

0.88), but an association with age was identified. The average age of subjects who preferred sphygmomanometers was higher compared to those who preferred automatic monitors ( $p < 0.05$ ).

**Conclusions.** This study revealed that, although BP measurement using automatic monitors is less uncomfortable, patients rely more on sphygmomanometers. Results show that preference is related to age, as younger people tend to prefer automatic monitors. The findings of this study indicate the need to widely disseminate information regarding the accuracy of automatic monitors among patients, especially older ones, in order to make them part of the decision-making process for replacing sphygmomanometers with automatic monitors.

### PP316 Efficacy And Usability Of eHealth Technologies In Stroke Survivors For Improvement Of Self-Management: Clinical Trial

Eunate Arana Arri ([eunate.aranaarri@osakidetza.eus](mailto:eunate.aranaarri@osakidetza.eus)), Leire Ortiz-Fernández, Janire Orcajo, Rubén García Fernández, Joana Sagastagoya, Natale Imaz-Ayo and Ander Alava-Menica

**Introduction.** Stroke is a leading cause of severe and long-term disability in developed countries. Around 15 million people suffer a stroke each year, most due to modifiable risk factors. Several reviews have shown that interventions mediating eHealth technologies can reduce the risk of suffering a stroke episode, improving the control of risk factors; nevertheless, all of them conclude that new and well-designed studies are needed.

**Methods.** We performed a prospective, randomized, parallel group and open, pilot trial. The study was carried out based on an initial sample of forty-three patients between 18 and 80 years old who have had an ischemic stroke. The control group got conventional treatment and the intervention group got conventional treatment and the assistance of STARR (the Decision Support and self-management system for stroke survivors), as well as commercial wearables. The principal variable of the study was to evaluate the usability of the decision support system.

**Results.** At month nine, the average score on the System Usability Scale in the intervention group was 64.7 and in month 12, 67.4, exceeding in both cases the margin of acceptability (50) and in the limit of "good" (68). When we analyzed clinical factors (systolic/diastolic blood pressure) as well as the analytical parameters related to prevention of reinfarction, we observed that the intervention group had good control of blood pressure and better analytical parameters, compared to the control group.

**Conclusions.** Technological support allowed participants to feel comfortable using the devices as well as resolving technical incidences by themselves after a training period. The self-management platform can be efficient in stroke survivors' management of their disease condition, improving analytical and clinical parameters, which eventually can influence a decrease in associated comorbidities and, therefore, improvement of the disease. However, it should be noted that this type of platform is not useful for every patient profile, and studies in this regard should be expanded.

### PP326 Health Economic Value Of The Midline Catheter Versus Peripherally Inserted Central Catheter In Korean Inpatient Setting

Smeet Gala, Hana Shim ([hana.shim@bd.com](mailto:hana.shim@bd.com)), Sook-Young Jeon, YoonJe Euh, KwonSun Lee and KyungWoo Kwon

**Introduction.** It is estimated that over 90 percent of hospitalized patients will receive some form of vascular access device (VAD) for their treatment. Currently, patients requiring medium-term catheterization often have peripherally inserted central catheters (PICCs) placed, which are expensive, time consuming and usually for long-term catheterization. Midline catheters (MCs) are VADs placed in deep peripheral veins, with a dwell time of up to 29 days. The study aimed to evaluate if using MCs over PICCs has any clinical and economic benefits.

**Methods.** A cost-calculator was developed in Microsoft Excel 2013 to demonstrate the clinical and economic differences of using MCs over PICCs in an inpatient setting in Korea. A literature review was conducted and included eighteen studies that showed MCs have positive clinical, patient, economic, and institutional outcomes. The model captured clinical outcomes such as usage duration, complications, and costs. The time horizon was one year, and various model inputs were derived from the literature review.

**Results.** For an annual catheter utilization of MCs over PICCs, the total cost-saving was USD 3,764,994. Total treatment costs for MCs were USD 7,230,825 and for PICCs were USD 8,987,922. The total treatment costs included device cost, complication cost and labor cost related to using both MCs and PICCs. For MCs versus PICCs, device costs were USD 6,554,317 versus USD 6,563,356, complication costs were USD 106,749 versus USD 982,417, and labor costs were USD 569,759 versus USD 1,442,149.

**Conclusions.** In both the base and sensitivity analyses, results showed that MCs can be an impressive cost-saving option among patients with unnecessary PICC use in Korea. Among patients who require medium-term catheterization and use PICCs even when not targeted for central line insertion, MCs are a more cost-effective option, and MCs will benefit these patients with lesser complication rates. MCs are a suitable alternative with clinical and economic benefits that could lead to lower burden on patients and healthcare systems.

### PP329 An Australian Cost-Effectiveness Analysis Of The Eluvia™ Drug-Eluting Stent For Treatment Of Symptomatic Lower-Limb Peripheral Artery Disease

William A. Gray, Thathya V. Ariyaratne ([Thathya.Ariyaratne@bsci.com](mailto:Thathya.Ariyaratne@bsci.com)), Robert I. Griffiths, Peter W.M. Elroy, Stacey L. Amorosi, Ronald L. Akehurst, Alysha M. McGovern and Stefan Müller-Hülsbeck

**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

Nishath Altaf, Thathya V. Ariyaratne (Thathya.Ariyaratne@bsci.com), Adrian Peacock, Irene Deltetto, Jad El-Hoss, Shannon Thomas, Colman Taylor and Patrice Mwipatayi

**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

Caroline Pavin Lacerda, Katiuce Tomazi Kny (katiuce.kny@gmail.com) and Maria Angélica Pires Ferreira

**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