Japan. In this study, we conducted an economic evaluation of a universal infant hepatitis B vaccination compared with the current selective strategy of vaccinating high-risk infants. **METHODS:** A cost-effectiveness analysis was conducted using a Markov model. The state transition process was defined as a series of 9 states including susceptible, immune, acute hepatitis, fulminant hepatitis, asymptomatic carrier, chronic hepatitis, liver cirrhosis, hepatocellular carcinoma and death. All data on cost, epidemiology and utility were derived from official statistics, published literatures and expert opinion. The incremental cost-effectiveness ratio (ICER) per quality-adjusted life year gained and life-year gained were calculated at a 3% discount rate. The analysis was performed from payer's perspective and time horizon was set to 100 years. One-way sensitivity analysis was undertaken. All parameters were projected to the population of 2009 birth cohort, 1.078 million. **RESULTS:** By introducing the universal hepatitis B vaccination, 1,507 patients and 197 deaths caused by HBV related liver diseases were expected to be prevented. Cost of medical care was saved 770 million yen, but the cost of vaccination was 1.77 billion yen. Estimated ICERs were 18,300,515 yen/QALY and 20,093,520 yen/LYG. When the cost of vaccination was 5,600 yen(1,868 yen per dose), ICER was 5,000,000 yen/QALY. **CONCLUSIONS:** At a cost of 5,600 yen(1,868 yen per dose) of vaccination, universal hepatitis B policy was considered to be cost- effective in Japan. In hepatitis B, regional differences of genotype were well-known and affected the sequel of hepatitis B related diseases. Because most of the epidemiological data employed in this study were derived from foreign literatures, we try to replace then into estimated local data. This study was partially supported by the grant of Japanese Ministry of Health, Labor and Welfare (Research on Applying Health Technology).

PHS45

COST EFFECTIVENESS ANALYSIS OF A SPECIALIST SERVICE AND ADRENALINE INJECTORS IN ANAPHYLAXIS

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OBJECTIVES: Anaphylaxis is a severe life threatening acute event that can have a number of triggers. Specialist services are believed to be important in preventing recurrence and current lack of referral might mean high recurrence rates and unnecessary cost. Also, lack of timely and correct use of adrenaline injectors might lead to significant excess mortality. The study objective was therefore to assess the cost effectiveness of specialist service versus standard care with or without prescription of adrenaline injectors. **METHODS:** A Markov model validated by clinical experts was constructed, which modeled anaphylaxis according to trigger, either food, drug, insect or idiopathic. Anaphylaxis mortality was modeled as a function of time to die and time for emergency response. Probabilistic sensitivity analysis on key parameters was performed. **RESULTS:** Standard care with injectors was dominated by specialist service with or without injectors. Specialist service with no injectors would be cost effective if the threshold for a Quality Adjusted Life Year was greater than about £740 and with injectors would be cost effective if the threshold was greater than £1800. These results were robust to all sensitivity analyses except at relatively extreme values of a small number of parameters. **CONCLUSIONS:** This is the first study to address the cost effectiveness of specialist service or adrenaline injectors in anaphylaxis. The results showed that specialist service with adrenaline injectors was cost effective at a threshold of £20,000 per Quality Adjusted Life Year. More well designed prospective studies on the effectiveness of specialist services are needed to confirm these findings.

PHS46

COST-EFFECTIVENESS OF A SECONDARY PREVENTION PROGRAM IN PATIENTS WITH MYOCARDIAL INFARCTION: RESULTS FROM A RANDOMISED CONTROLLED TRIAL (PROACTIVE HEART)

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OBJECTIVES: Participation in coronary heart disease (CHD) secondary prevention programs is low, therefore an innovative program is needed to meet this treatment gap. As a secondary aim within a large trial, the current study evaluated cost-effectiveness of a telephone-delivered secondary prevention program for myocardial infarction patients compared to usual care. **METHODS:** A total of 430 adult myocardial infarction patients were randomised to a six-month CHD secondary prevention 'health coaching' intervention or usual care condition. Primary outcome variables were health-related quality of life (SF-36) and physical activity (Active Australia Survey). Data were collected at baseline, 6 months (post-intervention) and 12 months (6 months post-intervention). A secondary cost-effectiveness analysis was conducted. Health utility (SF-6D) and health care utilisation data were collected using self-reported (GP, specialist, other health professionals, health services, and medication) and claims data (hospitalisation rates). Multiple imputation techniques were applied to adjust for missing data. Intervention effects are presented as mean difference (95% CI), p value. **RESULTS:** Improvements in health status (SF-6D) were observed in both groups, with no significant difference between the groups at 6 [0.012 (-0.016, 0.041), p=0.372] or 12 months [0.011 (-0.028, 0.051) p=0.738]. Patients in the health coaching group were significantly more often admitted to hospital due to causes not related to cardiovascular disease (p=0.042). The overall cost for the health coaching group was higher ($10,574 vs. $8,534, p=0.021), mainly due to higher hospitalisation costs ($6,841 vs. $4,984, p=0.036). The incremental cost-effectiveness ratio was $85,423 per QALY. **CONCLUSIONS:** ProActive Heart is not a cost-effective intervention compared to usual care. There was no intervention effect on SF-6D at 6 or 12 months and it resulted in significantly increased costs. This higher cost may in the future eventuate in cost savings, as patients are better monitored and health problems may be identified at an earlier stage resulting in better health outcomes.

PHS47

COST-UTILITY ANALYSIS OF ROTIGOTINE IN RESTLESS LEGS SYNDROME FROM THE NHS SCOTLAND PERSPECTIVE

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OBJECTIVES: To assess the cost-effectiveness of rotigotine transdermal patch relative to placebo and oral dopamine agonists (ropinirole and pramipexole) in the treatment of moderate-to-severe idiopathic restless legs syndrome (RLS) from the perspective of National Health Service (NHS) Scotland. **METHODS:** A cost-utility analysis was conducted using a decision tree in order to measure the cost per quality-adjusted life-year (QALY) gained resulting from the treatment of moderate-to-severe idiopathic RLS in 2008. Clinical, safety and quality of life data were extracted from the literature. The decision analytic model was run for a 1-year time horizon in the base-case analysis. The model included direct medical costs, augmentation rate and the most common adverse events. Sensitivity analyses assessed the effect of varying the time horizon to 9 months, 2 and 5 years. An annual discount rate of 3.5% was applied to costs and benefits for analysis beyond 1 year. **RESULTS:** Over a 1-year period, treating patients with rotigotine would result in a total cost of £1658 per patient as compared with £606, £1152 and £1055 for placebo, ropinirole and pramipexole respectively. Treatment with rotigotine resulted in 0.842 QALYs gained compared with 0.691 for placebo, 0.753 for ropinirole and 0.780 for pramipexole. The cost per QALY gained for rotigotine was £6990 versus placebo, £5725 versus ropinirole and £9729 versus pramipexole. Probabilistic sensitivity analysis has shown that the probability of rotigotine being cost-effective compared with placebo, ropinirole and pramipexole is greater than 0.90 at a willingness to pay threshold of £13,000. At a threshold of £20,000, the probability of rotigotine being more cost-effective is close to 1 versus placebo and ropinirole and 0.93 versus pramipexole. **CONCLUSIONS:** Rotigotine transdermal patch was shown to be a cost-effective treatment in patients with moderate-to-severe restless legs syndrome from the payer's perspective (NHS Scotland).

PHS48

COST-EFFECTIVENESS ANALYSIS OF TOLVAPTAN FOR HYPONATREAMIA IN SOUTH KOREA

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OBJECTIVES: To evaluate the cost-effectiveness of tolvaptan for hypervolemic or euvolemic hyponatremia in South Korea. **METHODS:** A decision tree was constructed to assess the clinical and economic impact over 30 days from restricted societal perspective. A competitor was supportive care. The result was presented as the incremental cost per QALY gained. We supposed that patients would move to 3 different serum sodium levels; normonatremia (>135mEq/L), mild hyponatremia (130-135mEq/L), marked hyponatremia(<130 mEq/L) after 4 days treatment. Each level had three states; discharge, continuing hospitalization and death. According to serum sodium level, Patients had difference their length of hospital stay. Uncertainty was explored with deterministic sensitivity analysis. **RESULTS:** The analysis showed that cost of tolvaptan was 1,358,370 KRW and supportive care was 1,396,092 KRW. The use of tolvaptan reduced 37,722 KRW for supportive care. QALYs were 0.047203, 0.042146 (tolvaptan, supportive care, respectively). Tolvaptan had 0.00506 QALYs higher. Cost-effectiveness analysis represented tolvaptan was dominant. The deterministic sensitivity analysis for uncertain parameters demonstrated that this analysis results were robust. **CONCLUSIONS:** Tolvaptan was cost-effective for hyponatremia in comparison with supportive care. The first medicine as oral vasopressin receptor antagonist, tolvaptan could increase patients' quality of life for hyponatremia in Korean population.

PHS49

COST OF HYPOGLYCAEMIA IN PATIENTS WITH DIABETES IN POLAND

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OBJECTIVES: Estimation of indirect and selected direct costs of hypoglycaemia in patients with type 1 and type 2 diabetes in Poland. **METHODS:** The study was conducted at 4 Polish diabetes centres- 2 urban and 2 suburban. Anonymous questionnaire comprising 35 questions was used in direct interviews. Data were analysed in a population of 180 patients with diagnosed diabetes who experienced severe (requiring third party support) or/ and non-severe hypoglycaemia during last year. Indirect costs were estimated using a human capital approach based on lost Gross Domestic Product (GDP) and lost gross earnings. Additional estimations of direct costs, which could be attributed to hypoglycaemic event, were based on used medical resources and their unit prices. **RESULTS:** There were on average 0.16 episodes of severe and 4.66 episodes of non- severe hypoglycaemia per patient in the recall period (1month). An average total monthly cost of severe hypoglycaemia was 699.77 EUR, with hospitalisation being a main cost driver, and 40 EUR in the case of a non-severe episode. 23% of the studied population was professionally active. A total average time lost was equal to 3.85 hours, which in Polish conditions gave an absenteeism cost per month of 16.27 EUR (GDP lost) and 16.99 EUR (lost earnings) per person per month. 52.38% of employed patients reported reduced productivity while at work (presenteeism). Its value was estimated at the level of 14.88 EUR and 15.53 EUR per patient per episode according to GDP and earnings lost respectively. Indirect costs related to sick-leaves and hospitalisations in working-age population were not reported in the study. **CONCLUSIONS:** Hypoglycaemic