costs across herna repair and mesh type cohorts are also presented. RESULTS: Across treatment groups the majority of patients were white (61.5%). In semantics and umbilical hernia repair groups were both predominately male with low to moderate incidences of obesity and diabetes. Incisional herna repair patients had the highest incidence of obesity (19.0%) and diabetes (18.5%) and could be equally either male (42.0%) or female (58.0%). Tissue-separating mesh (TSM) was primarily used in incisional hernia repair groups and was used in all surgical cohorts. TSM was used more frequently in females (60.1%) and in patients with a high incidence of obesity (22.7%) and diabetes (22.1%). No striking differences in surgical costs across the herna repair or mesh type cohorts were observed, with average surgical costs between €2199 and €4099.

CONCLUSIONS: This is the first example of extracting herna repair patient demographics from a nationwide database. Although there are limitations to the interpretation of this data, these results are encouraging. Further development of the management, analysis and interpretation of such data is ongoing.

PMD81

DECISION ANALYTIC MODELS USED IN ESTIMATING THE COST-EFFECTIVENESS OF DRUG-ELUTING STENTS VERSUS BARE-METAL STENTS

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OBJECTIVES: Cost-effectiveness analysis (CEA) of a medical test can require extensive modeling if test results influence treatment decisions and disease progression. We applied the assessment hierarchy of Schaafsma et al. (2009) to a CEA of a high definition CT scanner (one of the first assessments in the NICE/UK Diagnostics Guidance Programme). METHODS: We reviewed modeling studies published until February 2011 that studied the cost-effectiveness of DES versus BMS. We then extracted various parameters (e.g., model type, time horizon, data sources, choice of disease states) and explored the influence of these parameters on the results using meta-analytical methods. RESULTS: The incremental cost-effectiveness ratio (ICER) of the 32 eligible studies compared ranged from €900-€3300 and this difference also affects the ICER. CONCLUSIONS: Decisions made in cost-effectiveness models to compare DES with BMS lead to wide variation in cost-effectiveness estimates, making it difficult to conclude that DES is more cost-effective than BMS. Since 80,000 PCIs are performed per year in the UK, it is very important to obtain valid estimates of the cost-effectiveness of DES versus BMS.

PMD82

DRUG ELUTING BALLOON FOR THE TREATMENT OF PERIPHERAL ARTERY DISEASE: A COST-EFFECTIVENESS ANALYSIS IN ITALY

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OBJECTIVES: Cost-effectiveness analysis of a medical test can require extensive modeling if test results influence treatment decisions and disease progression. We applied the assessment hierarchy of Schaafsma et al. (2009) to a CEA of a high definition CT scanner (one of the first assessments in the NICE/UK Diagnostics Guidance Programme). METHODS: We reviewed modeling studies published until February 2011 that studied the cost-effectiveness of DES versus BMS. We then extracted various parameters (e.g., model type, time horizon, data sources, choice of disease states) and explored the influence of these parameters on the results using meta-analytical methods. RESULTS: The incremental cost-effectiveness ratio (ICER) of the 32 eligible studies compared ranged from €900-€3300 and this difference also affects the ICER. CONCLUSIONS: Decisions made in cost-effectiveness models to compare DES with BMS lead to wide variation in cost-effectiveness estimates, making it difficult to conclude that DES is more cost-effective than BMS. Since 80,000 PCIs are performed per year in the UK, it is very important to obtain valid estimates of the cost-effectiveness of DES versus BMS.

PMD84

USING FIVE EXISTING MODELS TO COMPREHENSIVELY MODEL THE COST-EFFECTIVENESS OF DRUG-ELUTING BALLOON FOR THE TREATMENT OF PERIPHERAL ARTERY DISEASE: A NICE DIAGNOSTIC GUIDANCE PROJECT

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OBJECTIVES: Cost-effectiveness analysis (CEA) of a medical test can require extensive modeling if test results influence treatment decisions and disease progression. We applied the assessment hierarchy of Schaafsma et al. (2009) to a CEA of a high definition CT scanner (one of the first assessments in the NICE/UK Diagnostics Guidance Programme). METHODS: We reviewed modeling studies published until February 2011 that studied the cost-effectiveness of DES versus BMS. We then extracted various parameters (e.g., model type, time horizon, data sources, choice of disease states) and explored the influence of these parameters on the results using meta-analytical methods. RESULTS: The incremental cost-effectiveness ratio (ICER) of the 32 eligible studies compared ranged from €900-€3300 and this difference also affects the ICER. CONCLUSIONS: Decisions made in cost-effectiveness models to compare DES with BMS lead to wide variation in cost-effectiveness estimates, making it difficult to conclude that DES is more cost-effective than BMS. Since 80,000 PCIs are performed per year in the UK, it is very important to obtain valid estimates of the cost-effectiveness of DES versus BMS.

PMD83

SLEEP QUESTIONNAIRES DISCRIMINATE BETWEEN PARTICIPANTS WITH AND WITHOUT OVERACTIVE BLADDER SYMPTOMS

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OBJECTIVES: Nighttime urinary frequency (nocturnia), common in patients with overactive bladder (OAB), negatively impacts sleep quality. Three sleep-related patient-reported questionnaires were assessed with regard to ability to discriminate between patients with and without OAB. METHODS: Adult men and women with OAB symptoms for at least 3 months (>8 micturitions per day; >2 micturitions per night; and ≥6 urgency episodes over 3 days per bladder diary) and without OAB symptoms (control group) completed several sleep questionnaires: Stanford Sleepiness Scale (sleeping and waking for 5 days), Epworth Sleepiness Scale, and Nocturnia Quality of Life Questionnaire (N-QoL). t-tests were performed between groups. RESULTS: A total of 43 participants with OAB and 10 healthy controls were enrolled. Mean age and proportion of men were similar in the OAB and control groups (63.7 vs. 55.6 years old [P = 0.31], and 46.2% vs 40.0% male [P = 0.53], respectively). Race and patient status, and age and proportion of men were similar in the OAB and control groups (all P > 0.5). Mean scores on the Stanford Sleepiness Scale across the 5 days were significantly higher in the OAB group than the control group at time of awakening (3.0 vs. 2.0, P = 0.0033) and at 7:00 pm (5.5 vs. 1.9, P = 0.0006), indicating greater sleepiness. Epworth Sleepiness Scale mean scores were also significantly higher in the OAB group than the control group (10.5 vs 4.1, respectively; P < 0.0001), indicating greater daytime sleepiness. On the N-QoL, participants with OAB had significantly lower scores than the control group, indicating lower sleep quality.
cantly lower mean Total scores than controls (54.7 vs. 99.2, P=0.0001), Sleep/energy scores (5.9 vs. 100.0, P=0.0001), and Rother/concern scores (54.0 vs. 98.3, P=0.0001), indicating a higher prevalence of life impairment. Such comparisons were estimated compared between a group observed during a preoperative and the first two postoperative periods (the 2nd to 6th postoperative months and the 7th to 12th postoperative months). Repeated measures analysis with bootstrapping re-sampling approach was used for the cross-period comparisons.

RESULTS: The mean age of the select patients (N=47) was 11.6 year at their first observed SEGa surgery, the majority of the patients were male (66%). Statistically significant postoperative increases in the prevalence rates of seizure (23–26%, p<0.05), hydrocephalus (21–26%, p<0.05), headache (17–19%, p<0.05), stroke and hemiparesis (6–9%, p<0.05), and autism (9%, p<0.05) were observed.

CONCLUSIONS: This real-world claim data showed an increase in the risk of some clinical conditions including seizure and hydrocephalus after a SEGa surgery in patients with TSC. Further research to explore any possible causal relationship between these risk increases and SEGa surgery through prospective studies or registries is needed.

PSU3
PREVALENCE RATES OF SURGICAL COMPLICATIONS AMONG TUBEROUS SCLEROSIS COMPLEX PATIENTS WITH SURGICAL REMOVAL OF SUBEPENDYMAL GIANT CELL ASTROCYTOMA: A REAL-WORLD NATIONAL RETROSPECTIVE COHORT STUDY

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OBJECTIVES: To compare the prevalence rates of surgical complications among tuberous sclerosis complex (TSC) patients with surgical removal of subependymal giant cell astrocytoma (SEGa). METHODS: Based on 3 US national health care claims databases (2000–2009), a retrospective cohort study was conducted in TSC patients at age 45 or younger, who had a continuous health insurance coverage 1 year before and 1 year after the surgery. A SEGa surgery was identified by a healthcare claim that simultaneously had a TSC diagnosis code, a benign brain tumor diagnosis code and a procedure code of removing a benign brain tumor from cerebral ventricular system. The surgical complications examined in the study included surgical procedure complications, nervous system complications, surgical misadventures, postoperative infection, subdural empyemas, and epidural abscess. The prevalence rates of these conditions were estimated for the first postoperative year. RESULTS: Approximately 47 TSC patients had at least one SEGa surgery. The mean age of patients at their 1st observed SEGa surgery was 11.6 years. The majority of patients (66%) were male. The prevalence rates of surgical complications in the 1st postoperative year were 34% for surgical procedure complications, 17% for subdural empyemas, 12.8% for nervous system complications, 6% for postoperative infection, 2% for epidural abscess, and 4% for surgical misadventures respectively. CONCLUSIONS: In this real-world claim database analysis, we observed that a portion of TSC patients experienced surgical complications within first year after their SEGa surgeries. Further research is needed to understand the causes of this surgical outcome.

PSU4
POSTOPERATIVE PREVALENCE RATE OF SUBEPENDYMAL GIANT CELL ASTROCYTOMA (SEGa) DIAGNOSIS AND REPEATED SEGa SURGERY IN PATIENTS WITH TUBEROUS SCLEROSIS COMPLEX: A REAL-WORLD NATIONAL RETROSPECTIVE COHORT STUDY

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OBJECTIVES: To examine the postoperative prevalence of subependymal giant cell astrocytoma (SEGa) diagnosis and repeated SEGa surgeries among patients with tuberous sclerosis complex (TSC) who had an initial SEGa surgery. METHODS: Based on three US national health claims databases (2000–2009), we conducted a retrospective cohort study with TSC patients who had a first observed SEGa surgery at age 35 or younger and were under continuous health insurance coverage 1 year before and 1 year after the surgery were selected. The prevalence rates of SEGa surgery, postoperative prevalence rates of SEGa diagnosis and repeated SEGa surgery were estimated for a period from the 3rd through 6th postoperative month and a period from the 7th through 12th postoperative month respectively. RESULTS: The select patients (N=47) had mean age of 11.6 years (at the 1st SEGa surgery) with 66% males. After the 1st observed SEGa surgery, postoperative prevalence rates of SEGa diagnosis was 34% in the period from the 3rd to 6th postoperative month and 26% in the period from the 7th to 12th postoperative month. About 4–9%, patients had a repeated SEGa surgery in their 1st postoperative year. In the real-world setting, TSC patients with SEGa surgery may experience repeated SEGa surgeries or/and still have SEGa diagnoses within the first postoperative year. Further research on the effectiveness of SEGa surgery via prospective studies or registries is needed to improve care in TSC patients with SEGa.

PSU5
RISK OF ARTHRITIS AS A PREDICTOR FOR THE MISDIAGNOSIS OF CHONDROLYSIS: AN INTERNATIONAL ANALYSIS OF CLINICAL OUTCOMES

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OBJECTIVES: The conventional genetic evaluations (EE) methods may be challenging within the context of genetic testing technologies (GTTs), because: the main outcome a GTT is information, benefits may occur many years after taking the test, non-medical harms might be associated with GTTs, and GTTs may also provide false positive and false negative results to the family members of affected individuals. This study was performed to systematically review the methods used in EEs included in Health Technology Assessments (HTAs) of GTTs. METHODS: A systematic search of literature was undertaken to identify HTA reports on GTTs that included EEs in addition to clinical effectiveness results. Studies were reviewed in terms of methods (e.g. type of EE, analytic perspective, cost-effectiveness analysis, and quality (using QHES instrument). RESULTS: Of 342 identified citations, 15 HTAs consisting of 10 model-based and 3 trial-based EEs were included. More than 50% of the included studies had moderate to low quality scores mainly due to not reporting the most critical elements of a thorough economic analysis, such as lifetime management of uncertainty. Cost-effectiveness analysis (CEA) accounted for 62% of included studies. 65% of the studies adopted a third party payer perspective, and 60% used a lifetime time horizon. 75% of CEA reported intermediate outcomes (e.g. cases detected, prevented, quality-adjusted life years). Only 25% of the included studies examined quality adjustments (QALYs). The most frequent variables tested in univariate sensitivity analysis included costs (62%), effects (46%) and transition probabilities (54%). Probabilistic sensitivity analysis was conducted in 31% of studies. CONCLUSIONS: We found several methodological challenges in the reviewed EEs including identification of a proper analytical perspective, inclusion of wider range of outcomes and costs, allowing for long-term psychological, ethical and social impacts of genetic tests, and sufficient management of uncertainty. These issues should be carefully considered in future EEs of GTTs.