

Cost-effectiveness of the Birthing in our Community service from birth to age 18 for First Nations families

Abstract

The Birthing in our Community (BiOC) service in South East Queensland was established to address the rising rates of preterm birth among First Nations families, who have greater healthcare needs compared to babies born at term. The BioC service successfully reduced the odds of preterm birth and was found cost-effective compared to standard care (maternity care provided in the hospital) in the short-term (birth to 28days). To investigate the cost-effectiveness of the BioC service from birth to age 18 compared to standard care, a decision analytic model was developed. The model estimated the costs to the health system, through analysis of a hypothetical cohort of women having a First Nations baby and utilised Disability Adjusted Life years (DALY) to quantify the burden of preterm birth. A probabilistic sensitivity analysis was conducted to assess for uncertainty in the model inputs. The incremental cost-effectiveness of the BiOC service was AU\$16,404.92 per DALY averted. The importance of the BioC service that reduced preterm birth among First Nations families, is observed through this analyses. These results show that the BioC service is cost-effective till age 18, and the reduction of preterm birth achieved through the service is beneficial. The findings of this study could benefit those looking at such services for the future and inform the establishment of similar services beyond South East Queensland.