volumes and costs. Correlations and paired T-tests were used to compare simulated annual costs with actual annual costs from the continuous measurements. RESULTS: Analyses confirmed that discontinuous measurements using cost diaries offer good estimates of annual health expenditures, but measurement patterns and imputation methods did influence the outcomes, as the correlations differed between methods. The best estimated annual costs were obtained by random cohort measurement, using three random cohorts, ensuring that at least a third of the participants were measuring costs each month, combined with IM imputation. Discontinuous measurement of health expenditures carries a small risk of missing infrequent expensive events, which may result in underestimation of annual costs. CONCLUSIONS: To reduce the burden on participants in future economic evaluation, we recommend calculating annual costs from discontinuous measurements in random cohorts, combined with IM imputation.

THE POTENTIAL PENALTY FOR NOT SAMPLING FROM THE RISK SET IN NESTED CASE-CONTROL DESIGNS: EVIDENCE FROM SIMULATED DATA
Kuri VA1, Feudjo-Tepie M2

OBJECTIVES: Appropriate design and efficient analytical strategy are generally considered as some of the prerequisites for a valid and reliable health outcomes research on non-randomized observational data. For rare outcomes, the case-control design is often presented as the most efficient, whereby, proper selection of controls is crucial. Using simulated data for the nested case-control design, we assess the relative efficiencies of two sampling strategies for the controls- the version where controls can never be cases (design 1) and the recommended approach in which controls are sampled from the risk sets such that some controls can be future cases (design 2). METHODS: In each simulation, we assumed an underlying hazard that follows a Weibull distribution with inputted values for the scale and shape parameters to generate 100 sets of cohorts of 4000 patients in treatment groups (i.e. treated and untreated). The process also involved an assumed hazard ratio for treatment and 3 factors that required adjustments. Designs 1 and 2 were then applied successively on each of the resulting datasets and then analysed to obtained for each design, the estimated odds ratio (OR- an approximate of the inputted hazard ratio) and its 1st and 3rd quartiles. RESULTS: We considered over 50 scenarios for hazard ratio that varied between 0.3 and 4.0. The absolute differences between the inputted hazard ratio and the estimated odd ratio ranged from 0.01–8.00 and from 0.01–0.50 for designs 1 and 2 respectively. The inputted hazard ratio was within the inter-quartile range of the OR in less than 5% of the runs with design 1 but more than 80% with design 2. CONCLUSIONS: Our study suggests that in nested case-control designed studies, if controls are not sampled from the appropriate risk sets, we can expect much larger bias in our estimates than with correct sampling.

CONSISTENTLY ESTIMATING RISK DIFFERENCE IN A JURISDICTION OF INTEREST: ODDS SOLUTION TO RELATIVE RISK FALLACIES
Eckermann S1, Coory M2, Willan AR3
1Flinders University, Adelaide, South Australia, Australia, 2University of Queensland, Brisbane, Queensland, Australia, 3SickKids Research Institute, Toronto, ON, Canada

OBJECTIVES: Economic analyses in health technology assessment often require estimation of absolute risk difference (ARD) for outcomes such as survival or progression, given base risk in the jurisdiction of interest and trial evidence of treatment effects. We demonstrate that odds ratios (OR) provide distinct advantages over relative risk (RR) in consistently estimating such ARD in direct and indirect comparisons. METHODS: Use of OR is shown to lead to inferential anomalies in estimating ARD, while consistently estimated using OR. These inferential anomalies and odds solution are illustrated for indirect comparison of Natiluzimab versus Interferon beta-1b for multiple sclerosis, as well as direct comparisons. RESULTS: Use of relative risk is shown to lead to inferential anomalies in estimating ARD, while consistently estimated using OR. These inferential anomalies and odds solution are illustrated for indirect comparison of Natiluzimab versus Interferon for progression (RR = 0.70, ARD = 21% for a base risk of 70% progression) but less effective than Interferon for no progression (RR = 0.84, ARD = 4.8%). This