recurrence avoided is €82 in the 5 years time horizon and the open mesh is the dominant option in the 15 years time horizon from a hospital perspective. Results in the probability sensitivity analysis are very similar to deterministic analysis. **CONCLUSION:** Findings suggest open mesh hernia repair method as a very cost effective therapy from both hospitals and payers perspectives for the inguinal hernia treatment in Slovakia.

PHC9

THE POTENTIAL SAVINGS IN OPERATING ROOM TIME ASSOCIATED WITH THE USE OF SUGAMMADEX TO REVERSE SELECTED NEUROMUSCULAR BLOCKING AGENTS: FINDINGS FROM A HOSPITAL EFFICIENCY MODEL

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OBJECTIVE: Operating rooms (OR) are an expensive hospital resource. As a new selective reversal binding agent, sugammadex has been shown in clinical trials to reduce reversal time (time from reversal agent administration to full recovery) among patients receiving selected steroidal neuromuscular-blocking agents (NMBAs). Our goal was to develop a hospital efficiency model to assess the potential impact of sugammadex adoption on OR time. **METHODS:** A deterministic model was developed to estimate potential time savings associated with sugammadex adoption for the U.S. setting. Model inputs included surgical caseloads, utilization rates of NMBAs and reversal strategies, OR time components, and OR labor costs. The effects of reversal strategies on reversal time were evaluated using clinical trial data. Other model inputs were estimated using published literature and analyses of secondary hospital databases. OR time saved was defined as the difference in minutes required for all procedures performed per day in one OR before and after the introduction of sugammadex. Estimates of savings in OR staff costs (including OR nurse, OR technician, and certified registered nurse anesthetist) were generated under alternative assumptions about the likelihood that overtime is paid. Sensitivity analyses were performed on key model assumptions. **RESULTS:** In the base-case scenario, OR time saved by sugammadex was estimated to be 25 minutes per OR day or 612 hours annually in a typical US hospital with 6 ORs. Associated annual cost savings were estimated to range from $32,035 (25% of days involve overtime) to $96,105 (75% of days involve overtime). Findings also varied with the assumed adoption rate of sugammadex and hourly OR staff salaries. **CONCLUSION:** Sugammadex may save OR time and associated costs for U.S. hospitals, primarily by reducing overtime pay. The net financial benefit of sugammadex will depend on its cost and its adoption rate in clinical practice.

PHC10

AN ASSESSMENT OF HOSPITAL COSTS AND REIMBURSEMENT AMONG TOTAL HIP OR KNEE ARTHROPLASTY PATIENTS IN THE UNITED STATES THAT EXPERIENCE VENOUS THROMBOEMBOLISM

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OBJECTIVE: Deep vein thrombosis (DVT) and pulmonary embolism (PE), collectively known as venous thromboembolism (VTE), are well-known complications of total knee or hip arthroplasty (TKA and THA). This study examined the economic burden of VTE in arthroplasty surgeries from a US hospital perspective. **METHODS:** Patients at least 18 years old undergoing TKA and THA from January 1, 2002 to December 30, 2006 were extracted from a large, nationwide inpatient database. Rates of events, length of hospital stay, inpatient costs and reimbursed amounts (available for a small subset that could be linked to managed care data) were evaluated. Multivariate analyses were conducted on hospital costs to adjust for differences in demographic and clinical characteristics. **RESULTS:** Out of 259,524 hip and knee surgeries (mean age of 67 years), 1.0% of patients diagnosed with VTE during hospitalization (0.6% DVT only and 0.4% PE [with or without DVT]). Compared to patients without VTE, mean length of stay (LOS) for those with VTE was twice as long (8 vs. 4, $p < 0.0001$) and hospital costs were 48.0% higher ($20,850 vs. $14,092, $p < 0.0001$). Within the limited subset that had linked managed care claims data (n = 5002), mean cost of patients with VTE was 23.5% higher ($16,877 vs. $13,662, $p < 0.0023$); however, the amount reimbursed was on average 6.4% higher ($14,121 vs. $13,272, $p = 0.77$). After multivariate adjustment, DVT increased costs by $1421 following TKA and $3950 following THA; PE increased costs by $2862 following TKA and $4355 following THA ($p < 0.0001$ for all). **CONCLUSION:** Experiencing VTE complications substantially adds to the costs of TKA or THA. The increased hospital costs of patients with VTE did not appear to be adequately reimbursed. The overall economic impact of implementing prophylaxis to prevent VTE events can be projected.

HEALTH CARE INTERVENTIONS—
Patient-Reported Outcomes

PHC11

A SYSTEMATIC REVIEW OF STUDIES ON QUALITY OF LIFE IN ANIMALS

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OBJECTIVE: The objective of this project was to review published studies on quality of life (QoL) in animals. **METHODS:** An electronic search in EMBASE including MEDLINE using the key words "quality of life" and "animals" resulted in 1588 articles. Inclusion criteria for review was study on QoL, exclusion criteria were case studies with n < 3, and studies in laboratory animals as proxy for humans. **RESULTS:** A total of 48 studies were included for review, of which 40 were performed in dogs. The aim of nine studies was the development and validation of a questionnaire, three studies provided a checklist or background information on QoL in animals. In the remaining 36 studies QoL was assessed as outcome measure in specific diseases or treatments; however 30 of these studies were uncontrolled. Previously developed, used or validated questionnaires were included in only 3 studies. In 23 studies assessment of QoL was limited to one single question, addressed to the owners. In 30 of the 36 studies the evaluation of QoL was performed only at one time point after the start of an intervention, of which 3 studies retrospectively evaluated a baseline value. In 19 studies, all or part of the animals were already dead at the time of assessment. In 19 of the 30 uncontrolled studies QoL was rated as good to excellent (or equivalent in scores) in >50% of the animals, even in studies on severe conditions such as cancer or chemotherapy. **CONCLUSION:** Most of the studies assessing QoL as outcome used unvalidated questionnaires and included only one single question addressed to the owners. It is questionable whether the

multidimensionality of QoL can be assessed properly this way; especially in this specific situation where the owners are proxy reporters but also responsible for the well-being of the animal and therefore likely to be biased.

HEALTH CARE INTERVENTIONS—Health Care Use & Policy Studies

PHC12

STARR PROCEDURE FOR OBSTRUCTED DEFAECATION SYNDROME (ODS): 12-MONTH FOLLOW-UP

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OBJECTIVE: A European STARR registry was set-up to determine the short-term safety and effectiveness of the STARR procedure for obstructed defaecation syndrome. **METHODS:** STARR registries in Italy, Germany and the UK were designed with a web-based interface to allow pooling of results for combined analysis. Recruitment commenced in January 2006. Data collection included a symptom severity score (SSS), obstructed defaecation score (ODS), Cleveland clinic incontinence score, symptom-specific (PAC-QoL) and generic (ED-5Q utility and VAS) QoL score. All complications were recorded. Data collection was performed at baseline, 6 weeks, and 6 and 12 months. **RESULTS:** A total of 1456 patients were recruited and eligible for analysis. There were 214 (14.7%) male patients. The mean age was 54 yrs (range: 17–92). Mean operative time was 44mins (range: 15–210). Average length of stay was 3 days (range:1–36). By September 2007, 698 (48%) and 422 (29%) were eligible for analysis at 6 and 12 months. respectively. A significant symptomatic improvement was seen between baseline and 6 months and maintained at 12 months (SSS: baseline 24.1 (95%CI: 23.8,24.4) v's 12 months 12.5 (95%CI: 12.1,12.9), p < 0.001; ODS: baseline 15.3 (95%CI: 14.9,15.6) v's 12 months 5.8 (95%CI: 4.8,6.7), p < 0.001. This was reflected in a significant improvement in both PAC-QoL and ED-5Q QoL scores at both 6 and 12 months. Incontinence scores improved from 3.1 (95%CI: 2.9,3.3) at baseline to 2.9 (95%CI: 2.1,2.7) at 6 months and 1.9 (95%CI: 1.5,2.2) at 12 months (p < 0.001). 457 minor and major complications were reported, of which the most frequent were: unexpected pain (7.7%), urinary retention (6.8%), bleeding (4.5%), stapled line complications (3.2%), sepsis (1.4%), incontinence (1.3%). Postoperative defaecatory urgency was reported in 17% of patients. There was no mortality. **CONCLUSION:** STARR for ODS is safe,effective and significant improvement in QoL.

INDIVIDUAL'S HEALTH—Clinical Outcomes Studies

PIH1

PREVENTION OF FALLS AND FALL-RELATED INJURIES IN THE COMMUNITY-DWELLING ELDERLY: A REVIEW

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OBJECTIVE: As part of a broader analysis on aging in the community, the purpose is to perform a literature review to assess the effectiveness of interventions designed to prevent falls and fall-related injuries in community-dwelling elderly individuals. **METHODS:** A search was performed in OVID MEDLINE, MEDLINE In-Process and Other Non-Indexed Citations, EMBASE, CINAHL, Cochrane Library, and INAHTA/NHS EED between January 2000 and September 2007. Furthermore, all studies included in a Cochrane review published in 2003 were considered for inclusion. Studies were included if they were controlled trials in a population of community dwelling elderly and examined falls or fall-related injuries as an outcome. **RESULTS:** Fifty-nine studies were identified investigating the effectiveness of nine interventions. A meta-analysis found that exercise programs effectively reduced falls if they were 6 months or longer in duration (RR = 0.84 [95% CI: 0.76–0.93]) or were offered to the general population and not a high risk group (RR = 0.79 [0.70–0.90]). Environmental modifications were effective in individuals with a history of falls (RR = 0.66 [0.54–0.81]), and a gait stabilizing device for outdoor winter use effectively reduced falls (RR = 0.43 [0.29–0.64]) and injurious falls (RR = 0.10 [0.01–0.74]). Although neither hormone replacement therapy or vitamin D alone reduced falls or injuries, vitamin D plus calcium supplementation resulted in a reduction in the number of falls (RR = 0.83 [0.73–0.95]) and fractures (RR = 0.60 [0.39, 0.94]). Multifactorial interventions were only marginally effective in reducing falls in a high risk population (RR = 0.87 [0.76–1.01]), and there was no evidence that vision interventions or hip protectors were effective. **CONCLUSION:** Several interventions were identified which reduce the risk of falls and fall-related injuries in community-dwelling elderly, however special consideration must be given to the intervention duration and population risk profile when determining the most appropriate interventions to implement. An economic analysis that informs investment decisions to maximize the impact of reducing falls is currently underway.

PIH2

CONTRACEPTIVE FAILURE RATES AMONG MEDICAID AND NON-MEDICAID ENROLLEES

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OBJECTIVE: Contraceptive efficacy depends both on patient compliance and the characteristics of the method used. Efficacy rates can thus vary across different populations, particularly in women employing user-dependent methods (i.e., oral, condoms). This study measured the contraceptive failure rates in a Medicaid and a non-Medicaid population and evaluated the efficacy variance between the two groups. **METHODS:** Monthly contraceptive-use histories were constructed for all women using data from the 2002 National Survey of Family Growth (NSFG VI). Contraceptive use was defined by first contraception method mentioned in the survey. Poly-modal use was not defined. Women were classified as Medicaid enrollees if they reported having Medicaid coverage in the 12 months prior to the survey, or reported Medicaid payment for services. The final dataset included 1208 Medicaid-enrolled women and 6435 non-Medicaid enrolled women. Pregnancy rates were calculated each month and then annualized for women using user-dependent methods (oral contraceptives [OC], condom) or non-daily methods (IUD, injected, implanted birth control). **RESULTS:** Average annual contraceptive failure rates for Medicaid vs. non-Medicaid women were: oral pill—1.15% vs 0.13% (p = 0.0051); condom—2.05% vs. 0.55% (p = 0.0015); IUD—0.52% vs. 0.16% (p = 0.5156); injected or implanted—0.27% vs. 0.13% (p = 0.3940). OC failure rate was nearly 9-times higher in the Medicaid population than in the non-Medicaid population. Failures rates for IUD, injectables and implants were also higher but