The methods used for combining evidence on multiple surrogate outcomes can lead on average by 14%, when including multiple surrogate endpoints, to a more substantial gain in precision in other disease areas, hence leading to faster HTA decisions.

PM74

A BAYESIAN FRAMEWORK TO ESTIMATE THE COST OF CARE FOR RENAL DISEASE PATIENTS WITH AND WITHOUT A USUAL SOURCE OF CARE

Zawar P., Parthasarathy M., Damien P.

University of Houston Clear Lake, Houston, TX, USA, 2Saaros Medical Solutions Pvt Ltd, Whitehouse Station, NJ, USA, 3University of Tass at Austin, Austin, TX, USA

OBJECTIVES: To model total health care costs of end-stage renal disease adult patients with and without an usual source of care provider and to evaluate whether these costs differ between dialysis and transplant patients.

METHODS: Retrospective claims data from 19th unique adult patients was collected for years 2002 to 2011 using the Medical Expenditure Panel Survey conducted on American households. Total cost for renal disease patients was modeled using the Medical Expenditure Panel Survey cost profiles and the bootstrap model averaging (BOOT) method of multiple model selection prediction to produce estimates of total cost for any given renal disease patient with and without a usual source of care. All independent variables had a

PM75

META-ANALYSIS FOR THE EVALUATION OF MULTIPLE SURROGATE ENDPOINTS

Bukkewicz S., Spata E., Thompson J.R., Abrams K.

University of the Sciences in Philadelphia, Philadelphia, PA, USA

OBJECTIVES: In health technology assessment (HTA), decision-makers face increased pressures to make earlier decisions. However, in early stages of drug development, data on the relationship between new health technologies and patient outcomes is often limited, especially when measuring the effectiveness of new interventions requires long follow-up time. Therefore, shorter-term surrogate endpoints play an important role in HTA. Candidate surrogate endpoints demonstrate proof of concept. However, when more than one of such endpoints exits, they may not fully mediate the treatment effect on the final outcome. This study presents methodology for evaluation of multiple surrogate endpoints as predictors of the treatment effect on the final outcome.

PM76

ASSESSING THE VARIABLES AFFECTING THE COMPLETION OF A COMPLIANCE MONITORING PROGRAM (CMP) FOR NURSES UNDERGOING SUBSTANCE ABUSE TREATMENT

Pandya SA, 1Moes S, 2Peterson AM

1University of the Sciences, Philadelphia, PA, USA, 2Lianganion Foundation, Inc, Bensalem, PA, USA

OBJECTIVES: This paper sought to determine the factors which best predict the completion of a nurse substance abuse monitoring program.

METHODS: A retrospective cross sectional analysis was conducted in a state database (Florida) of 65,630 nurses enrolled in CMP. The entire dataset and the subset of the 10,000

PM77

THE USE OF BOOTSTRAP MODEL AVERAGING WHEN ESTIMATING SURVIVAL CURVES

Barker C, Hawkins N2

University of Oxford, Oxford, UK, 2London School of Hygiene & Tropical Medicine, London, UK

OBJECTIVES: To explore the use of bootstrap model averaging (BOOT) for estimating survival curves when conducting parametric survival analysis. METHODS: A set of fully clinical datasets with advanced and early disease states were published in a systematic review. Individual patient data for overall survival were estimated from digitised Kaplan-Meier curves using a published algorithm. A range of parametric survival models (exponential, Weibull, Comperz, lognormal, log-logistic, Gamma and Generalized Gamma) were fitted for each study. One thousand bootstrap samples of the IBD for each study were taken. The model which minimised the Bayesian Information Criterion (BIC) was selected for each sample. The proportions of bootstrap samples within which each model was selected were used as the weights for the BOOT estimate. These were applied to the mean survival estimates obtained from each candidate model applied to the original data set to obtain the weighted average


RESEARCH ON METHODS – Patient-Reported Outcomes Studies

PM79

DEVELOPMENT AND VALIDATION OF THE HEMOPHILIA-SPECIFIC BURDEN SCALE FOR CAREGIVERS OF CHILDREN WITH HEMOPHILIA IN THE US – THE HEMOPHILIA ASSOCIATED CAREGIVER BURDEN SCALE (HEMOCABTS

von Mackensen S, 1Wisniowski T, 1Ugo J, 2Boggio L

1University Medical Centre, Hamburg, Germany, 2NOVO Nordisk, PlasmoBurn, USA

OBJECTIVES: To determine of this research to determine the factors which best predict the completion of a nurse substance abuse monitoring program. METHODS: A retrospective cross sectional analysis was conducted in a state database (Florida) of 65,630 nurses enrolled in CMP. The entire dataset and the subset of the 10,000

for HBA1C, SBP, BMI, TC, HDL and LDL was predicted as follows. MI: 0.89, 0.90, 1.00, 0.93, 0.95, 1.00, 0.93 (UK2E-RE) and 0.92, 0.92, 1.00, 0.99, 1.29, 0.98 (SNDR-RE). Stroke: 0.80, 0.76, 1.00, 0.98, 1.18, 1.20 (UK2E-RE) and 0.85, 0.94, 1.00, 0.99, 1.18, 1.00 (SNDR). HD: 0.85, 0.89, 0.94, 1.00, 1.00, 1.00, 1.00 (UK2E-RE) and 0.94, 0.90, 0.93, 0.99, 1.00, 1.00, 1.00 (SNDR-RE). CONCLUSIONS: The degree to which RF modification influences CV risk was strongly dependent on RE selected. The choice of equation within a model may influence the predicted health economic benefit associated with CV risk factor modification.

PM74

EVALUATING THE RELATIVE CONTRIBUTION TO QUALITY-ADJUSTED LIFE EXPECTANCY ASSOCIATED WITH HBA1C, WEIGHT AND HYPOGLYCEMIA AS MULTIPLE RISK EQUATIONS WITH THE CORE DIABETES MODEL (CDM)

McEwan P, Evans M, Lamotte M, Foos V

1Health Economics and Outcomes Research Ltd, Monmouth, UK, 2University Hospital Lindnag, Cardiff, UK, 3MS Health Consulting, Brussels, Belgium, 4MS Health, Basel, Switzerland

OBJECTIVES: The cost-effectiveness type 2 diabetes mellitus (T2DM) therapies are often driven by changes in HBA1C, weight and glycaemia rates. There are a number of risk equations available for modeling diabetes complications. The objective of this study was to attribute the predicted gain in quality adjusted life years (QALYs) to HBA1C, weight and glycaemia change for each of the UKPDS-68 risk equations (UK-68-RE), the UKPDS-94 risk equations (UK-94-RE), the Swedish-UK-68-RE, the National Diabetes Prevention Program-ADVANCE R (AD-RE). METHODS: Published data on T2DM switching to insulin degludec from either insulin glargine or detemir were used. Mean (± SD) baseline profiles were age 62.8 years (± 14.7), diabetes duration 16.2 years (± 5.0), HBA1C 9.4% (± 1.1), weight 102.8 kg (±33.9) and 1.0 glycaemia events per week (±1.4). Mean 1-year change in clinical variables was HBA1C -0.7% (±0.3), weight -1.8 kg (±1) and glycaemia events/week -1.0 (±1.3). The complete case mean regression equations were used to calculate the incremental QALYS predicted associated with either the UK-68-RE, UK-82-RE, S-NDR-RE and A-RE. Results were discounted at 3%. RESULTS: With UK-68-RE total QALYs for insulin degludec were 7.747 (QALY gain of 3.306 vs. basal insulin); 2.84%, 97.24% and -0.71% attributable to Hba1c, hypoglycaemia and weight change respectively. Finally, for ADVANCE-RE total QALYs were 7.035 (QALY gain of 2.68) for an increase of 1.00 (SNDR-RE). Stroke: 0.88, 0.76, 1.00, 0.99, 1.18, 1.00 (UK68-RE), 0.85, 0.76, 1.00, 0.99, 1.00, 0.99 (UK82-RE) and 0.83, 0.94, 0.99, 0.91, 1.00 (SNDR-RE). CONCLUSIONS: The degree to which RF modification influences CV risk was strongly dependent on RE selected. The choice of equation within a model may influence the predicted health economic benefit associated with CV risk factor modification.