

PUK2

LINKING CNI REGIMEN ADHERENCE TO HOSPITAL DAYS AND HEALTH CARE COSTSLegorreta AP¹, Gilmore AS², Marehbian J², Naujoks C³, Kilburg A³¹UCLA School of Public Health, Los Angeles, CA, USA, ²Health Benchmarks, Inc, Woodland Hills, CA, USA, ³Novartis Pharma AG, Basel, Switzerland

OBJECTIVES: The advantages of improved adherence to immunosuppression include reduced morbidity, mortality, and health care costs. Our aim was to examine calcineurin inhibitor (CNI) adherence following kidney transplantation and the effect on hospital days and health care costs. **METHODS:** US claims data from 10 US health plans for de novo patients receiving kidney transplants between 1995 and 2005 were employed. Patients with \geq one post-transplant claim for cyclosporine modified (CsA) or tacrolimus (tac) were included. CNI adherence was defined as the medication possession ratio (MPR) or the number of therapy days supplied to the number of followup days during the year following the first CNI claim. Patients who switched to another CNI medication or were not continuously enrolled in the health plan were excluded. Zero-inflated negative binomial regression was used to examine the relationship between CNI adherence and hospital days. **RESULTS:** Of 821 enrolled patients, 51% were in the CsA and 49% in the tac cohorts. The groups were not different with regard to age, gender, income, level of comorbidity, or number of hospital days during the adherence measurement period. A total of 28% of the CsA group was 100% adherent (MPR = 1) compared to 21% in the tac group ($p = 0.02$). Holding patient characteristics and prior utilization constant, receiving CsA was associated with 15 (95% CI: 5, 40) fewer hospital days compared to tac. Also, increasing levels of adherence by one standard deviation reduced days spent in the hospital by 12 (95% CI: 9, 30). This difference in hospital days likely impacted total health care costs, which were significantly lower for CsA (\$13,949) compared to tac (\$20,896) during the same period ($p = 0.009$). **CONCLUSIONS:** Receiving cyclosporine modified following transplantation was associated with higher levels of adherence, fewer hospitalizations, and lower total health care costs.

PUK3

BUDGET IMPACT ANALYSIS OF INCLUDING RENAL REPLACEMENT THERAPY IN THE BENEFIT PACKAGE OF UNIVERSAL COVERAGE IN THAILAND

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OBJECTIVES: To estimate the amount of government health budget required for the extension of access to renal replacement therapy (RRT) towards beneficiaries of the universal health care coverage (UC) scheme in Thailand. Ability of the government to bear the increasing budget and appropriate measures to cope with anticipated costs of including RRT in the benefit package were also investigated. **METHODS:** Literature review on demand for RRT at both domestic and international levels, and the estimate of costs for haemodialysis and continuous peritoneal dialysis in Thailand. From the government perspective, several scenarios of budget requirements according to the estimated costs for RRT and possible rationing criteria were calculated. **RESULTS:** The government would spend approximately more than five billion Baht during the first year of implementation, if there is neither strategy to reduce the costs for RRT nor appropriate selection criteria for end-stage renal disease patients. The budget for universal access to RRT would increase to 74,355 million Baht in the sixteenth year of implementation if the government played passive roles in controlling costs of the program.

The budget required would reduce to 58% of the estimate if the government introduced the rationing criteria for patients aged less than 60 years. **CONCLUSIONS:** The policy on the extension of access to RRT should be considered carefully by the government because of its financial impact on the government health budget. Appropriate interventions including effective measures to control costs of RRT, strategies to reduce the incidence of end-stage renal disease, and the rationing criteria for access to RRT are needed if the decision to implement the policy is made.

PUK4

AN ECONOMIC EVALUATION OF DE NOVO RENAL TRANSPLANT RECIPIENTS USING BRANDED (B-CSA) VS. NON-BRANDED CYCLOSPORINE MODIFIED (NB-CSA)Helderman JH¹, Gilmore AS², Ryskina K², Legorreta AP³, Naujoks C⁴, Machnicki G⁴¹Vanderbilt University, Nashville, TN, USA, ²Health Benchmarks, Inc, Woodland Hills, CA, USA, ³UCLA School of Public Health, Los Angeles, CA, USA, ⁴Novartis Pharma AG, Basel, Switzerland

OBJECTIVES: Despite concerns regarding bioequivalence of NB-CsA to B-CsA, generics constitute the second most widely used form of CsA in the US. We assessed whether potential cost savings associated with the lower acquisition cost of generics are realized with NB-CsA. **METHODS:** Claims data from eight commercial health plans were linked to Organ Procurement Transplant Network data. De novo kidney recipients with \geq 1 pharmacy claim for B-CsA ($n = 247$) or NB-CsA ($n = 64$) were included. Information was collected for 1 year before and after initial (index) CsA claim. Patients who switched between study drugs or had <1 year pre- or post-index data were excluded. Log transform regression with backward selection was used to model costs in the first year post-index. Statistical significance of cohort differences in predicted costs was determined by bootstrapping with 1000 repetitions. **RESULTS:** Baseline demographics were similar between the two cohorts; 62% male, 60% age >45 years, and 10% African American. Total prescription medication costs were higher for NB vs. B-CsA (\$14,233 vs. \$12,606, $p = 0.04$), reflecting higher costs for both immunosuppressant (IS) and non-IS drugs incurred by the NB-CsA cohort. NB-CsA patients had higher inpatient costs (\$17,459 vs. \$7904), more hospitalizations (4.5 vs. 3.2, respectively), and slightly higher outpatient costs (\$8547 vs. \$7477) vs. B-CsA. Utilization for gastrointestinal symptoms (e.g., abdominal pain, vomiting, diarrhea) was higher in the NB vs. B-CsA cohort (13% vs. 5%, $p = 0.04$) as were total health care costs (\$40,239 vs. \$27,988, $p = 0.07$). After controlling for patient characteristics and pre-transplant costs, total costs were 27% higher ($p = 0.03$) for NB vs. B-CsA. For the average patient taking NB vs. B-CsA, predicted costs were \$8291 higher (95% CI: \$122, \$21,278). **CONCLUSIONS:** Despite lower acquisition cost of generics, de novo renal transplant recipients initiated on NB-CsA incurred increased health care costs, which appeared to be driven by costly pharmacy and inpatient utilization.

PUK5

COSTS AND COST-EFFECTIVENESS OF EPOETIN IN PATIENTS WITH CHRONIC RENAL INSUFFICIENCY DURING THE PREDIALYSIS PERIOD IN POLANDNiewada M¹, Kowalik E², Jakubczyk M³, Rutkowski B⁴, Szkulciecka-Debek M⁵¹Medical University of Warsaw, Warsaw, Poland, ²Institute of Cardiology, Warsaw, Poland, ³Warsaw School of Economics, Warsaw, Poland, ⁴Medical University of Gdansk, Gdansk, Poland, ⁵Roche Polska Sp. z o.o. Warsaw, Poland