

Rural Health Information Project

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Clustering Project - Objective

To use clustering methods to define rural areas on the basis of distance from health services (physical access) and economic resources to access health services, and any other relevant factors, for the purposes of analysing health data.

Clustering Project

Models for consideration:

1. Economic Resources + %Population Change + ARIA+
2. Economic Resources + %Population Change + %Aboriginality + ARIA+
3. Relative Social Disadvantage + %Population Change + ARIA+
4. Economic Resources + Dependency Ratio + ARIA+
5. Economic Resources + Child Dependency Ratio + total population + ARIA+
6. Economic Resources + Child Dependency Ratio + ARIA+
7. Economic Resources + Dependency Ratio + ARIA++
8. Economic Resources + Child Dependency Ratio + ARIA++
9. Economic Resources + %Population Change + ARIA++

Clustering Project - Methods

Wards Minimum Variance Method

- Produces spherical clusters
- Begins by treating each LGA as its own cluster
- Finds the 2 LGAs which are the most similar based on the selected variables. This is done by finding the combination of LGAs which produces the minimum error sum of squares.
- The above step is repeated until a stable result is achieved.

Clustering Project - Methods

Lance-Williams Flexible Beta Method

- This algorithm depends on a parameter, beta, which can be specified by the user. A beta value of -0.25 is the default.
- Shape of clusters depend on value of beta