therapy is used, between −$7.9 and $68.8 million in El Salvador, and between −$888.8 thousand and $8.6 million in Belize.

CONCLUSIONS: Since the ratio of antiretroviral drug costs to GDP was 0.041% in Brazil in 2000, these three Central American countries may have more difficulty affording antiretroviral therapy unless double combination therapy is used.

SESSION II

METHODOLOGY ISSUES I

MI1

HANDLING MISSING DATA IN STOCHASTIC COST-EFFECTIVENESS ANALYSIS: THE IMPACT OF IMPUTATION METHODS ON ESTIMATES OF THE PHYSICAL QUANTITIES OF MEDICAL CARE RESOURCE USE

Bell TJ[1], Liu J[1], Backhouse M[2]
[1]Research Triangle Institute, Raleigh-Durham, NC, USA;
[2]Research Triangle Institute, Manchester, UK

OBJECTIVE: An issue that has recently received attention from health economists is how to handle the problem of missing data in stochastic cost-effectiveness analysis. The purpose of this paper is to highlight the impact that different approaches to the imputation of missing data can have on estimates of the physical quantities of medical care resource use.
METHODS: Medical care resource use data were collected prospectively in a 6-month RCT comparing two treatments for a chronic condition that is characterised by acute episodes. Two approaches of the multiple imputation were used to address the problem of missing data. Method A relied on imputing missing data for total costs and then estimating the physical quantities of medical care resource use. Method B relied on imputing missing data for the physical quantities of medical care resource use and then estimating total costs. Results for physician and nurse visits and days in the hospital were reported.
RESULTS: The two multiple imputation approaches produced different estimates of medical care resource use. For method A, the average number of physician and nurse visits and days in the hospital between the two groups were 5.7 vs. 5.3 physician visits, 1.0 vs. 0.9 nurse visits, and 4.0 vs. 4.7 days in the hospital. For method B the average number of physician and nurse visits and days in the hospital between the two groups were 6.0 vs. 6.3 physician visits, 1.2 vs. 1.3 nurse visits, and 4.0 vs. 5.0 days in the hospital.
CONCLUSIONS: Medical care resource use estimates are sensitive to the imputation approach. Method B builds prediction models specifically for the utilisation components under the imputation and results from the imputed datasets are believed to be less biased. It also provides more flexibility for analysing the cost components.

MI2

COST-EFFECTIVENESS VS. COST-UTILITY ANALYSIS: DOES ADJUSTING FOR HEALTH-RELATED QUALITY OF LIFE REALLY MATTER?

Tengs TO, Lin TH
Health Priorities Research Group, University of California, Irvine, CA, USA

The US Public Health Service Panel on Cost-Effectiveness issued a series of recommendations designed to improve the rigor and consistency of cost-effectiveness analyses. While the Panel's individual recommendations are largely sound, they nevertheless vary in importance. That is, the violation of some recommendations will yield dramatically different cost-effectiveness estimates and resource allocation decisions than the violation of other recommendations.
OBJECTIVE: The Panel has advocated the use of quality-adjusted life-years (QALYs) as the best way to evaluate outcomes in a cost-effectiveness analysis. We consider the importance of this recommendation for cancer prevention, screening, and treatment by studying the empirical relationship between cost/life-year and cost/QALY. In addition, we consider whether adjusting for health-related quality of life (QOL) affects the ultimate resource allocation decision implied by the cost-effectiveness ratio.
METHODS: We identified 198 articles reporting two or more outcome measures for the same intervention: cost/life-year, cost/QALY, total life-years, total QALYs, incremental life-years, or incremental QALYs. We calculated a correlation matrix for these outcomes and performed a regression analysis to examine the relationship between cost/life-year and cost/QALY. We also employed various willingness to pay (WTP) thresholds to assess whether the use of cost/life-year would yield different resource allocation decisions than cost/QALY.
RESULTS: The correlation between the total life-years and total QALYs associated with the intervention is 0.97 (P < 0.0001). The correlation between cost/life-year and cost/QALY is 0.78 (P < 0.0001). Assuming a $50,000 WTP threshold, adjustment for QOL would affect choice in 7% of cases. With a $400,000 threshold, QOL would affect choice in 2% of cases.
CONCLUSION: The outcome measures of life-years and QALYs are highly correlated with one another. While adjusting for QOL can make an important difference in some economic analyses, it generally does not affect implied resource allocation decisions for cancer prevention, screening, and treatment.

MI3

IMPORTANCE OF CONSIDERING SENSITIVITY AND SPECIFICITY OF SCREENING METHODS IN HEALTH ECONOMIC ANALYSES OF DIABETIC NEPHROPATHY SCREENING POLICIES

Palmer AJ, Roze S
CORE Center for Outcomes Research, Basel, BS, Switzerland