing or lowering drug quality. The other policy aimed at promoting rational pharmaceutical prescribing failed to make tangible impact at national level. **CONCLUSIONS:** The drug policies implemented during 2009-2011 achieved limited success and new approaches towards reform will be needed to obtain better results.

EX4
RECENT TRENDS IN COMMUNITY PHARMACY PAYMENT OF NATIONAL HEALTH INSURANCE IN SOUTH KOREA

Choi SE[1], Cheong C[2], Lee H[2], Kim J[2], Lim EA[1]
[1]Korea University, Yeongi-gun, Chungnam, South Korea, [2]Seoul National University, Seoul, South Korea

OBJECTIVES: To investigate recent trends in reimbursement payment for pharmacy service and pharmaceuticals from the Korean National Health Insurance (NHI) using the NHI claims database. **METHODS:** Pharmacy claims data were extracted from the Korean NHI database from January 1, 2008 to March 31, 2011 by quarterly unit. The monthly number of prescriptions of each pharmacy, the average number of supply-days per prescription, and payment amount to each pharmacy including cost of pharmaceuticals and dispensing fees were calculated from the claims. The information of all community pharmacies such as the number of pharmacists in practice and pharmacy location was collected. The trends and variation in the pharmacy payment amount and the composition were traced on quarterly basis. **RESULTS:** Total claims of 15,996 pharmacies were included for analysis. The monthly reimbursed payment per pharmacy increased from 29.73 million Korean Won (KW) in 1Q 2008 to 36.41 million KW in 1Q 2011. While the increase related to dispensing fees was 1.73 million KW per pharmacy for this period, the amount contributing to pharmaceuticals increased from 4.95 million KW. The daily number of prescriptions per pharmacist was ranged from 39.41 in 2008/3Q to 51.09 in 2009/4Q, which is below the current daily threshold for the discount of dispensing fee in South Korea, 75 prescriptions per pharmacist. The average number of supply-days per prescription was ranged from 9.12 in 2008/1Q to 11.32 in 2010/3Q. **CONCLUSIONS:** While the number of prescriptions per pharmacist and supply-days of prescriptions were relatively stable, the reimbursement amount per pharmacy showed an increasing trend. The main source of the increase seemed to be the payment for pharmaceuticals rather than pharmacy services.

PODIUM SESSION II:
HEALTH TECHNOLOGY ASSESSMENT STUDIES

HT2
COST-EFFECTIVENESS ANALYSIS OF BONE MINERAL DENSITY SCREENING TOOLS

Kang E[1], Lee BK[2]
[1]Soonchunhyang University, Asan City, South Korea, [2]Soonchunhyang University, Cheonan City, South Korea

OBJECTIVES: The aim of this study was to compare the cost effectiveness of BMD-(Bone Mineral Density) screening tools- RA, QUS, pDXA, QCT, and DXA, for women's lifetime bone densitometry exam at 66 years old. **METHODS:** A total of 101 subjects aged in 60s' were recruited to estimate sensitivity and specificity of each BMD screening tool. A Markov model was developed to analyze the cost-effectiveness of DXA, QUS, RA, pDXA, and QCT. A cohort of 10,000 women aged 66 was constructed for each bone densitometry and a cohort of 10,000 women aged 66 was also constructed as a non-exam group. In the Markov model of osteoporosis and its related fractures, costs and effectiveness measured by QALY were estimated until the cohorts reached 100 years old or died. It was assumed that only costs were discounted by 5% and the compliance for osteoporosis drugs was 38%. Sensitivity analysis was performed on the discount rate and the compliance to osteoporosis drugs. **RESULTS:** ICER (incremental cost-effectiveness ratio) is an indicator of how much extra costs are needed to increase an extra 1 QALY compared to the reference group. The magnitudes of ICER's were ordered as DXA<pDXA<(QCT, RA, QUS). DXA and pDXA cost extra 398,618 won and 453,947 won, respectively, in order to increase 1 extra QALY compared to the non-exam group, which meant that DXA and pDXA were very cost-effective. The extra costs for QUS, RA, and QCT to increase 1 QALY compared to the non-exam group ranged 530,000 won‘590,000 won, which meant that these were also cost-effective. **CONCLUSIONS:** All the BMD screening tools that were examined in this study were found to be cost-effective in terms of ICER. When the relative cost-effectiveness of pDXA, QUS, RA, and QCT compared with DXA, DXA was predominant over the other.

HT3
DEVELOPMENT OF A CHECK LIST FOR QUALITY ASSESSMENT OF PHARMACOECONOMIC EVALUATIONS SUBMITTED FOR REIMBURSEMENT IN TAIWAN

Wu GHM[1], Liao CH[1], Shau WY[1], Lo PC[1], Pwu RF[2]
[1]Center for Drug Evaluation, Taipei, Taiwan, [2]Taipei Medical University, Taipei, Taipei, Taiwan

OBJECTIVES: It is not mandatory for pharmaceutical manufacturers to submit cost-effectiveness evidence yet in Taiwan, but an incentive of a maximum 10% mark-up for conducting local cost-effectiveness analysis has been announced since 2010. HTA/CDE (Division of Health Technology Assessment, Center for Drug Evaluation) assists the assessment on the strength of evidence of local cost-effectiveness evaluation, and a checklist was therefore developed to ensure the consistency and to improve the transparency. This study presents the impact of local pharmacoeconomic incentive and the development of the checklist. **METHODS:** By reviewing other international checklists for quality assessment of pharmacoeconomic evidence and adding items for local adaptation and transferability, a checklist consisting of four dimensions including PICOS, cost-effectiveness analysis design, source of parameters, and overall quality was developed with a four-level-grading for evidence strength. The local pharmacoeconomic evidence was identified from the dossiers submitted by the manufacturers during 2008-2011, and was independently assessed by the four reviewers in the economic evaluation team of HTA/CDE as reference cases. Discrepancies between reviewers were discussed until consensus was reached. **RESULTS:** There were 83 and 67 dossiers submitted for reimbursement before and after the incentive was announced, respectively. However, no local pharmacoeconomic evidence has been submitted until eight months after the incentive was announceed. Another four dossiers consist of five local pharmacoeconomic evaluation (one with multiple indications) were submitted in 2011. The strengths of evidence were graded as strong, medium, low, and very low for 0, 1, 2, and 3 cases according to the checklist. **CONCLUSIONS:** A pragmatic strategy was used to incorporate cost-effectiveness evidence into the drug reimbursement decisions in Taiwan. Local pharmacoeconomic evidence submissions increase slowly after the incentive was announced. A quality assessment checklist was proposed. Further experience will be cumulated and discussed among the submitting bodies, the appraisal committee members, and HTA/CDE.

HT4
HEALTH TECHNOLOGY ASSESSMENT MAP IN ASIA – REGIONAL VERSUS INTERNATIONAL INFLUENCES

Andreykiv M[1], Wiebinga C[1], Gabel C[2], Zorzi O[1]
[1]Quintiles, Hoofddorp, The Netherlands, [2]Quintiles, Singapore, Singapore

OBJECTIVES: To gain insights into health technology assessments (HTA) landscape in Asia and to better understand international influence dynamics across interconnected HTA universe. **METHODS:** Information on major Asian HTA agencies (NECA, HITAP, CDE, etc) was collected and analysed at the level of four data categories: agencies, institutions, people (members) and assessments. For each category a number of attributes were included (such as location, affiliations, memberships, type of technology, decision on technology). The Ni3 software was applied to add multiple types of connections between the datasets to conduct the analysis and visualize HTA networks. The tool enabled mapping of relationship links that represent direction and weight of influence, overlaying displayed stakeholders with visual charts summarizing sets of quantitative values (such as number of employees or budget) for visual pattern matching and comparison, and geographic analysis. **RESULTS:** The analysis revealed the initiated collaboration between HTA stakeholders in the Asia region. In the centre of the Asian HTA ecosystem are located the most established agencies in Korea, Taiwan and Thailand where HTA already yields important evidence to inform policy and practice. The visual analysis revealed patterns of collaboration where agencies were 1) referring to each other; 2) referring to the same sources and academic institutions, and 3) absorbing the experience from well-established European HTA agencies such as NICE or IQWIG. **CONCLUSIONS:** HTA has expanded globally and can be characterised by common patterns in interactions when looking at and refining the evidence required for the reimbursment. Rapidly growing in number and in influence HTA organizations in Asia are strengthening their abilities through collaboration with each other, by involving independent research institutions into the HTA process and by building upon European HTA experience.

PODIUM SESSION II:
PREFERENCE-BASED OUTCOMES STUDIES

PR1
DOES MEDICATION ADHERENCE CORRELATE WITH HEALTH-RELATED QUALITY OF LIFE? FINDINGS FROM A DESCRIPTIVE ANALYSIS

Saleem F[1], Hassali MA[1], Shafie AA[1], Aljadhey H[2], Haq N[1], Atif M[3]
[1]Universiti Sains Malaysia, Penang, Malaysia, [2]King Saud University, Riyadh, Riyadh, Saudi Arabia, [3]Allianze University College of Medical Sciences (AUCMS), Penang, Malaysia

OBJECTIVES: To evaluate the association between medication adherence and Health Related Quality of Life (HRQoL) among hypertension patients in Quetta city, Pakistan. **METHODS:** A questionnaire based cross sectional study design was undertaken with hypertension patients attending public hospitals in Quetta city, Pakistan. HRQoL was measured by Euroqol EQ-5D. Medication adherence was assessed by Drug Attitude Inventory. Descriptive statistics was used to tabulate demographic and disease related information. Spearman's correlation was used to assess the association between the study variables. All analysis was performed by using SPSS 17.0. **RESULTS:** Among 385 study patients, mean age (SD) was 39.02 (6.59), with 68.8% of males dominating the entire cohort. Mean (SD) duration of hypertension was 3.01±0.939 years. Forty percent (n=154) had bachelor level of education with 34.8% (n=134) working in the private sector. Negative and weak correlation (-0.77) between medication adherence and EQ-5D was reported. In addition, negative week but significant correlation (-0.120, p=0.019) was observed among medication adherence and EQ-VAS. **CONCLUSIONS:** No apparent relationship between medication adherence and HRQoL was reported. Improved medication adherence therefore in patients with hypertension does not necessarily im-