

OBJECTIVES: To analyze the cost of hemodialysis (HD) and peritoneal dialysis (PD) in different regions of Russia. **METHODS:** Open source information search. Direct cost analysis. **RESULTS:** During the information search current tariffs have been found for 25 regions for HD and for 11 regions for PD. Tariff per one HD procedure has ranged from \$ 96 for the republic Chuvashia to \$ 319 for the Khanty-Mansi Autonomous Area, i.e. annual cost of the HD per patient amounted to \$ 14976 and \$ 49764, respectively. The cost of a single procedure HD in Moscow was \$ 162, which corresponds to an annual expenditure of approximately \$ 25272 per patient.

The average cost of the procedure HD in the Russia amounted to about \$ 150 and the annual cost of HD for one patient - \$ 23400. The cost of one exchange PD ranged from \$ 15 in the Nizhny Novgorod region to \$ 84 in the Khanty-Mansi Autonomous Area. Thus, the annual costs on the PD upon 4 exchanges per day for per patient in these regions were \$ 21900 and \$ 122640, respectively. The cost of one PD exchange in Moscow was \$ 26, which corresponds to an annual expenditure of approximately \$ 37960 per patient. The average cost of one exchange PD in Russia amounted to \$ 22, and the average annual cost per patient - \$ 32120 (accepted exchange rate was 1 \$ = 33,35 RUB). **CONCLUSIONS:** Thus, during the cost analysis it has been revealed that the cost of dialysis among the subjects of Russia differs in more than 3 times, despite the fact that the same set of medical services is provided in each region.

PUK18

COST OF IN-PATIENT HOSPITALIZATIONS FOR CHRONIC KIDNEY DISEASE IN THE UNITED STATES

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OBJECTIVES: To understand the trends in rate and cost of hospitalizations due to Chronic Kidney Disease (CKD) in the U.S. **METHODS:** We analyzed the last five years of hospitalizations with ICD-9 diagnosis codes of CKD and End Stage Renal Disease (ESRD). The annual number of hospitalizations for specific diagnosis was obtained from AHRQ's National In-patient Sample (NIS) databases of 2005-2009. Data was also analyzed for length of stay (LOS), charges and cost of hospitalization. **RESULTS:** During the last five years the number of hospitalizations with diagnosis of CKD and ESRD has increased 4.1 and 4.6 fold, respectively. In 2009, an estimated 1,634,422 and 931,641 hospitalizations were with diagnosis of CKD and ESRD respectively. The mean LOS for patients with CKD increased from 4.9 to 5.5 days between 2005-2009. The mean LOS for patients with ESRD has remained steady at ~6 days between 2005-2009. The cost of hospitalization with diagnosis of CKD has increased 31% between 2005-2009. The cost of hospitalization with diagnosis of ESRD has increased 21% between 2005-2009. In 2009, the mean cost of hospitalization for patients with CKD and ESRD was \$11,209 and \$21,358, respectively. **CONCLUSIONS:** Hospitalizations due to CKD and ESRD have significantly increased during the last five years. There is a need for prevention, treatment, and disease management programs to lower the medical and socioeconomic burden of this disease.

PUK19

COSTS OF DELAYED GRAFT FUNCTION AFTER KIDNEY TRANSPLANTATION IN LIVING AND DECEASED DONOR RECIPIENTS

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OBJECTIVES: Although delayed graft function (DGF) on kidney transplantation outcomes have been associated with worse allograft and patient survival, the cost impact has not been recently explored using a large retrospective database and assessed after transplantation hospitalization. Our objective was to determine the financial impact of delayed graft function (DGF) in primary kidney transplant recipients of deceased (DD) and living donor (LD) recipients in the early post-operative and long-term follow-up periods. **METHODS:** A retrospective analysis of USRDS and Medicare claims from 2004-2009. Subjects excluded were multiple transplants, donor <5 yo, and transplantation payments <\$15,000. DGF was defined as requiring dialysis within the first week post-transplantation. Total direct medical costs were assessed for 1, 3, 6, 12, 24, and 36-month time intervals post-transplant. Uni-variate analyses of covariates were assessed for association with log-transformed charges. Significant variables ($p < 0.05$) were included in multivariate regression. Base charge was calculated using a mean of standard demographic and outcome characteristics. **RESULTS:** After application of exclusion criteria and data validation, 22,616 DD and 7,373 LD recipients were evaluated. In multivariate analysis, DGF was an independent predictor of charges at 1, 3, 6, and 12 months of \$3,920 ($p < 0.0001$), \$1,962 ($p < 0.0001$), \$839 ($p = 0.006$) and \$1,026 ($p = 0.019$), respectively in DD. In LD, DGF was an independent predictor of charges at 1, 3, and 6 months of \$145 ($p = 0.012$), \$4,558 ($p < 0.0001$), and \$3,629 ($p = 0.001$), respectively. **CONCLUSIONS:** DGF is a significant independent predictor of greater health resource utilization in renal transplantation that impacts costs beyond the transplant hospitalization. This impact extends longer in DD compared to LD. This information should be considered in addition to clinical outcomes expected based on the individual transplant candidate to determine likelihood of successful patient and allograft outcomes.

PUK20

COST-CONSEQUENCES ANALYSIS OF TREATMENT REGIMENS USED FOR THE MANAGEMENT OF LOWER URINARY TRACT SYMPTOMS (LUTS) ASSOCIATED WITH BENIGN PROSTATIC HYPERPLASIA (BPH)

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OBJECTIVES: Combination therapy with an α -blocker and an antimuscarinic is recommended for men with moderate-to-severe LUTS/BPH if symptom relief is

insufficient with monotherapy. We evaluated the cost and resource utilisation, in the UK health care system, of three treatment scenarios: tamsulosin (0.4mg) monotherapy; tolterodine (modified release, 4mg) + tamsulosin given concomitantly; and fixed-dose combination (FDC) of solifenacin 6mg + oral controlled absorption system [OCASTM] formulation of tamsulosin (TOCAS, 0.4mg). **METHODS:** A Markov model, with a monthly cycle length and 1-year time horizon, compared the cost of treating 1,000 men with LUTS/BPH who have moderate-to-severe storage symptoms and voiding symptoms. All patients were initially treated with tamsulosin monotherapy. Patients with inadequately controlled symptoms at week 12, based on Total Urgency and Frequency Score (TUFS), the daily sum of all recorded Patient Perception of Intensity of Urgency Scale [PPIUS] scores from micturition diaries), were considered for FDC solifenacin 6mg + TOCAS or tolterodine + tamsulosin. Patients adequately controlled at week 12 continued tamsulosin monotherapy. Thereafter, patients could discontinue therapy each month based on reported medication persistence data. Patients who discontinued treatment were eligible for surgery or other medical management. **RESULTS:** Compared with tamsulosin monotherapy, total costs per patient, over a 1-year time horizon, were reduced by £133.75 for tolterodine + tamsulosin and reduced by £154.85 for FDC solifenacin 6mg + TOCAS. **CONCLUSIONS:** Our findings suggest FDC solifenacin 6mg + TOCAS reduces annual health care costs compared with tamsulosin monotherapy and tolterodine + tamsulosin in patients with inadequately controlled storage symptoms. Lower total cost for FDC solifenacin 6mg + TOCAS and tolterodine + tamsulosin versus tamsulosin monotherapy was largely driven by improved symptom control. The relatively lower total cost for FDC solifenacin 6mg + TOCAS versus tolterodine + tamsulosin (£21 per patient/year) was principally due to improved persistence with FDC solifenacin 6mg + TOCAS.

PUK21

COST-EFFECTIVENESS OF A FIXED-DOSE COMBINATION OF SOLIFENACIN AND TAMSULOSIN IN MEN WITH LOWER URINARY TRACT SYMPTOMS (LUTS) ASSOCIATED WITH BENIGN PROSTATIC HYPERPLASIA (BPH)

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OBJECTIVES: Combination therapy with an α -blocker and an antimuscarinic is recommended for men with moderate-to-severe LUTS/BPH if symptom relief is insufficient with monotherapy. We evaluated the cost-effectiveness of fixed-dose combination (FDC) solifenacin 6mg + oral controlled absorption system (OCASTM) formulation of tamsulosin (TOCAS, 0.4mg) versus tolterodine (modified release, 4mg) + tamsulosin (0.4mg) given concomitantly, from the perspective of the UK NHS. **METHODS:** A Markov model, with a time horizon of 1 year, was developed for men with LUTS/BPH who have moderate-to-severe storage symptoms (≥ 8 micturitions/day and ≥ 2 urgency episodes/day [Patient Perception of Intensity of Urgency Scale, PPIUS, grade 3 or 4]) and voiding symptoms treated with FDC solifenacin 6mg + TOCAS or tolterodine + tamsulosin. Treatment success was defined using the Total Urgency and Frequency Score (TUFS), the daily sum of all recorded PPIUS scores from micturition diaries). The phase 3 NEPTUNE study was used to estimate transition probabilities and utilities were derived from analysis of EQ-5D data. Other model input parameters included discontinuation rates, derived from a large UK database study (THIN). Univariate and probabilistic sensitivity analyses were performed. **RESULTS:** FDC solifenacin 6mg + TOCAS was associated with lower total annual costs (£520 vs £583) and increased quality adjusted life years (QALYs, 0.840 vs. 0.838), and was therefore dominant compared with tolterodine + tamsulosin. Time horizon, discontinuation/withdrawal rates, drug cost and utility values were the main drivers of cost-effectiveness. The probability that FDC solifenacin 6mg + TOCAS is cost-effective was 100% versus tolterodine + tamsulosin, at a willingness to pay threshold of £20,000/QALY gained. **CONCLUSIONS:** FDC solifenacin 6mg + TOCAS is dominant compared with tolterodine + tamsulosin for the treatment of men with LUTS/BPH who have moderate-to-severe storage symptoms and voiding symptoms. To our knowledge, this is the first cost-effectiveness analysis of a FDC in this patient population.

PUK22

ECONOMIC EFFECTS OF TREATMENT OF CHRONIC KIDNEY DISEASE WITH LOW-PROTEIN DIET

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OBJECTIVES: The most recent literature has shown extensively that a low protein diet in patients with Chronic Kidney Disease (CKD), delays the natural progression of the end stage renal disease (ESRD) and the necessary treatment of chronic dialysis. The aim of this study is to estimate the cost-effectiveness of a low protein diet compared with no dietary treatment in patients with CKD stage 4 and 5 after 2, 3, 5 and 10 years. **METHODS:** It was developed a Markov model to estimate costs and QALYs associated with low protein diet versus no treatment for patients with CKD stage 4-5. The transition probability was estimated on data from seven studies which determined the efficacy of low protein diets in delaying the need to start maintenance dialysis. Utilities and cost were estimated from literature review and projected for the lifespan considered in the model. The annual cost of dialysis per patient was approximately €34,072. The costs of a low-protein diet was €1,440 per patient per year in the Lazio Region (conservative assumptions). Probabilistic and Deterministic sensitivity analysis were performed. **RESULTS:** The model estimate that low-protein diet should be more effective. Dietary treatment improve 0.09 QALYs after two years, 0.16 after three years, 0.36 after five years and up to 0.93 incremental QALYs after the first 10 years. After two years the model estimate incremental cost in favour of dietary treatment of €1,325, €3,023, €6,906 and €13,829 for 2, 3, 5 and 10 years of follow-up respectively. **CONCLUSIONS:** The results of these simulations indicate that the treatment of CKD patients with a