Contributed Poster Presentations

SESSION I

RESEARCH METHODOLOGY ISSUES

PMI1

SELF-REPORT OF HEALTH-RELATED LOST PRODUCTIVE TIME AT WORK: BIAS AND THE OPTIMAL RECALL PERIOD

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OBJECTIVE: To determine if the length of the recall period is associated with differences in self-reported work loss and to determine the optimal length for the recall period.

METHODS: Three different phone interviews were developed to quantify illness-related work loss. Two different recall periods, one week and four weeks, were used for each interview. A convenience sample (n = 20,088) of adult residents from the Baltimore, MD and Chicago, IL areas was contacted by phone, of whom 7,691 met occupation eligibility criteria. Respondents were randomized to interviews that used a one-week and four-week recall period. Reference measures were derived from follow-up interviews conducted one and four weeks later, respectively, using a bounded recall method (n = 615).

RESULTS: A significantly lower estimate of lost productive work time was observed for interviews that used a four-week recall period compared to interviews that used a one-week recall period. Using the four-week recall data, work loss estimates for weeks 3 and 4 were significantly lower than estimates for weeks 1 and 2. This difference does not appear to be due to forward telescoping. Estimates of weekly work loss from the one-week recall interviews did not differ from estimates derived using data from weeks 1 and 2 of the four-week interview. Bounded recall data was used to confirm these results. If over-reporting were occurring, estimates of lost work time would be significantly lower using bounded recall compared to unbounded recall. We observed no differences by data collection method (i.e., bounded versus unbounded recall).

CONCLUSION: We recommend a two-week recall period to minimize under-reporting of health-related lost productive work time and to maximize statistical power (i.e., capture of number of work-loss episodes).

PMI2

SMOOTHED BOOTSTRAP FOR CONFIDENCE INTERVAL FOR COST-EFFECTIVENESS RATIOS

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OBJECTIVES: The statistic of interest in most health-economic evaluations is the incremental cost-effectiveness ratio. Health-economics literature suggests a number of alternative approaches to estimating confidence intervals for the cost-effectiveness ratio. The most favored seem to be the bootstrap methods. We assess two resampling methods for computing confidence intervals for cost-effectiveness ratios developed from randomized controlled trials: the naive bootstrap method and the smoothed bootstrap method.

METHODS: The simplest method of sampling from empirical distribution is naive resampling. We randomly choose members of the sample with replacement. If the sample is based on a continuous random variable this method has the obvious drawback that only a small number of different values can be generated. There is a simple modification of naive resampling called smoothed bootstrapping in statistical literature. We not only resample but also add a noise to each of the resampled numbers. The noise is a continuous random variable with an expectation of 0 and a small variance. The smoothed bootstrap is the same as generating random variables from a density estimate using the kernel density method. We perform a Monte Carlo experiment to compare these methods. We evaluate the relative performance of each and assess whether or not it is affected by different distributions of costs and effectiveness (bivariate normal and bivariate log normal) or by different levels of correlation between the costs and the effects. The principal criterion for performance is the probability of miscoverage, defined as the probability that the true value falls outside the estimated confidence interval.

RESULTS: Overall probabilities of miscoverage for the smoothed bootstrap method are lower than for the naive bootstrap method. The performance of the smoothed bootstrap method is independent of sample size, correlation level and type of distribution. The performance of naive bootstrap method increases with the sample size and the correlation level.

PMI3

INCORPORATING CLINICAL LEVEL-OF-EVIDENCE CRITERIA INTO A BREAST CANCER TREATMENT MODEL FOR JAPAN

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OBJECTIVES: To develop an evidence-based clinical and economic decision-analysis model to identify existing treatment patterns and estimate the costs and outcomes for early, recurrent, and metastatic breast cancer in Japan.