

are consistent with earlier studies and highlight the ATTUNE Knee may facilitate shorter LOS in TKA and increase the likelihood of home discharge. These improvements were achieved in a hospital environment with an established enhanced recovery program and a low baseline LOS.

PMD26

IMPROVED QUALITY CONTROL WITH SUBCUTANEOUS (SC) INFUSION PUMP

Lukács M¹, Oláh A¹, Boncz I¹, Csikós Á¹, Busa C¹, Frank N¹, Endrei D¹, Pakai A²

¹University of Pécs, Pécs, Hungary, ²University of Pécs, Zalaegerszeg, Hungary

OBJECTIVES: The subcutaneous (SC) infusion pump are routinely used in palliative care for the SC infusion of drugs for pain and symptom control. The infusion can lead to patient well-being and the potential for sub-optimal symptom control. This study will outline the use of continuous SC infusion pumps, known as syringe drivers, including their benefits and drawbacks in a palliative care context. At the Clinical Center of the University of Pécs are carrying out trials of the recently launched SC infusion pump in the inpatient and home palliative care. The SC infusion pump is often set at ml/hour with the rate set at 24-hour period. **METHODS:** The study is a retrospective, quantitative analysis. Through a purposive sampling we analyzed records of tumor- and terminal stage patients in 2017, who were involved in the service of the Pécs-Baranya County Hospice Foundation and met enroll criteria. We were used descriptive statistics. Syringe driver recording forms were retrieved from case notes of consecutive patients who received medication via a syringe driver. The pain was measured on a numerical scale, and other symptoms and well-being were documented on ESAS scale. **RESULTS:** During the presented five case report the continuous infusions help improving well-being, pain and other symptoms (for example: vomiting, nausea, dehydration) relief. Based on the cases we found that the rate of pain decreased by 30%, the number of vomits decreased by 20%, and the patient's well-being showed 15% increase. **CONCLUSIONS:** The introduction of syringe drivers revolutionised pain control with added benefits for the patient and professionals.

PMD27

EFFICIENCY OF THE USE OF LONG-ACTING REVERSIBLE CONTRACEPTION: A SYSTEMATIC REVIEW OF THE LITERATURE

Gomez de la Rosa F¹, Alvis Zakzuk J², Alvis Guzman N³, Moreno D⁴, Rincon M⁵, Vargas JC⁶, Edna Estrada F⁷, Urrego M⁸, Rubio ML⁹, Alvarez Mesa C⁸, Tolosa J⁵

¹ALZAK Foundation, Cartagena, Colombia, ²ALZAK Foundation, Centro de investigación Seguridad Materna - Grupo de investigación para la salud materna, perinatal y de la mujer - Clínica Maternidad Rafael Calvo, CARTAGENA, Colombia, ³Universidad de Cartagena - ALZAK Foundation, Cartagena, Colombia, ⁴Ministerio de Salud y protección Colombia, Bogota, Colombia, ⁵Oregon Health & Science University, Portland, OR, USA, ⁶Profamilia Colombia, Bogota, Colombia, ⁷Centro de Investigación para la Salud Materna Perinatal y de la Mujer. Clínica Maternidad Rafael Calvo C., Cartagena de Indias, Colombia, ⁸Universidad de Antioquia, Medellín, Colombia, ⁹UNFPA, Bogota, Colombia

OBJECTIVES: To develop a systematic review of economic evaluations on the use of long-acting reversible contraceptives (LARC). **METHODS:** A systematic review of scientific literature was carried out in Pubmed, Chochrane and Google Scholar databases. Economic evaluations and systematic reviews of the literature that included long-acting contraception methods (LARC) as intervention technology were included. The review was made in English and Spanish. No publication date restriction were applied on the selected studies. Quality assessment was developed using the CHEERS verification list (Consolidated Health Economic Evaluation Reporting Standards) developed by the ISPOR guidelines (International Society for Pharmacoeconomics and Outcomes Research). **RESULTS:** After applying the inclusion criteria, thirteen studies were included (ten cost-effectiveness analyzes, one cost-utility study, one cost-benefit study, and one unspecified economic evaluation). All the studies involved women in reproductive age (15-49 years). Nine studies used a Markov model to simulate the use of contraceptives. The main clinical outcome was the number of unwanted pregnancies. 84% (11) of studies resulted in cost savings with the evaluated LARC intervention. The remaining studies could not reach the CE threshold mostly due to the intervention price was not competitive. LARC costs vary significantly by type and country. The most cost effective ones resulted to be levonorgestrel (LGN 20 IUS), T380A copper IUD, Implanon and the YuangongCu365. Regarding quality, 77% of the studies analyzed costs from the third payer perspective. In addition, the majority of studies (70%) meet barely 56% of the items included in the CHEERS list. **CONCLUSIONS:** Most studies reported dominance in long-term contraceptive methods when considering time horizons of more than 24 months, resulting in cost savings for the health systems even when administration and insertion of long-term methods is more costly at beginning of planning.

MEDICAL DEVICES/DIAGNOSTICS - Cost Studies

PMD28

BUDGET IMPACT ANALYSIS OF THE ADVANCE LUBRICATH® FOLEY CATHETER TRAY® FOR URINARY CATHETERIZATION OF LONG DURATION IN MEXICO

Ruiz Miranda CI¹, Rodriguez Mendoza MM², Gomez Zamesa M¹, Sanchez Trejo K²

¹Becton Dickinson, Mexico City, Mexico, ²Consultoría en Investigación Farmacéutica, Mexico State, Mexico

OBJECTIVES: To estimate the budget impact on the Public Health Care System of Mexico for the introduction of the Advance Lubricath® Foley Catheter Tray® (a pre-connected, sterile, closed-system tray with safety seal junction) indicated for urinary catheterization. **METHODS:** Two scenarios were contemplated for the budget impact analysis: 1) the current scenario entails the use of a component, non-pre-connected urinary drainage system; 2) a future scenario entails the use of the Advance Lubricath® Foley Catheter Tray®. The future scenario considers an initial adoption rate of 10%, with annual increments of 10% during a time horizon of 5 years. The perspective used was from the Public Health Care System, the

objective population was hospitalized adult patients who require the placement of a urinary catheter. To estimate population size, the number of annual hospital discharges in the National Health System (INEGI, 2010-2015) as well as, the percentage of hospitalized patients who require a urinary catheter (Jiménez, et al, 2010) was used. **RESULTS:** The mean annual cost per patient for the current scenario was \$219.13 dls. and for the future scenario was \$216.80 dls. Based on the adoption rate, time horizon and the estimated population, the annual mean budget impact in the current scenario was predicted to be \$127,480,836 dls, while the future scenario was \$127,078,297 dls. in year 5. In the future scenario, the use of Advance Lubricath® Foley Catheter Tray® generates savings for the Public Health Care System of \$402,539 dls, which represents a percentage saving of 0.0014% of the total public health budget. **CONCLUSIONS:** The results show that the use of the Advance Lubricath® Foley Catheter Tray®, assuming an adoption rate of 10% and increasing 10% each year, would result in significant cost savings for the Public Health Care System in Mexico.

PMD29

BUDGET IMPACT ANALYSIS (BIA) OF POINT-OF-CARE OF HbA1c MONITORING IN BELGIAN, GERMAN AND SWISS PATIENTS WITH DIABETES MELLITUS TYPE II

Navarro F¹, Hren R², Boltyenkov A³

¹Siemens Healthcare Diagnostics Inc., Norwood, MA, USA, ²Siemens Healthcare Diagnostics GmbH, Vienna, Austria, ³Siemens Healthcare GmbH, Erlangen, Germany

OBJECTIVES: In patients with diabetes mellitus (DM) type II monitoring of glycated hemoglobin (HbA1c) level is essential to ensure glycemic control. In this study, we assessed overall financial impact of HbA1c monitoring in the point-of-care setting in Belgium, Germany, and Switzerland. **METHODS:** We developed a budget-impact model comparing the strategy of using point-of-care (POC) HbA1c monitoring with the strategy of using conventional laboratory-diagnostics (LD) in patients suffering from DM type II. We followed cohorts of patients diagnosed with DM type II in Belgium, Germany and Switzerland for the period of 15 years and estimated the costs of complications (amputation, cataract extraction, kidney failure, heart failure, stroke, and microvascular disease or myocardial infarction) using the local data. To assess the validity of the assumptions and robustness of the model, a thorough sensitivity analysis was undertaken. **RESULTS:** In patients with DM type II, POC HbA1c monitoring resulted in savings of €59.3 million (on average, €182 per patient in the cohort) in Belgium when compared to conventional LD monitoring; corresponding savings in Germany were €848 million (on average, €233 per patient in the cohort) and in Switzerland savings amounted to €118 million (on average, €422 per patient in the cohort). The sensitivity analysis showed robustness of our findings. **CONCLUSIONS:** Our health economics analysis suggests that the POC HbA1c monitoring in patients suffering from DM type II may reduce overall health care costs in Belgium, Germany, and Switzerland.

PMD30

ECONOMIC ANALYSIS OF D-DIMER TEST USED FOR THE DIAGNOSIS OF VENOUS THROMBOEMBOLISM IN COLOMBIA

Galvez K¹, Robles A², Tamayo C³, Simbaqueba E⁴

¹Hospital Pablo Tobón Uribe, Medellín, Colombia, ²Universidad de Alicante, Alicante, Spain, ³U Nacional, Bogota, Colombia, ⁴Werfen, Bogota, Colombia

OBJECTIVES: According to estimations made for 2014, Colombian Health System spent about USD 10.2 million in the use of diagnostic images for Venous Thromboembolic Disease (VTE). From the total number of cases, 35.7% were reported as confirmed cases, equivalent to USD 3.5 Million. Because of this, we developed a budget impact analysis for inclusion of Pretest Probability Score (PTP) and D-Dimer Test (DD) in the VTE diagnostic protocol. **METHODS:** A probabilistic decision tree was made showing two diagnostic protocol choices for VTE. One branch did not include PTP+DD (A). The other branch included PTP+DD (B). Data of VTE pathology distribution and total of cases reported were provided by SISPRO (Official National Health Database). We assumed the probability of positive-negative results and pathology distribution from Leganani et al (2009). All related costs were obtained from the SOAT fare manual 2011 plus inflation. The model considered the follow-up of the patient and the use of resources and supplies only until the diagnosis. Besides, it was considered the risk of sub-estimated population due to pathology behavior in different ages ranges based on data presented by Silverstein et al (1998). **RESULTS:** From simulations, the A branch of the tree (no PTP+DD) presented an economic cost of USD 5.9 million. The B branch (PTP+DD) presented an economic cost of USD 4.4 million. The difference between both results presented savings up to 24.7% (USD 1.4 million). These results can be discriminated for PE and DVT. **CONCLUSIONS:** Using PTP+DD in the VTE diagnostic protocol represented savings up to USD 1.4 million. That expense could be redirected to support thrombosis preventing campaigns. Lastly, the results presented in this work showed the importance of correct use of clinical practice guidelines and laboratory tests as a support in the diagnosis of high impact pathologies.

PMD31

BUDGET IMPACT ANALYSIS OF IMPLEMENTING 5MM DUAL-ENDED SAFETY PEN NEEDLES FOR INSULIN INJECTIONS IN US HOSPITALS

Ermakova A, Taylor S

Becton Dickinson, Franklin Lakes, NJ, USA

OBJECTIVES: Healthcare workers often administer subcutaneous insulin injections and face a risk of needlestick injuries (NSIs). Almost 20% of all syringe NSIs are related to insulin injections. Pen needles with safety engineered features on both front (patient) and back (device) ends are recommended. In addition, patient safety benefits exist with shorter needles which may reduce the risk of insulin intramuscular (IM) injections and hypoglycemia. A model was developed to estimate the budget impact of using shorter dual-ended safety pen needles relative to longer single-ended safety pen needles for insulin injections by reducing the risk of NSIs and hypoglycemia. **METHODS:** A 1-year budget impact model was developed from the perspective of a US hospital taking into account device acquisition costs, direct