RESULTS: Within 2 years of incision, excision and anastomosis of intestine, 14.3% of patients had obstruction, 2.6% required an adhesiolysis for obstruction, and 12.9% underwent additional open colorectal or general surgery. After other operations of intestine, 17% of patients had obstruction, 3.1% required an adhesiolysis, and 20.2% underwent additional surgery. After operations of rectum, rectosigmoid and perirectal tissue, 15.3% of patients had obstruction, 5.1% required an adhesiolysis, and 16.4% underwent additional surgery.
CONCLUSIONS: In this study of Medicare patients, bowel obstruction, adhesiolysis for obstruction, and additional abdominal surgery occurred more often after abdominal surgery than previously published.

TPRD3

OUTCOMES OF TREATMENT OF UNCOMPLICATED HYPERTENSION WITH DIHYDROPYRIDINE CALCIUM CHANNEL BLOCKERS

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OBJECTIVE: To compare the effectiveness and costs of care for nifedipine-CC and amlodipine when used for initial management of uncomplicated hypertension.
METHODS: A retrospective analysis was conducted using outpatient pharmacy, provider, and hospital discharge claims records of continuously eligible Pennsylvania Medicaid patients started on either drug in 1994 without prescriptions for other anti-hypertensive agents or reported cardiovascular complications in the 8 months prior to initial nifedipine-CC or amlodipine prescription. Comparison of three indicators of change in prescriptions were evaluated to provide information on medication effectiveness. Chi-square tests of association were conducted to evaluate effectiveness indicators while linear regression was utilized to compare costs.
RESULTS: Patients satisfying inclusion/exclusion criteria who received nifedipine-CC ($n = 151$) or amlodipine ($n = 316$) had similar demographic characteristics and levels of comorbidity. A slightly greater percentage of patients started on nifedipine-CC had prescription records consistent with cross-over to a different calcium channel blocker (15.3% versus 10.3%) while a greater percentage of patients started on amlodipine had records consistent with cross-over to another class of anti-hypertensive agent (7.3% versus 13.2%). In adherent patients, other anti-hypertensive drugs were added to each regimen to a similar extent and no differences were found in adverse events that were reported. Total pharmacy costs were determined to be significantly higher ($p < 0.0001$) in patients started on amlodipine ($2536 higher in patients with the most comorbidity to $293 in the least).
CONCLUSIONS: The results suggest these drugs have similar effectiveness and that physicians' drug preferences can have important effects on total pharmacy costs.

TPRD4

THE COST-EFFECTIVENESS OF IMMUNOSUPPRESSIVE THERAPY AFTER RENAL TRANSPLANTATION

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OBJECTIVE: The purpose of this study is to evaluate the cost-effectiveness of the immunosuppressive regimen, cyclosporine, mycophenolate mofetil, and prednisone (CMP), in improving 3-year graft survival in kidney transplant recipients as compared to the immunosuppressive regimen, cyclosporine, azathioprine, and prednisone (CAP).
METHODS: A sample of kidney transplant recipients receiving either cadaveric or living donor transplants in 1996 was selected from the United States Renal Data System (USRDS). Direct costs were estimated from Medicare reimbursements and included: outpatient costs, hospitalization costs due to rejection episodes, infectious complications, or graft failure, dialysis costs due to graft failure, and medication costs. The effectiveness measure was length of graft survival and expressed as the total number of life-months with an intact graft. A Markov model including three Markov states (e.g., graft intact, return to dialysis as a result of graft failure, and death) and two transient states (e.g., graft rejection and complications) was used to model the course of progression and continuous risk of graft rejection. The USRDS data were also used to estimate transplant recipients' transition probabilities throughout the Markov stages.
RESULTS: Although mycophenolate mofetil costs substantially more than azathioprine ($6000 versus $1000 annually), preliminary findings suggest that the CMP regimen is more cost-effective than CAP because of the reduction in hospitalizations and treatment costs saved by avoiding acute graft rejection episodes.
CONCLUSIONS: Our study provides valuable information regarding the most cost-effective immunosuppressive regimen to renal transplant centers. Findings from this study will also be of interest to the Medicare End-Stage Renal Disease (ERSD) program since a majority of the kidney transplant patients were covered under this program.

TPRD5

USING HOSPITAL CLAIMS TO TRACK PRACTICE PATTERNS, OUTCOMES, AND COSTS IN PERCUTANEOUS CORONARY INTERVENTIONS (PCI)

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OBJECTIVE: To use data from the HCIA hospital claims database to track pharmaceutical use, incidence of adverse events, and costs in patients undergoing PCI.
METHODS: We analyzed hospital claims data from a nationally representative sample of 11,086 patients who underwent PCI between October 1996 and September 1997 to determine inpatient pharmaceutical use, patient outcomes (i.e., repeat PCI, coronary artery bypass surgery [CABG], or death), the incidence of adverse events (i.e., bleeding), and costs. Analyses were conducted using a multivariate model to control for patient severity and other exogenous factors, yielding conservative and upper bound cost estimates.
RESULTS: Mean total heparin dosage was approximately 83,000 units per patient per hospital stay. Stents and abciximab were used in 51% and 21% of patients, respectively. CABG was necessary in 2.4% of patients and repeat procedure in more than 5.5% of patients; the incidence of death was 1.5%. Bleed rates (defined as any patient receiving a red blood cell transfusion) was 6.3% throughout the study period with 5.1% of patients requiring a transfusion of two or more units. Even among non-CABG patients, bleed rates were nearly 5%. Cost for an uncomplicated PTCA averaged $9555. The incremental cost for managing patients who suffered an adverse outcome or event averaged $5745. A less conservative model incorporating increased length of hospital stay showed that the average patient with complications incurred additional costs of $11,780.
CONCLUSION: Hospital claims databases are a cost-effective alternative for tracking the costs and outcomes associated with inpatient pharmaceutical use. In the case of PCI, hospital claims data offers the ability to track repeat procedure, CABG, death, and bleeding rates as well as costs.

TPRD6

TOTAL HEALTHCARE UTILIZATION AND COSTS ASSOCIATED WITH MIGRAINE IN A MEDICAID POPULATION

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OBJECTIVE: To compare healthcare use and drug utilization in patients with migraine and patients without migraine headaches.
DESIGN: Retrospective review of Idaho Medicaid claims database for claims filed during 1993 and during 1997.
METHODS: Inclusion criteria for the migraine patients were: above the age of 4, with a migraine diagnosis and one or more prescriptions for migraine medication, enrolled in Medicaid during 1993 and in 1997 (n = 430). The control group (n = 1720) had to have at least one non-migraine-related diagnosis and one or more prescriptions during the study period for inclusion. A control group was matched by age, gender, and geographic region. A 4:1 match was performed. Use of health services and drug utilization in four identified treatment settings and associated costs were compared between the migraineurs and control group before and after removing migraine-related costs. Differences in costs and utilization of calcium-channel-blockers, anti-depressants, analgesics, anti-migraine preparations, beta-blockers and NSAIDs were analyzed separately.
RESULTS: Significant differences ($p < 0.05$) in costs, in all four treatment settings, number of procedures and visits and drug utilization were found in both the years (viz., 1993 and 1997) between the two groups, before and after removing migraine-related costs. After removing migraine-related services and drugs used specifically for migraine, the number of encounters, procedures in ERs, physicians' office, "unknown" setting, and utilization of analgesics, beta-blockers and NSAIDs remained significantly higher in migraineurs, in both years. Utilization of narcotics was found to be nine times more among migraineurs in 1993 and five times more in 1997.
CONCLUSION: Except for hospital outpatient services, migraineurs use healthcare services more than a matched comparison group even after removing migraine-related costs.

TPRD7

ESTIMATING LIFE-EXPECTANCY IN POST-ACUTE CORONARY SYNDROMES: THE IMPORTANCE OF TWO-COMPONENT SURVIVAL MODELS

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OBJECTIVE: Post-acute coronary syndrome (post-ACS) patients experience very different survival patterns during the acute and chronic phases of their illness. To provide a clinically relevant life expectancy estimate for post-ACS patients and subgroups of unstable angina (UA) and recent (<6 week) myocardial infarction (MI) patients, we developed a two-component survival model which accounted for differences in acute and chronic survival and also extrapolated beyond the available follow-up data.
METHODS: We included UA and MI patients who received an initial coronary angiography (cath) at Duke University Medical Center between March 1984 and December 1997. Patients with previous cardiac procedures or valvular disease were excluded. We defined the acute post-ACS phase as lasting from the initial cath through 1 year follow-up and chronic phase as the second follow-up year through end of life.
RESULTS: Our population contained 10,398 patients with 12-year follow-up 95% complete. Initial treatment strategy, age, body mass index, history of diabetes, cerebral or peripheral vascular disease, and congestive heart failure were predictive of both acute and chronic phase survival ($p < 0.05$). Recent MI and year of initial cath were predictive of acute phase survival whereas history of MI and smoking were predictive of chronic phase survival ($p < 0.05$). While acute phase mortality was greater