

# Small area estimation of indigenous life expectancy in Australia

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## 1 Introduction

## 2 Data

## 3 Methods

$$y_{asirt} \sim \text{Poisson}(\gamma_{asirt} w_{asirt}) \quad (1)$$

$$\log \gamma_{asirt} \sim N(x_{asirt} \beta, \sigma^2) \quad (2)$$

Table 1: Priors for main effects and interactions

Term	Prior
(Intercept)	Exchangeable with known variance
age	Local trend with covariates
sex	Exchangeable with known variance
region	Exchangeable
time	Damped local trend
indigenous	Exchangeable with known variance
age:sex	Exchangeable
age:indigenous	Exchangeable
sex:indigenous	Exchangeable
region:indigenous	Exchangeable
time:indigenous	Local level
age:sex:indigenous	Exchangeable

## 4 Results

## 5 Discussion

Bryant and Zhang (2018)

## References

Bryant, J. and Zhang, J. L. (2018). *Bayesian Demographic Estimation and Forecasting*. CRC Press.