and men with diabetes-related comorbidities/complications by 13% and 5% compared to IDDM without diabetes related comorbidities/complications. The probability of working for women and men with NIDDM also were 7% and 2% less than women and men without this disorder. Similarly, these probabilities were even smaller for women and men with NIDDM related comorbidities/complications by 2% compared with NIDDM without diabetes related comorbidities/complications (all at p-values <0.05). The predicted weekly work hours for women and men without diabetes were 29 and 41 hours, with IDDM were 18 and 30, with IDDM and comorbidities/complications were 13 and 23, with NIDDM were 21 and 35 hours and finally with NIDDM and related comorbidities/complications were 17 and 30, respectively. CONCLUSIONS: The effect of diabetes and its related comorbidities especially for men with NIDDM and related comorbidities/complications on the probability of unemployment and predicted weekly work hours in Canada are substantial. The results of this study have implications for cost-effectiveness of diabetes control and may facilitate studies of the health burden of diabetes for the prevention and treatment of diabetes and thus increase the labor productivity.

DB3
DECREASED RATES OF MAJOR HYPOGLYCAEMIC EVENTS LEAD TO IMPROVED LONG TERM COST EFFECTIVENESS OF BIPHASIC INSULIN ASPART 30/70 VERSUS BIPHASIC HUMAN INSULIN 30 IN TYPE 2 DIABETIC SUBJECTS IN DANISH, FINNISH, GERMAN, NORWEGIAN, SPANISH, SWEDISH, AND UK SETTINGS
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OBJECTIVES: A 24-month randomised, open-label parallel group study in type 2 diabetes patients compared the safety and efficacy of biphasic insulin aspart (BIAsp30/70) and biphasic human insulin (BHI30/70) injected twice daily before meals. Major hypoglycaemic episodes were reduced with BIAsp30/70 compared with BHI30/70 (annual rate 4.1% versus BHI30/70 (annual rate 15.5%) and were significantly lower in the second study year (p = 0.04). Glycaemic control did not differ between groups. A peer-reviewed, validated model projected the impact of the different rates of major hypoglycaemia events on long-term health economic outcomes in multinational settings. METHODS: The CORE Diabetes model employs standard Markov/Monte Carlo simulation techniques to describe long-term incidence and progression of diabetes-related complications. Transition probabilities were derived from major diabetes studies. The clinical effects of the comparators were derived from the trial described. The analysis was performed in multinational settings using published country-specific costs, health care resource utilization, clinical data, and recommended discount rates. A lifetime horizon and payer perspective was taken. Only direct costs were considered. Sensitivity analyses was performed. RESULTS: Discounted quality-adjusted life years (QALY) were improved by 0.15–0.22 years with BIAsp30/70 versus BHI30/70 depending on country specific discount rates. Increases in lifetime costs were seen with BIAsp30/70 in all settings. Costs per QALY were DKK61,922, 9784€, 14,068€, NOK38,911, 12,840€, PKK29,911€, 14,068€, SEK76,495€, and €6,585 in the Danish, Finnish, German, Norwegian, Spanish, Swedish, and UK setting respectively. Results were most sensitive to assumptions regarding major hypoglycaemia rates, mortality following major hypoglycaemic events, HbA1c changes and to the relative costs of BIAsp30/70 versus BHI30/70. CONCLUSIONS: Treatment with BIAsp30/70 was projected to result in additional QALYS and reduced health care costs associated with major hypoglycaemic events versus treatment with BHI30/70. The higher acquisition costs of BIAsp30/70 led to increased overall costs, but the incremental cost/QALY fell within the range generally considered to be cost-effective in each country.

UC1
HEALTH ECONOMIC COMPARISON OF CONTINUOUS SUBCUTANEOUS INSULIN INFUSION WITH MULTIPLE DAILY INJECTION FOR THE TREATMENT OF TYPE 1 DIABETES IN THE UK
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OBJECTIVES: The aim of this study was to project the long term costs and outcomes of continuous subcutaneous insulin infusion (CSII) compared with multiple daily injection (MDI) in patients with type 1 diabetes (T1D) in the UK. METHODS: The CORE Diabetes Model is a peer-reviewed, validated model that employs standard Markov/Monte Carlo simulation techniques to describe the long term incidence and progression of diabetes-related complications. Baseline cohort characteristics were taken from published studies of T1D in the UK (mean age 26 years, duration of diabetes 12 years, 54% male, 90% Caucasian, mean HbA1c 8.68%). Transition probabilities were derived from major diabetes clinical studies. Effects associated with CSII and MDI deliv-
ery systems were taken from a recent meta-analysis. Published UK costs for 2003, health care resource utilization and clinical data, and recommended discount rates were used (3.5% per annum on costs and outcomes). A lifetime horizon and third party payer perspective was taken. Only direct costs were considered. Extensive sensitivity analyses were performed.

RESULTS: Treatment with CSII was associated with an improvement in life expectancy (LE) of 0.72 years compared to MDI (mean LE 17.37 ± 6.81 versus 16.66 ± 6.62 years). Quality adjusted life expectancy (QALE) improved by 0.59 years with CSII versus MDI (mean QALE 10.23 ± 3.89 versus 9.64 ± 3.69 years). Mean direct lifetime costs were ±19,413 more expensive with CSII treatment versus MDI (±81,115 versus ±57,015). This produced an incremental cost effectiveness ratio of ±32,753 per quality adjust life year saved with CSII compared to MDI. The main difference between the two arms was in medication costs. Sensitivity analysis showed the results were robust under a range of assumptions. CONCLUSIONS: Improvements in glycemic control associated with CSII versus MDI lead to improvements in LE and QALE due reduced incidence of diabetes-related complications. CSII is cost effective compared to MDI according to accepted international thresholds.

UC2

PATIENTS’ PREFERENCES FOR INGUINAL HERNIA REPAIR
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OBJECTIVE: Inguinal hernia repair is a common surgical procedure. Available evidence suggests that there are advantages and disadvantages to open and laparoscopic repair. The value that patients attach to the profile of outcomes is uncertain. The objective is to elicit patients’ values for the profile of outcomes for each surgical technique. METHODS: A postal discrete choice survey was developed containing 7 attributes with 3 levels each, identified from the literature, expert opinion and a pilot study. A fractional factorial design reduced the number of scenarios to 18, using SPEED. The scenarios were systematically paired into 9 binary choices to derive an efficient design (orthogonality, level balance, utility balance and minimal overlap). Respondents were asked to choose operation A or B in each pair-wise choice and indicate the strength of their preference. Dominance and consistency tests, and a ranking exercise were also included. Results were analysed in STATA using a random effects probit model. The study sample was 50 post-operative patients (25 laparoscopic, 25 open) and 50 patients waiting for an inguinal hernia repair at one hospital. RESULTS: In total, 63% of patients returned the questionnaire, (18 post-laparoscopic, 10 post-open and 35 waiting). The mean age of respondents was 53 years (range: 25–87), 58% were retired. Initial analysis of complete responses, based on the sign and significance of the regression coefficients, indicated patients prefer operations with: 1 overnight stay (β = 0.466) to those with 0 or 2+ nights; least risk of operative-complications (β = −0.195); longer return to usual activities (β = 0.049); least post-operative pain (β = −0.042); lowest chance of recurrence (β = −0.033); complications after the operation (β = 0.031); and, least long-term pain (β = −0.009). Overall the signs on the coefficients were consistent with a priori expectations. All attributes were statistically significant (p < 0.01). CONCLUSION: Patients value those attributes describing immediate care/outcome more than those that affect long-term outcome.

UC3

A FIVE-LEVEL VERSION OF EQ-5D
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OBJECTIVES: EQ-5D defines health in terms of 5 dimensions each divided into 3 levels, forming a classification of 245 states. The first level within each dimension corresponds to “no problem” and it has been suggested that the classification lacks scope for sensitivity. A 5-level descriptive classification offers advantages with smaller step sizes than is presently the case, leading to reduced ceiling effects. This paper reports on a study that compares self-rated health status in a patient survey using a modified 5-level descriptive classification alongside the conventional 3-level EQ-5D. METHODS: EQ-5D was modified by inserting an intermediate level between the existing levels 1&2 and 2&3. No text labels were provided for these levels 2 and 4 of the modified version. A questionnaire containing both 3-level and 5-level responses systems was constructed. The order of presentation was varied with 50% presenting the standard EQ-5D format first; in the remainder the 5-level version was presented first. Questionnaires were mailed out to over 2000 individuals selected from the national electoral register. RESULTS: Data from 950 respondents were available for analysis (n = 478 for 3-5 version and 472 for the 5-3 version respectively). 64% of respondents were indifferent when asked which version they preferred. Of the remainder 65% preferred the 5-level version. Response errors were defined as a difference in response of more than 1 level between the 2 versions and these were generally less than 1%. There was a smaller ceiling effect and only 39% of respondents reported no problems on the 5-level version. The corresponding rate for the 3-level version was 50%. CONCLUSIONS: A 5-level response system for EQ-5D is feasible. The revised version produced a wider distribution of reported problems with less compacting towards level 1. Backwards compatibility ensures that existing valuation sets can be used with both 3- and 5-level systems.

UC4

VARIATION IN ADL FUNCTIONING WITHIN BARTHEL INDEX SCORES: IMPLICATIONS FOR STROKE CLINICAL TRIALS AND PRACTICE
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OBJECTIVES: The Barthel Index (BI) is a validated activities of daily living (ADL) scale covering bowel and bladder functioning, grooming, toileting, feeding, transfers, mobility, dressing, stairs, and bathing. Scores range from 0–100 (0 = total dependence, 100 = complete independence). Mathematically, the BI allows for 5,146 possible profiles; however, many do not occur clinically due to hierarchical conservation of function. Published information on clinical representation of BI profiles and diversity within scores is scarce. We explored those issues and their clinical and economic implications. METHODS: A BI profile was defined as the score set for the ten ADL items. Complete BI profiles from 246 stroke inpatients were entered into a database and segmented by score. Data were validated against published findings. For each score, the number of unique profiles and their frequencies were calculated. The clinical and economic implications of differences in profiles at the same score were assessed. RESULTS: In total, 697 complete BI profiles were obtained from patient data, of which 246 were unique. Excepting the scoring extremes, the number of unique profiles at each BI score ranged