self-reported health status, Activities of Daily Living, and Instrumental Activities of Daily Living. However, estimates of the effect of prescription drug coverage on prescription use that control for selection are much smaller than those previously reported. CONCLUSION: Studies that purport to analyze the effect of drug coverage on utilization or health using observational data needs to account for selection bias associated with such coverage.

PATIENT-REPORTED OUTCOMES I

A BAYESIAN ESTIMATION OF AN AVERAGE SF-6D PREFERENCE BASED SCORE FROM COMMONLY REPORTED SF-12 STATISTICS

Hanmer J, Fryback DG
University of Wisconsin—Madison, Madison, WI, USA

OBJECTIVES: To construct an algorithm which converts statistics commonly reported in publications with the SF-12 health status measure to an average SF-6D preference based score. METHODS: We used SF-12 data from the 2002 Medical Expenditures Panel Survey. We presumed commonly published sufficient statistics would include average age, sex, physical component score (PCS), and mental component score (MCS). All combinations of these variables were used as predictors in models built with WinBUGS 1.4. Model fit was evaluated with the Deviance Information Criterion (DIC). The best fit model was also evaluated using R-square for comparison to other algorithms that convert SF-12 summary scores to preference scores. RESULTS: We used all respondents with PCS and MCS scores (n = 20,206). The best fit model included age, sex, PCS, and MCS as predictor variables (DIC = 67,434). The model was SF-6D = 0.001544 – 0.002173 * female + 0.000144 * age + 0.008097 * MCS + 0.00816 * PCS. The R-square of this model (0.88) was substantially better than models that convert to EQ5D summary scores developed by Lawrence et al (0.61) or Franks et al (0.65 and 0.59) or to HUI Mark 3 summary scores by Franks et al (0.51) or Sengupta et al (0.55). Because this model does not include power or interaction terms, knowing the average age, PCS score, MCS score, and the percent whom are female in a sample is sufficient to predict an average SF-6D score. The residual from directly calculated SF6D scores drops dramatically as group size increases; the standard deviation of residual size is 0.046 for 1 subject, 0.014 for 10 subjects, 0.006 for 50 subjects, 0.003 for 100 subjects, and approaches an asymptote of 0.003 with more than 200 subjects. CONCLUSIONS: Commonly reported summary statistics from previously published articles provide sufficient information for estimating an average SF-6D score without accessing individual level data.

QUANTIFYING PATIENTS’ RISK-BENEFIT TRADEOFF PREFERENCES: A CONCEPTUAL AND EMPIRICAL COMPARISON OF METHODS

Johnson FR, Van Houwen G, Mansfield C, Ozdemir S, Miller DW
1Research Triangle Institute, Research Triangle Park, NC, USA; 2Elan Pharmaceuticals, San Diego, CA, USA

OBJECTIVES: To compare conceptual models, empirical measurement, and results of alternative methods for measuring patients’ willingness to trade off severe adverse event risks for specified health gains. METHODS: We define and compare the theoretical foundations of standard gamble (SG) and multi-attribute conjoint analysis (CA) methods. SG derives from von Neumann-Morgenstern-expected-utility theory, while CA applies McFadden random-utility theory to hypothetical choices. We define theoretical conditions under which the two methods provide equivalent health-preference measures, including linearity, separability, and risk-neutrality. We evaluate accepted empirical methods used in SG and CA studies and propose methods for incorporating risks as CA treatment attributes. We then compare empirical maximum acceptable-risk estimates from CA studies of multiple sclerosis and Crohn’s disease patients with and without restrictive SG assumptions, as well as with published SG estimates from other disease interventions. RESULTS: We find that SG can be used to estimate MARs for specific health outcomes only by imposing more restrictive assumptions on patient preferences than CA methods require. We show that CA methods can be used to test various theoretical restrictions imposed by the SG assumptions and find that risk neutrality and linearity are rejected statistically in most cases. By imposing SG assumptions on CA results and by comparing CA results to published SG estimates for chronic conditions, we find that SG assumptions increase MAR estimates by 20% to 150% relative to those obtained by CA methods. CONCLUSIONS: CA methods can be used to replicate SG tradeoff tasks and to test the restrictions required to interpret SG estimates as risk-preference measures. CA offers a more flexible and conceptually rigorous method than SG as conventionally applied for measuring treatment preferences and risk-benefit tradeoffs. Most importantly, multiattribute CA methods can more realistically simulate clinically relevant risk-benefit tradeoff choices to improve the validity and reliability of preference estimates.

RACIAL DIFFERENCES IN PREFERENCE-BASED HEALTH-RELATED QUALITY OF LIFE ASSESSMENT

Fu AZ, Kattan MW
Cleveland Clinic Foundation, Cleveland, OH, USA

OBJECTIVES: To document whether there are fundamental racial differences in patients’ perception of the preference-based utility assessment for health-related quality of life. METHODS: Secondary data analysis was conducted using the 2003 Medical Expenditure Panel Survey (MEPS), a nationally representative sample of 20,428 people with their concurrent EQ-5D scores reported. Given the upper-bound of preference-based scores at 1.0, a two-part model was derived to identify the relationship between race and the preference-based utility score after controlling for individual demographic covariates, comorbidity profile, and functional and activity limitations. Logit models were employed to predict the probability of “no problems” for specific attribute in EQ-5D. In order to generalize the results to the whole US population, the complex survey sampling design of MEPS was taken into account using the specified sample weight, variance estimation stratum and primary sampling unit. RESULTS: Compared with Whites, Blacks were less likely to perceive themselves in full health (utility score of 1.0) by 3.5 percentage points (p < 0.01), holding all other factors constant. For those who did not perceive full health (51%), Blacks on average perceived themselves 0.037 less than Whites in the utility assessment (p < 0.0001). Even after controlling for education and income, racial difference remained significant. Among the five attributes of EQ-5D, self-care was the major contributor of the racial difference for utility assessment. Anxiety/depression was the only domain which did not have significant difference. CONCLUSIONS: This study adds to the literature of health-related quality of life by providing empirical evidence at the national level to demonstrate the racial differences for preference-based utility assessment. Health researchers need to be aware that Blacks are likely to perceive having a lower health-related quality