

USING SOCIOECONOMIC INDEXES

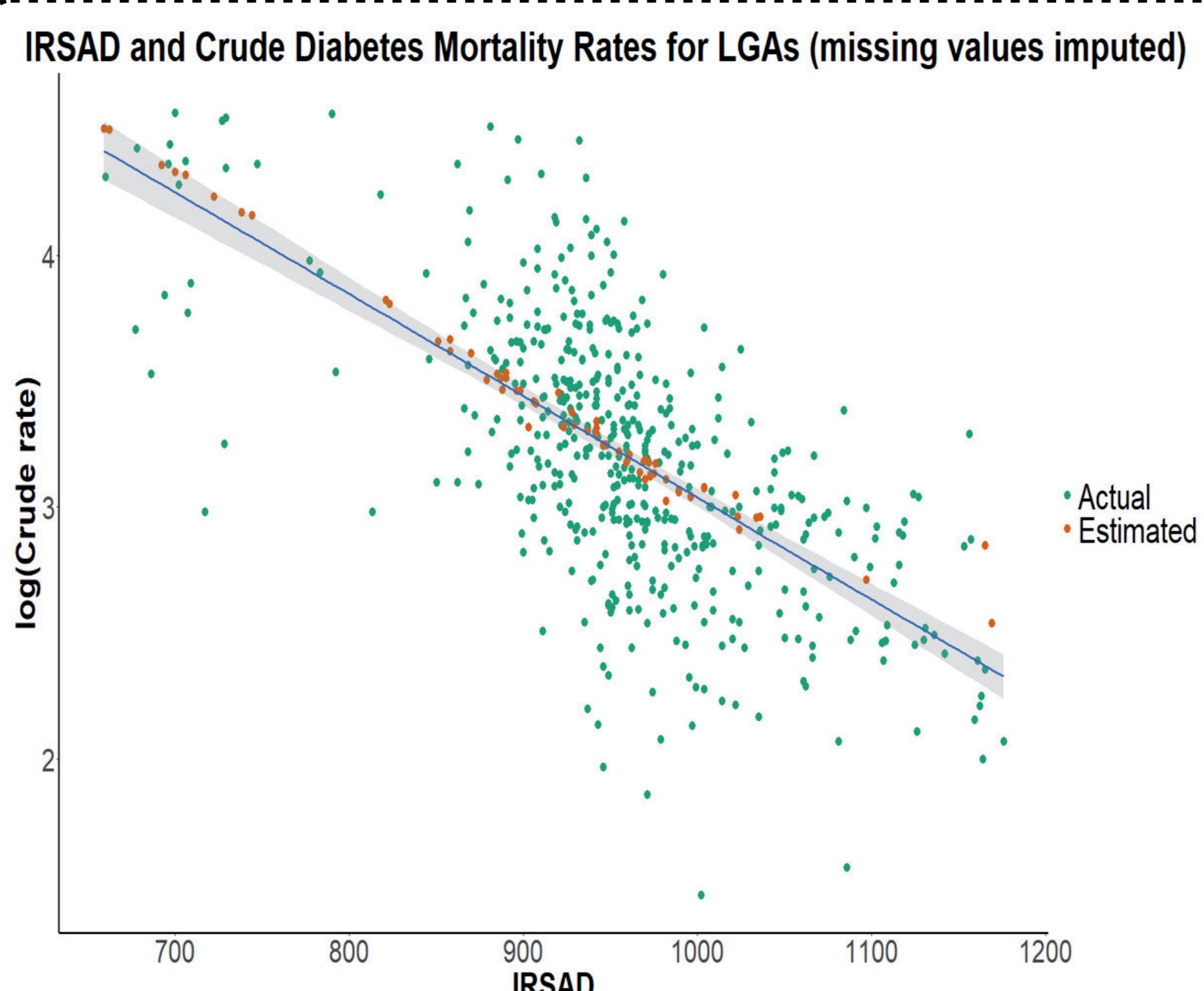
TO ESTIMATE DIABETES MORTALITY RATES: AN ANALYSIS OF THE AIHW MORT BOOKS



Diabetes is an extremely common cause of death in Australia, yet for a number of remote, sparsely populated Local Government Areas (LGAs) there exists no mortality data. However, we have found that socioeconomic indexes can be used to estimate the crude death rate of diabetes.

-0.673

Correlation between Index of Relative Socioeconomic Advantage and Disadvantage and log(Crude Rate)

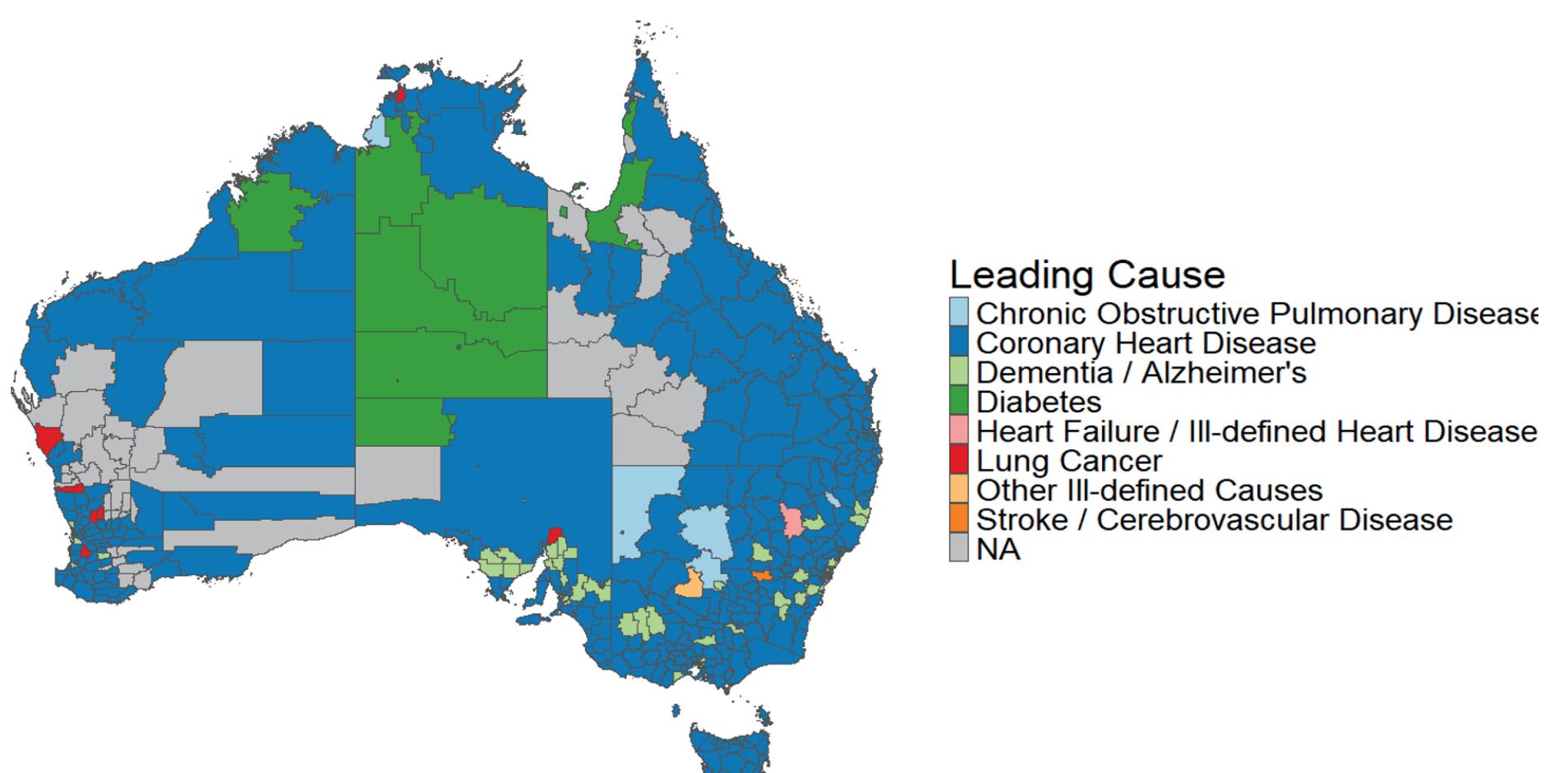


The regression model involved the use of 3 separate indexes and accounts for 40.8% of the variation in crude diabetes death rates. Furthermore, we were able to accurately estimate mortality rates for the 12% of LGAs which had no data, however, for low socioeconomic LGAs these estimates should be treated with caution due to high variance.

25,190

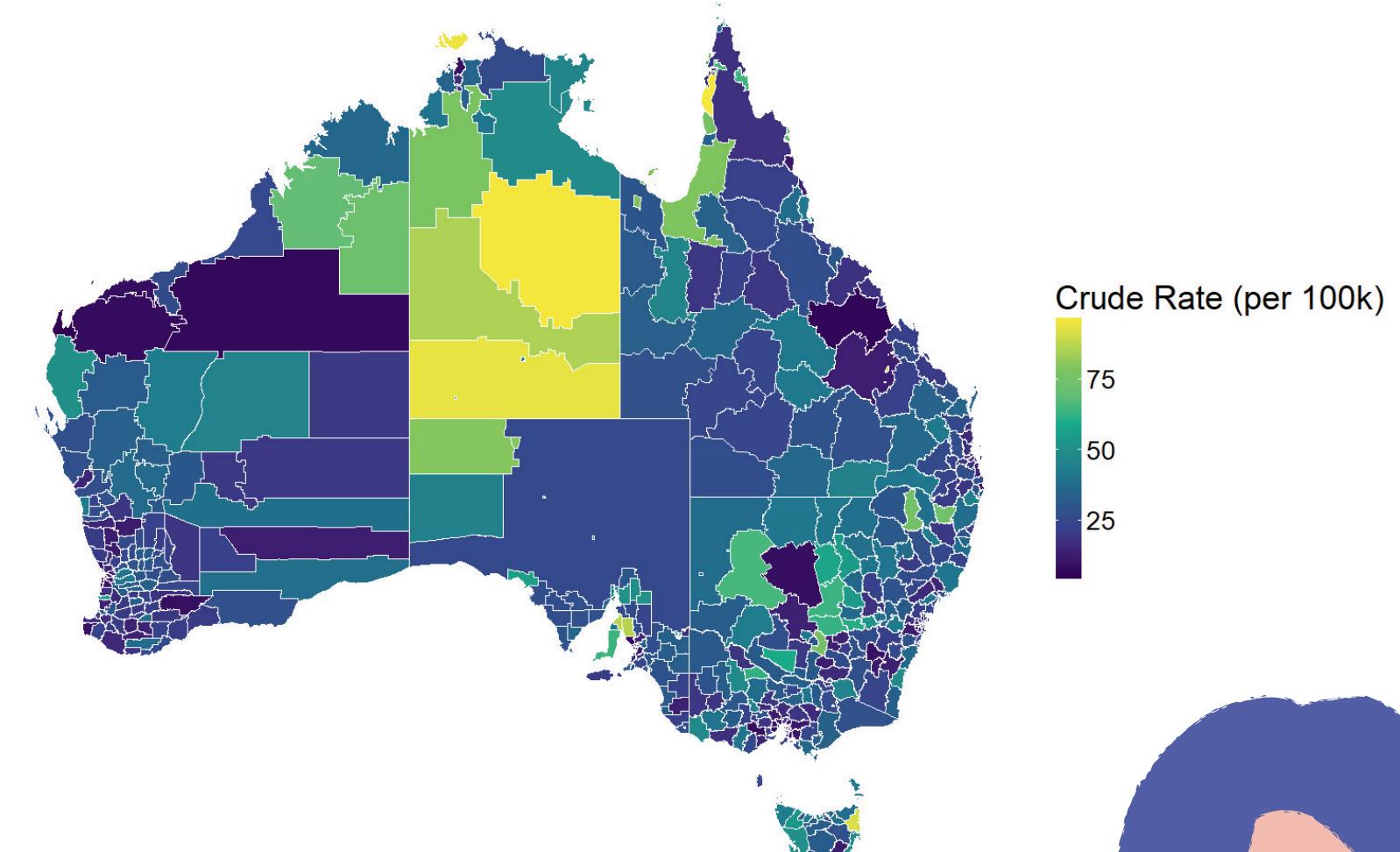
Number of deaths in Australia where the reason for death was diabetes (2017-2021)

Leading Cause of Death by LGA



The data was loaded into RStudio for analysis and visualisation. This included creating various other dataframes and a regression model, which was used to estimate crude diabetes death rates for LGAs which did not have any data.

Crude Diabetes Death Rate of LGAs (missing values imputed)



Socioeconomic indexes were sourced from the *Socio-Economic Indexes for Areas (SEIFA)*, *Australia* dataset published by the Australian Bureau of Statistics. Our analysis mostly focuses on the Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD) for its completeness. The mortality data comes from the *Mortality Over Regions and Time (MORT) Books* dataset published by the Australian Institute of Health and Welfare.

