devices to patients may have a positive impact on treatment outcomes. The aim of this study was to understand the preferences of MS patients for attributes of self-injection devices.

**METHODS:** A discrete choice experiment (DCE) survey was developed on the basis of a review of published literature. The attributes identified for inclusion in the survey were: ease of use; choice of use; presence of additional functions; needle visibility; practicality and efficacy. Choice sets were presented as pairs of hypothetical PCI. The optimal attribute set was derived from a fractional factorial design. One-hundred device-using MS patients completed the survey online. Analysis was conducted using a mixed-logit approach.

**RESULTS:** Analysis of the DCE data revealed that all attributes significantly predicted treatment choice. As anticipated, efficacy exhibited the largest effect on treatment selection and the case study found factors for understanding the magnitude of impact for the other attributes. Reducing the discomfort associated with device use and eliminating the necessity for assembly or drug reconstitution were highly valued by patients. The addition of reminder and time-stamping functions, improved needlestick injury prevention and a reduction in device size were secondary concerns but still deemed desirable.

**CONCLUSIONS:** Although efficacy is of primary importance to MS patients, the characteristics of drug delivery devices can play an important role in treatment decision-making. The findings suggest that there is significant potential value in developing self-injection devices that are not only efficacious but also convenient and comfortable to use. Reducing barriers to adherence could potentially translate into improved treatment outcomes for patients with MS.

**PMD44 ASSESSING PERFORMANCE FOLLOWING PRIMARY TOTAL KNEE ARTHROPLASTY (DEVELOPMENT OF THE PATIENT’S KNEE IMPLANT PERFORMANCE (PKIP) MEASURE)**

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**OBJECTIVES:** While a variety of knee-specific instruments currently exist, no patient-reported outcome (PRO) measures correlate function with improved stability, motion, satisfaction, and confidence. The objective of our study was to address this identified gap in available PROs assessing this phenomenon of a “normal” knee following primary TKA. **METHODS:** A conceptual model linking the impact of clinical mechanics to hypothesized functional outcomes was generated following a literature review of available assessment tools. Participants aged 18 to 80 who had undergone TKA between the past 10 to 18 months were identified through clinical sites to participate in Phase 1) focus groups, or Phase 2) in-depth interviews. Participants were asked to describe experiences with their knee replacement and general questions about how their knee feels now, since they had the surgery, followed by cognitive debriefing of the items. Specific inclusion and exclusion criteria were developed in addition to a semi-structured interview guide. Content comparative analysis was employed to identify key points and compared across all results to observe themes in participant experiences. **RESULTS:** Results from the first phase of the project indicated that the concepts of confidence, stability, and satisfaction in their replacement knee when performing activities requiring certain motions were felt to be distinct from each other and important in the patients’ assessment of their TKA. Phase 2 efforts yielded a final version of the PKIP scale containing 9 items assessing the broader concepts of stability, confidence and satisfaction in association with activities. Both a pre and post-surgical version of the measure were created. **CONCLUSIONS:** Results of this qualitative study support the use of the PKIP to assess performance following primary TKA. Psychometric evaluation of the PKIP is planned.

**PMD45 VARIATION IN HEALTH RELATED QUALITY OF LIFE IMPROVEMENT AFTER PERCUTANEOUS CORONARY INTERVENTION**

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**OBJECTIVES:** It is not clearly established whether percutaneous coronary intervention (PCI) provides similar incremental benefit in terms of health related quality of life (HRQoL) among all patients. **METHODS:** We analysed 79% consecutive patients undergoing PCI with the past 10 to 18 months were identified through clinical sites to participate in Phase 1) focus groups, or Phase 2) in-depth interviews. Participants were asked to describe experiences with their knee replacement and general questions about how their knee feels now, since they had the surgery, followed by cognitive debriefing of the items. Specific inclusion and exclusion criteria were developed in addition to a semi-structured interview guide. Content comparative analysis was employed to identify key points and compared across all results to observe themes in participant experiences. **RESULTS:** Results from the first phase of the project indicated that the concepts of confidence, stability, and satisfaction in their replacement knee when performing activities requiring certain motions were felt to be distinct from each other and important in the patients’ assessment of their TKA. Phase 2 efforts yielded a final version of the PKIP scale containing 9 items assessing the broader concepts of stability, confidence and satisfaction in association with activities. Both a pre and post-surgical version of the measure were created. **CONCLUSIONS:** Results of this qualitative study support the use of the PKIP to assess performance following primary TKA. Psychometric evaluation of the PKIP is planned.

**PMD46 “WHO KNOWS BEST?”: THE EFFECT OF YEA-SAYING BIAS ON WILLINGNESS TO PAY IN CHOICE-FORMAT CONJOINT-ANALYSIS STUDIES**

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**OBJECTIVES:** To determine the effect of adjusting colorectal-cancer (CRC) screening willingness-to-pay (WTP) estimates for uptake bias from yea-saying in a choice-format conjoint-analysis study. Yea-saying refers to a tendency to express agreement with the viewpoints of one’s actual or imagined audience when responding to hypothetical opinions. **METHODS:** Adults aged 45-70 years with no history of CRC and physicians from the United States and Canada completed a web-enabled choice-format conjoint survey that presented patients with hypothetical profiles for colorectal cancer screening tests included test type, frequency, accuracy, and cost. Each test-preference question was followed by a question asking if the respondent preferred no screening to the chosen test. A bivariate probit model combined data from both questions. Predicted WTP conditional on purchasing a test and societal expected WTP adjusted for uptake probability were estimated for both samples. **RESULTS:** A total of 501 and 1,087 adults from Canada and the United States respectively, and 100 physicians from both countries completed the survey. Patients opted for a screening test in about 70% of the questions. Physicians expected their patients to opt for a screening test only 50% of the time, which is the same as the patients’ expected uptake rate. For patients expecting a screening test, physicians’ surrogate WTP values were significantly less than patients’ values. Moreover, patients had significantly larger divergences between conditional and expected uptake rates. Overall mean WTP was $845, which was 29% smaller than the unadjusted expected WTP. **CONCLUSIONS:** If stated-preference subjects choose testing more frequently than they would if actually offered the hypothetical alternatives, the upward biased uptake estimates distort societal WTP measures. Minimizing incentives for yea-saying, detecting potential cases, and adjusting resulting WTP estimates is a high priority for state-predicted reference research.

**MEDICAL DEVICE/DIAGNOSTICS – Health Care Use & Policy Studies**

**PMD48 USING HOSPITAL PAYMENTS TO ENCOURAGE THE COST-EFFECTIVE USE OF HEALTH TECHNOLOGY**

*Sorensen C*, *Drummond M*, *Torbica A*, *Callea G*, *Mateus C*


**OBJECTIVES:** To explore the ways in which hospital payments can be used to encourage cost-effective use of health technology. **METHODS:** A survey of the developing hospital payment systems was conducted in 14 jurisdictions in order to ascertain if and how existing payment systems facilitate the adoption of new technologies, whether evidence of value (eg therapeutic benefit, cost-effectiveness) is considered when determining codes/tariffs, and in what ways payment systems could be adjusted to link payment levels more closely to evidence on value for money. **RESULTS:** Around 50% of the jurisdictions had developed their own payment classifications, as opposed to importing/adapting a system from elsewhere. A minority had created new codes/tariffs outside of a general update in response to a new technology. Three jurisdictions used evidence of value when creating new codes/tariffs, although they tended to only consider therapeutic benefit, not cost-effectiveness. The main barriers to using evidence in creating new codes/tariffs were the lack of a clear mechanism to do so, lack of standardization in the collection of new cost data and unclear or unavailable evidence. Around 70% of jurisdictions had used special payments, outside of the standard codes/tariffs, in response to specific new technologies and 50% used evidence of value when setting payment levels. In the case of special payments, consideration of evidence of both therapeutic benefit and cost-effectiveness was more common. Overall, respondents felt that hospital payment systems had only a modest to moderate impact on the adoption of new technologies, due primarily to the time taken in establishing new codes/tariffs, or negotiating special payments. **CONCLUSIONS:** Hospital payment systems have the potential to encourage the cost-effectiveness of new health technologies. More attention, however, is needed regarding the procedures for updating codes/tariffs or negotiating special payments, and in particular the ways of considering evidence of value.

**PMD49 DO HTA REQUIREMENTS AND PROCUREMENT INCENTIVES IN MEDICAL DEVICES NEED RE-ALIGNING?**

*Griffin AD*, *Chambers C*, *Wildon T*


**OBJECTIVES:** This study evaluates the impact on market dynamics of applying existing Health Technology Assessment (HTA) methodologies to medical devices. **METHODS:** Using a case study on drug-eluting stents (DES), we examine whether the economic characteristics of medical devices introduce particular challenges to the application of HTA and whether the experience of DIEs suggests directions for policy. For the case study found a market that encourages rapid competition, leading to value for the end user through price competition. The application of existing HTA methods has the potential to disrupt this dynamic and reduce the rewards of medical devices to innovators - through higher evidence requirements on initial entrants and market dynamics that subsequently drive a reduction in prices. A cycle of price reductions results because the comparator price of the old technology is reduced as a consequence of “disinvestment” follow-
ing the first recommendation in favour of the innovation, and then subsequent entrants prices fell, reduced through procurement competition as well as lower likely required R&D investment. CONCLUSIONS: The study finds that HTA decisions on medical devices can have a material impact on the market dynamics (and so prices) following a recommendation, because of the manner in which medical devices are procured. The findings of HTA will therefore vary depending on the point in time the HTA is undertaken, as relative prices change substantially over time. Re-reviewing cost-effectiveness, without any new clinical evidence, relative to a technology that has had a ‘disinvestment recommendation’ would therefore appear perverse, as it sets up a feedback loop that causes a perpetual downward spiral in prices. The study raises a number of policy issues for consideration. These include the interplay between different drivers of value in HTA and procurement, and the implicit ‘generalisation’ of evidence through the procurement process.

PMDS5
SHOULD PATIENTS BE ALLOWED TO CO-PAY FOR DEVICES AND TECHNOLOGIES IN THE FUTURE?

OBJECTIVES: The current global economic climate is putting increasing pressure on governments and payers to cut health care cost but continue to fund and grant reimbursement to innovative Medicines, Devices & biotechnologies that demonstrate benefit to patient’s quality of life. One funding model that is attracting interest is patient co-payment (co-pay). Patient co-pay models are being used globally to allow patient access to medicines and medical technologies. However in United Kingdom and Europe these types of funding models are still being evaluated and assessed. A survey was designed to uncover the attitudes of physicians and patients towards co-pay models as potential funding mechanism for gaining access to new and innovative technologies. METHODS: The United Kingdom was selected to carry out research to gauge the opinions of physicians and patients towards co-pay. A total of 150 specialist physicians involved in making budget decisions were surveyed via an internet based questionnaire and in a second survey 558 patients were interviewed face to face to evaluate their attitudes towards co-pay for new and novel technologies. The results from these two surveys were statistically analysed to reveal the attitudes of these two key groups toward patient co-pay and draw some initial conclusions. RESULTS: The analysis and results from the patient survey showed that 83% of patients would consider co-pay as way of gaining access to new technologies that were not fully reimbursed by the UK public healthcare system. The physician’s survey showed that 72% of the 150 of specialist supported the co-pay concept in principle. CONCLUSIONS: This UK research concluded that both physicians and patients would consider co-pay as a funding option to gain access to new technologies. Additional stakeholder research is anticipated to answer the implications surrounding equity and coverage and provide multiple stakeholders with insights into novel funding mechanisms for new technologies.

PMDS5
NATIONAL TRENDS IN ADVANCED DIAGNOSTIC IMAGING USE IN OUTPATIENT SETTINGS: AN ANALYSIS OF THE MEDICAL EXPENDITURE PANEL SURVEY, 2000-2009

Lang K1, Huang H1, Lee DW2, Federico V1, Menzin J1

1 IHS, London, UK, 2 IHS, Washington, DC, USA

OBJECTIVES: The current global economic climate is putting increasing pressure on governments and payers to cut health care cost but continue to fund and grant reimbursement to innovative Medicines, Devices & biotechnologies that demonstrate benefit to patient’s quality of life. One funding model that is attracting interest is patient co-payment (co-pay). Patient co-pay models are being used globally to allow patient access to medicines and medical technologies. However in United Kingdom and Europe these types of funding models are still being evaluated and assessed. A survey was designed to uncover the attitudes of physicians and patients towards co-pay models as potential funding mechanism for gaining access to new and innovative technologies. METHODS: The United Kingdom was selected to carry out research to gauge the opinions of physicians and patients towards co-pay. A total of 150 specialist physicians involved in making budget decisions were surveyed via an internet based questionnaire and in a second survey 558 patients were interviewed face to face to evaluate their attitudes towards co-pay for new and novel technologies. The results from these two surveys were statistically analysed to reveal the attitudes of these two key groups toward patient co-pay and draw some initial conclusions. RESULTS: The analysis and results from the patient survey showed that 83% of patients would consider co-pay as way of gaining access to new technologies that were not fully reimbursed by the UK public healthcare system. The physician’s survey showed that 72% of the 150 of specialist supported the co-pay concept in principle. CONCLUSIONS: This UK research concluded that both physicians and patients would consider co-pay as a funding option to gain access to new technologies. Additional stakeholder research is anticipated to answer the implications surrounding equity and coverage and provide multiple stakeholders with insights into novel funding mechanisms for new technologies.

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PMDS5
URINE DRUG MONITORING IN THE CLINIC – WHO ARE WE TESTING, WHAT ARE WE TESTING FOR, AND HOW OFTEN ARE WE TESTING?

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Jefferson School of Population Health, Philadelphia, PA, USA

OBJECTIVES: The purpose of this study is to better quantify how urine drug monitoring (UDM) is used in clinical practice. While several published studies have reported utilization of UDM in clinical practice, little is known about how often patients are monitored, which patients are monitored, which substances are important to detect, and under what circumstances clinicians modify the frequency of monitoring. METHODS: An online survey was developed based on qualitative phone interviews with eight clinicians who use UDM as a routine component of clinical practice. One thousand fourteen randomly selected clinicians known to order urine toxicology screenings were invited by mail to respond to the online survey assessing their clinical needs and preferences with regards to UDM. Ninety-three responses were received before the online survey was closed. RESULTS: Of the 93 respondents, 43% (n=40) had identified as pain management specialists and another 42% (n=39) as family/internal medicine practitioners. Seventy-six percent of respondents (n=72) require all new patients to have UDM performed when they enter their clinic. The majority administer UDM to chronic opioid therapy patients four or more times per year. Overall, the primary reasons clinicians use UDM consistently for the most common illicit drugs, the majority of opioids, and a handful of prescription medications associated with abuse. Ninety-one percent of respondents stated that all of their patients are tested for the same substances, regardless of abuse history. The most common reasons cited by clinicians for a change in the frequency of monitoring are patient history of substance abuse and aberrant behaviors. CONCLUSIONS: Despite a lack of agreement between guide-