To further understand this opportunity, this research sought to identify key IC practices that would be impacted by MDx testing and could support improved HAI outcomes. METHODS: Telephone-based primary research was conducted with 34 hospital quality and IC stakeholders across the US and UK to understand the impact of HAI-related IC practices, current IC practices, quality metrics, outcomes and opportunities for MDx integration and practicality of bringing these into practice. RESULTS: Hospitals have implemented a variety of strategies aimed at reducing and preventing the incidence of HAI. Hospitals assess the success of their IC strategies by benchmarking their infection rates against national or regional reports and measuring compliance with certain IC protocols. There are various IC practices that could be impacted by MDx testing such as patient isolation and timely administration of targeted antibiotic therapy; however, metrics associated with these practices are generally not reported. CONCLUSIONS: Primary and secondary research findings suggest that compliance with IC protocols is critical to improving HAI outcomes. Expanding hospital quality reporting metrics to include factors needed to support and sustain testing with improved IC practices, and will ultimately support improved HAI outcomes.

PMID134
BUDGET IMPACT ANALYSIS OF BIOABSORBABLE DRUG-ELUTING SINUS IMPLANTS FOR ENDOCRINE SINUS SURGERY

Cui B1, Zhao Z2, Zhong J1, Liu T2, Tao L3

1University of Calgary, Calgary, AB, Canada, 2CTI Clinical Trial and Consulting Services, Cincinnati, OH, USA, 3Stony Brook University, Stony Brook, NY, USA

OBJECTIVES: Bioabsorbable drug-eluting sinus implants (BDESI) inserted during osseous drug-eluting sinus implant (ESS) have been born to improve the post-operative outcomes in the management of refractory chronic rhinosinusitis (CRS) through reduced post-operative scarring, inflammation, polyposis and middle turbinate laterality. The aim of this study was to estimate the incremental budgetary impact of incorporating BDESI in CRS patients undergoing ESS. METHODS: A budget impact model (following ISPOR’s Good Practice Report) was developed from the perspective of the United States (US) health payer. The model was validated using expert inputs and model was tested and adaptable to different countries. Estimations of the prevalence of CRS, rates of ESS, and effectiveness outcomes; along with direct and indirect costs from CRS were obtained from a best-evidence systematic review of the published literature. A total of 1,5 million members were used in the analysis. All cost data obtained from the published literature were adjusted to April 2015 US dollars using the medical care component of the Consumer Price Index. The comparator group for analysis was the ESS with BDESI compared to the current clinical pen-/post-operative care. Primary outcome was the incremental budget impact reported using per-member-per-month (PMPM) costs. Scenario-based, probabilistic, and one-way sensitivity analyses were performed. RESULTS: For a US payer/self-insured employer, with a plan of 1.5 million members, the incremental PMPM impact of BDESI was estimated to range from -$0.009 to $0.09. The results varied based on the parameters included in the individual scenario. Sensitivity analyses revealed these findings to be robust to specified parameter value ranges. CONCLUSIONS: Previously published studies have documented the clinical benefits of BDESI. This study has demonstrated the use of BDESI during ESS procedures has negligible impact on the healthcare budget. Additional research is necessary to determine the benefit on costs from different countries based on the same factors described within this analysis.

PMID135
RE-USE OF INSULIN SYRINGE NEEDLES AND ITS EXTRA DISEASE BURDEN FOR DIABETIC PATIENTS IN BEIJING

Cui Z1, Cui B2, Zhuang W2, Tao L1

1Peking University, Beijing, China, 2Beijing Tiantan Hospital, Beijing, China, 3Beijing Medical Economics Research Association, Beijing, China

OBJECTIVES: To investigate the situation of disposable insulin syringe needles re-used by diabetic patients in Beijing and the safety problem due to re-use as well as the extra disease burden. METHODS: Use the semi-constructed questionaire to investigate how the insulin injection needles were re-used and its disease burden on diabetic patients who had been treated by insulin injection for at least half a year in 21 hospitals in Beijing. RESULTS: 45.25% of the insulin syringe needles were obtained from the pharmacies outside hospitals and the average price was 2.76 RMB per piece. Only less than 2% of the diabetics use new disposable needle per injection and 30.52% of them only changed their needles once per week. The main cause of 84.53% of the diabetics was cost saving. More than half of the surveyed diabetics got needle-injection-related hurts such as Lipohypertrophy and skin infection. 61.98% got hypoglycemia symptoms in the last 3 months. It was estimated that the extra disease burden resulted from the safety problems of insulin syringe needles re-use was 458.74 RMB per patient per year. CONCLUSIONS: At first health education should be enhanced on how to use the insulin syringe needles correctly and take it into consideration of bring the insulin syringe needles into insurance reimbursement list at appropriate time to alleviate the economic burden of the diabetics.

PMID136
COST-EFFECTIVENESS OF LOCAL INSULFICATION OF WARM HUMIDIFIED CO2 (WH-CO2) FOR OPEN AND LAPAROSCOPIC COLORECTAL SURGERY

Jenkins M, Taylor M, Shore J

York Health Economics Consortium, York, UK

OBJECTIVES: To determine the cost-effectiveness of local insulification (via a humidifier) of warm humidified CO2 (WH-CO2) compared with standard care in patients undergoing open or laparoscopic colorectal surgery. METHODS: A decision-analysis model was developed to estimate the costs and quality-adjusted life-years (QALYs) associated with open and laparoscopic colorectal surgery from a UK NHS perspective. WH-CO2 was compared with no insufflation in open surgery patients and with unheated CO2 (U-CO2) in laparoscopic patients. Efficacy data were derived from two different randomized controlled trials with hypothermia, with a US database analysis of hypothermia patients for open surgery, and from an unpublished UK NHS before and after study of laparoscopic surgery patients. Other parameter inputs were obtained from published literature. Deterministic and probabilistic sensitivity analyses were carried out to explore the robustness of results. Scenario analyses were undertaken to explore structural uncertainty within the model. RESULTS: The use of WH-CO2 dominated standard care (both costs and QALYs) for both open and laparoscopic surgery patients over a one year time horizon. Results varied by the number of patients undergoing surgery per humidifier per year. Based on 250 patients using the humidifier each year over a five year lifetime of the humidifier, WH-CO2 dominated standard insufflation in open surgery patients in 71% of model iterations and dominated U-CO2 in laparoscopic surgery in 98% of model iterations. WH-CO2 remained the cost-effective treatment option at a willingness-to-pay threshold of £20,000 per QALY. Probabilistic sensitivity analyses considered, provided 10 or more patients used each humidifier over its life span. CONCLUSIONS: The analyses conducted suggest that based upon the currently available clinical evidence, WH-CO2 is a cost-effective use of resources for patients undergoing either open or laparoscopic colorectal surgery within the UK NHS.