Introduction. Despite advances in endovascular interventions, including the introduction of drug-eluting stents (DES), high target lesion revascularization (TLR) rates still burden the treatment of symptomatic lower-limb peripheral arterial disease (PAD). Eluvia™, a novel, sustained-release, paclitaxel-eluting DES, was shown to further reduce TLRs when compared with the paclitaxel-coated Zilver® PTX® stent, in the IMPERIAL randomized controlled trial. This evaluation estimated the cost-effectiveness of Eluvia when compared with Zilver PTX in Australia, based on 12-month clinical outcomes from the IMPERIAL trial.

Methods. A state-transition, decision-analytic model with a 12-month time horizon was developed from an Australian public healthcare system perspective. Cost parameters were obtained from the Australian National Hospital Cost Data Collection Cost Report (2016–17). All costs were captured in Australian dollars (AUD), where AUD 1 = USD 0.69 (June 2020). Complete sets of clinical parameters (primary patency loss, TLR, amputation, and death) and cost parameters from their respective distributions were bootstrapped in samples of 1,000 patients, for each intervention arm of the model. One-way and probabilistic sensitivity analyses were performed.

Results. At 12 months, modeled TLR rates were 4.5 percent for Eluvia and 8.9 percent for Zilver PTX, and mean total direct costs were AUD 6,537 [USD 4,511] and AUD 6,908 [USD 4,767], respectively (Eluvia average per patient savings; overall cohort=AUD 371 [USD 256]; diabetic cohort=AUD 625 [USD 431]). In probabilistic sensitivity analyses, Eluvia was cost-effective relative to Zilver PTX in 92.0 percent of all simulations at a threshold of $10,000 per TLR avoided. Eluvia was more effective and less costly (dominant) than Zilver PTX in 76.0 percent of simulations.

Conclusions. In the first year after the intervention, Eluvia was more effective and less costly than Zilver PTX, making Eluvia the dominant treatment strategy for treatment of symptomatic lower-limb PAD, from an Australian public healthcare system perspective. These findings should be considered when formulating policy and practice guidelines in the context of priority setting and making evidence-based resource allocation decisions for treatment of PAD in Australia.

PP339 A Budget Impact Model Of The Eluvia™ Drug-Eluting Stent from The Australian Public Hospital And National Payer Perspective

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Introduction. Improving long-term outcomes like target lesions revascularizations (TLRs) is a focus for endovascular interventions aimed at treating symptomatic lower-limb peripheral arterial disease (PAD). Eluvia™, a paclitaxel-eluting drug-eluting stent (DES) was shown to further reduce TLRs when compared with the paclitaxel-coated Zilver® PTX® stent in the IMPERIAL trial, a global, randomized controlled study. This budget-impact evaluation investigated cost-savings from Eluvia-use when compared with Zilver PTX, relying on the 12- to 24-month outcomes from the IMPERIAL trial.

Methods. A budget-impact model comparing Eluvia and Zilver PTX was developed from the Australian public healthcare payer, and an individual hospital perspective, with a 5-year time-horizon. Observed trial results were applied to each year's incident population and associated costs, and no extrapolation was conducted. The analysis used publicly available Australian national hospital cost data, population estimates, procedural statistics, epidemiological literature, and data from public hospital audits to verify eligible population for endovascular procedures (EVP) including DES. All costs were captured in Australian dollars (AUD), where AUD 1 = USD 0.69 (June 2020).

Results. Assuming 80-percent EVP eligibility, and a DES-use range of 10–28 percent, the 5-year model estimated potential national savings of AUD 4.3–12.1 million (M) [USD 3–8.3M] to the public healthcare payer, driven by reduced TLRs from Eluvia-use compared with Zilver-PTX. The model projected potential national savings of AUD 33.1–92.6M (USD 22.8–63.9M) to individual hospitals through reduced hospital bed days for adverse events (AE). The model forecasted 14,428–40,399 treated patients; 1,499–4,198 fewer TLRs; and 16,515–46,243 fewer hospital days for AE. At a state level, projected hospital savings were: New South Wales AUD 10.9–30.7M [USD 7.5–21.1M]; Victoria AUD 8.4–23.4M [USD 5.8–16.1M]; Queensland AUD 6.5–18.3M [USD 4.5–12.6M]; Western Australia AUD 3.4–9.5M [USD 2.3–6.5M]; South Australia AUD 2.3–6.4M [USD 1.6–4.4M].

Conclusions. Treatment of symptomatic lower-limb PAD with the Eluvia DES could lead to potential savings for the Australian healthcare system, at the national, state, and the local hospital level, based on improved patient outcomes.

PP349 Use Of Applications For Mobile Devices In Asthma Control: A Systematic Review Of Literature

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Introduction. Cell phones and information technology can be allies in the care of chronic diseases. Despite the wide availability of mobile device applications (apps), many offered by industry and providers, questions remain about the real efficacy of these technologies. The objective of this study was to evaluate the efficacy of mobile device apps designed for use by outpatients in treatment for asthma and describe its main characteristics and functionalities.

Methods. A systematic review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol was conducted. MEDLINE and EMBASE were searched for randomized clinical trials (RCTs) evaluating the adoption of mobile apps on Android or iOS systems compared to the usual care, published in the last five years. Asthma control rate was defined as the primary outcome, and visits to

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emergency departments, hospitalizations and adherence to pharmacological treatment were secondary outcomes.

Results. Four RCTs (n = 415) met the inclusion criteria, two involving children and adults, and two only adults. Methodological quality was low to moderate. Common functionalities were asthma action plans, registration of the usual treatment, symptom diaries and educational alerts. Results were heterogeneous with respect to all outcomes evaluated. Study dropouts and lack of follow-up were frequent.

Conclusions. The clinical utility of mobile apps for asthma was evaluated in a few randomized studies; more data are necessary to establish the value of these technologies for asthma control.

PP350 Study On The Awareness, Willingness To Pay And Satisfaction With Non-Invasive Prenatal Testing Among Pregnant Women

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Introduction. Birth defects seriously affect children's survival and quality of life and bring great suffering and financial burden to children and their families. Down's syndrome is one of the most common birth defects. Compared with traditional serological screening methods, non-invasive prenatal testing (NIPT) has higher sensitivity and specificity in the screening of Down's syndrome. In April 2017, the People's Government of Fuyang City, Anhui Province launched a NIPT free screening program. From the perspective of the beneficiary, this research investigated the awareness, willingness to pay and satisfaction of pregnant women in Fuyang City, Anhui Province, to better improve the use of NIPT.

Methods. A questionnaire survey was conducted on 1,221 pregnant women who experienced this program in Fuyang City, Anhui Province. Multivariate ordered logistic regression models were established to analyze the factors affecting the satisfaction of NIPT.

Results. A total of 1,217 valid questionnaires were collected. Research indicated 82.5 percent knew about NIPT and 81.9 percent were willing to pay personally when its price was CNY 800 (USD 113.88) per test among pregnant women. The satisfaction of pregnant women with NIPT showed that the waiting time for test results was relatively low (4.5 out of 5 points) compared with other aspects of satisfaction. The higher the education level of the pregnant women, the lower their satisfaction with NIPT.

Conclusions. It is necessary to pay attention to the characteristics of education and to improve the awareness and satisfaction of NIPT among pregnant women. Meanwhile, if it is affordable enough for NIPT services to be provided by the government, this mode should be promoted. In conjunction with the willingness to pay of pregnant women, NIPT payment methods should be developed appropriately.

PP352 Systematic Review Of Clinical Effects Of Different Thermal Insulation Measures In Patients Undergoing Major Surgery

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Introduction. Hypothermia (core temperature <36°C) during major surgeries could result in a number of adverse events such as surgical site infection, bleeding, and prolonged hospital stay. The incidence of intraoperative hypothermia was 44.3 percent in China in 2015, with only 10.7 percent of patients receiving effective hypothermia prevention measures during major surgeries. By systematically examining the adverse risks for patients using different warming measures (active and passive), our study discussed the potential of bringing the most effective one (s) into clinical guidelines.

Methods. Articles, ongoing trials and grey literatures were retrieved from PubMed, The Cochrane Library and Clinical Trials till February 2019. Bair Hugger™ (BH) was determined to be the reference group and all randomized controlled trials including BH were included. In the control group, we kept all possible warming measures. Adverse effect indicators were decided using scoping reviews and then applied in literature screening. Type (open/endoscopic) and length of surgery were included in sub-group analysis.

Results. A total of forty-two studies were included, with twenty-seven of them passive insulation measures and fifteen active measures. Compared with passive measures, BH had significant advantages, such as in surgical site infection (risk ratio [RR] = 0.13, 95% confidence interval [CI]: 0.05, 0.80), chills (RR = 0.37, 95% CI: 0.25, 0.54) and hospitalization stay (mean difference [MD]=−1.27d, 95% CI: -2.05, -0.48). Compared with active insulation measures, BH had no significant advantages. Patients with open or longer surgeries (≥2 hours) experienced higher risks.

Conclusions. Generally, an active warming system is more effective in lowering risks (e.g., hypothermia, surgical site infection, chills, length of stay) than passive ones, especially for patients going through non-endoscopic or longer surgeries. Among the active warming systems, BH does the same job as other active insulation measures. Given that the practice of peri-operative hypothermia prevention using active warming systems is not popular in China, the use of BH and other active insulation measures during major surgeries are recommended to improve the safety and potentially reduce the cost of treating those clinical adverse events.

PP355 Evolution Of Health Technology Assessment For Rare Diseases In Asia

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Introduction. We reviewed the health technology assessment (HTA) guidelines for therapies targeting orphan conditions in four countries/regions in Asia.

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