



# Understanding the quality of linked Australian administrative data

ABS Statistical Data Integration

**Australian Bureau of Statistics**  
Informing Australia's important decisions



# Australian administrative data



- ▶ Administrative data has been used in the production of Australia's official statistics for some time:
  - aggregate births, deaths and marriage registry data is used to produce population estimates.
  - scanner data is used to produce the Consumer Price Index.
- ▶ Developments in data integration have produced new, linked data sources that can provide new insights.
- ▶ The ABS is continuing to explore ways that administrative data can be used to improve our official statistics.

# Australian administrative data



- ▶ The ABS has a number of [safeguards](#) in place to protect the data it holds.
- ▶ Arrangements for access to linked administrative data are outlined on the [ABS website](#).
- ▶ Access to approved extracts of linked administrative data is managed through the [Five Safes Framework](#).

# Bringing administrative data together

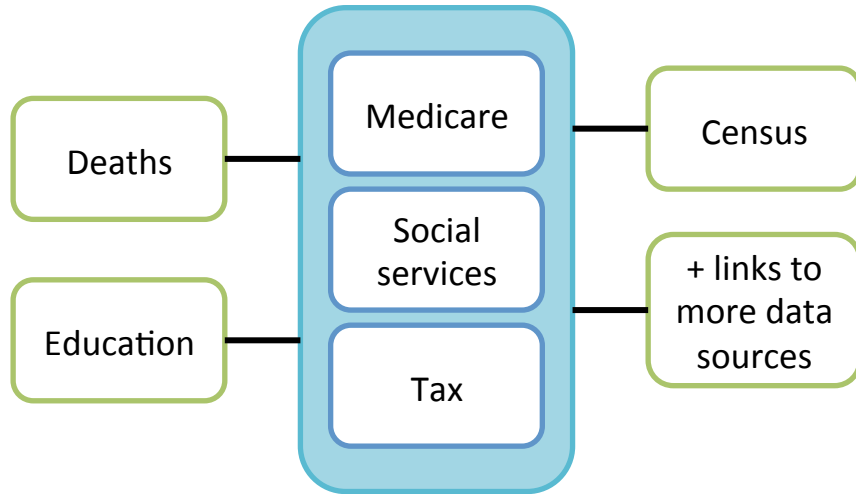


- ▶ The ABS has developed the Person Linkage Spine to enable administrative data sources to be brought together in a robust and consistent way.
  - The Spine enabled production of the [MADIP data asset](#).
- ▶ The Spine concept is based on international best practice.
  - Similar in concept to Statistics New Zealand's [Integrated Data Infrastructure](#) (IDI) Spine.

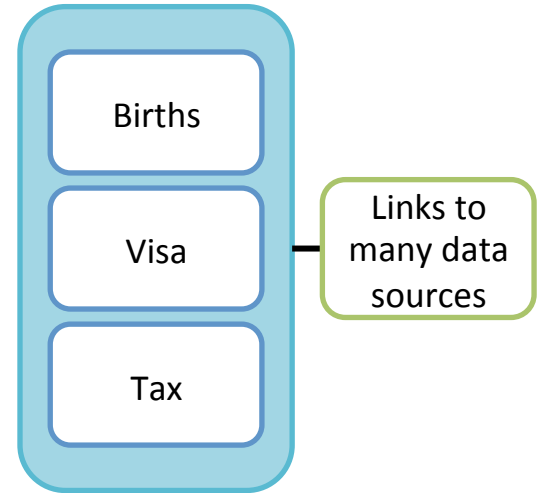
# Bringing administrative data together



## Australian Person Linkage Spine



## Stats NZ IDI Spine

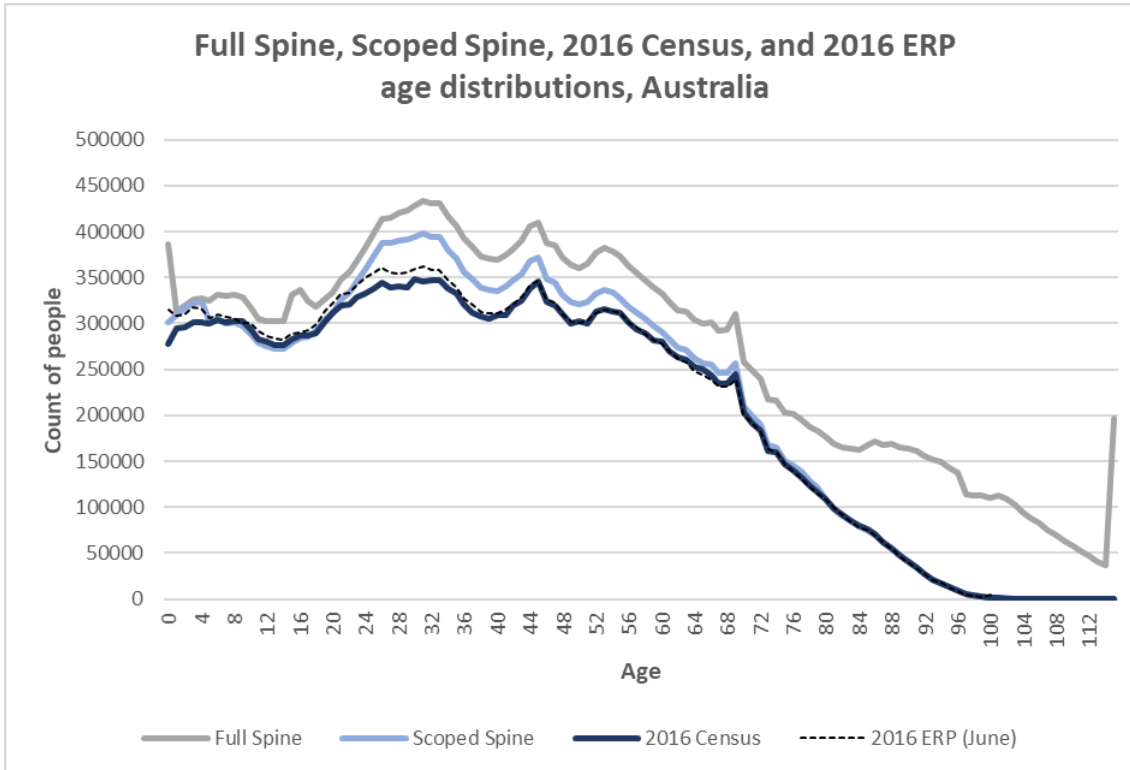


# Bringing administrative data together

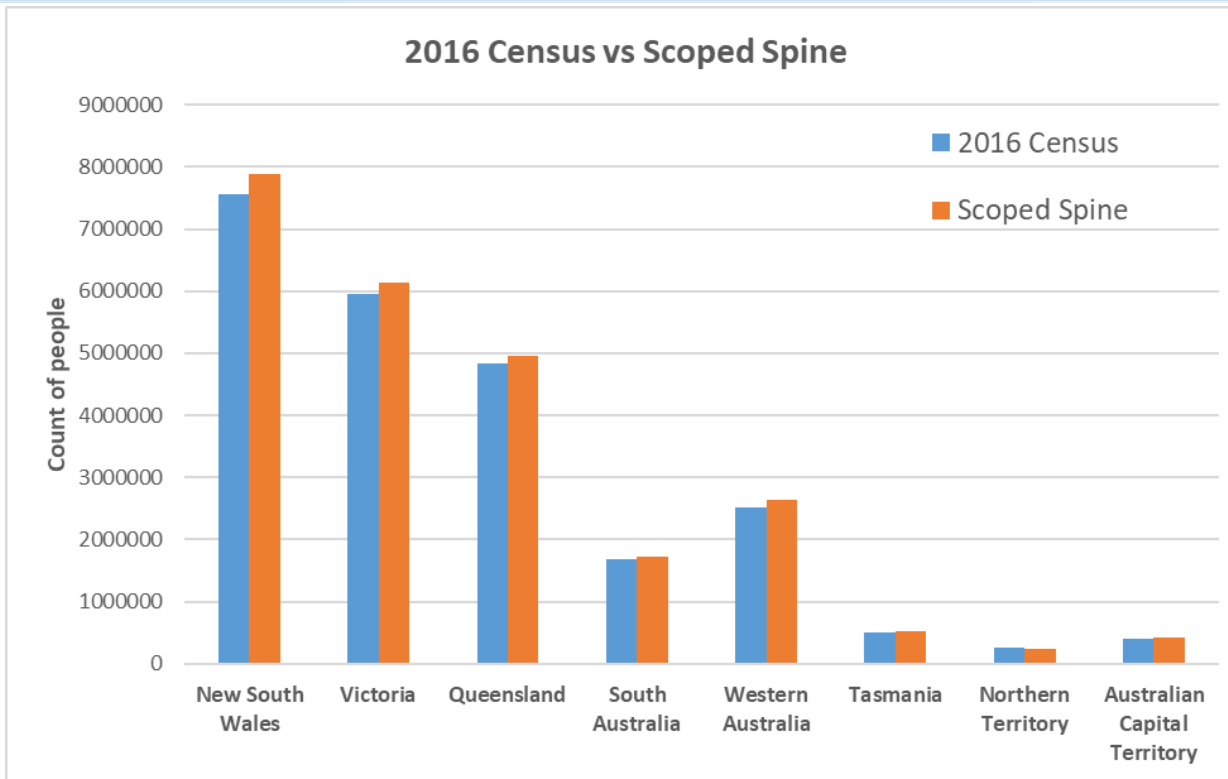


- ▶ To enable high quality linkage via the Spine, we need a high quality Spine.
- ▶ The ABS is conducting research to understand the quality of the Spine.
- ▶ One aspect of quality is how well the Spine covers the population in Australia, including:
  - By age
  - By location
  - For the Aboriginal and Torres Strait Islander population

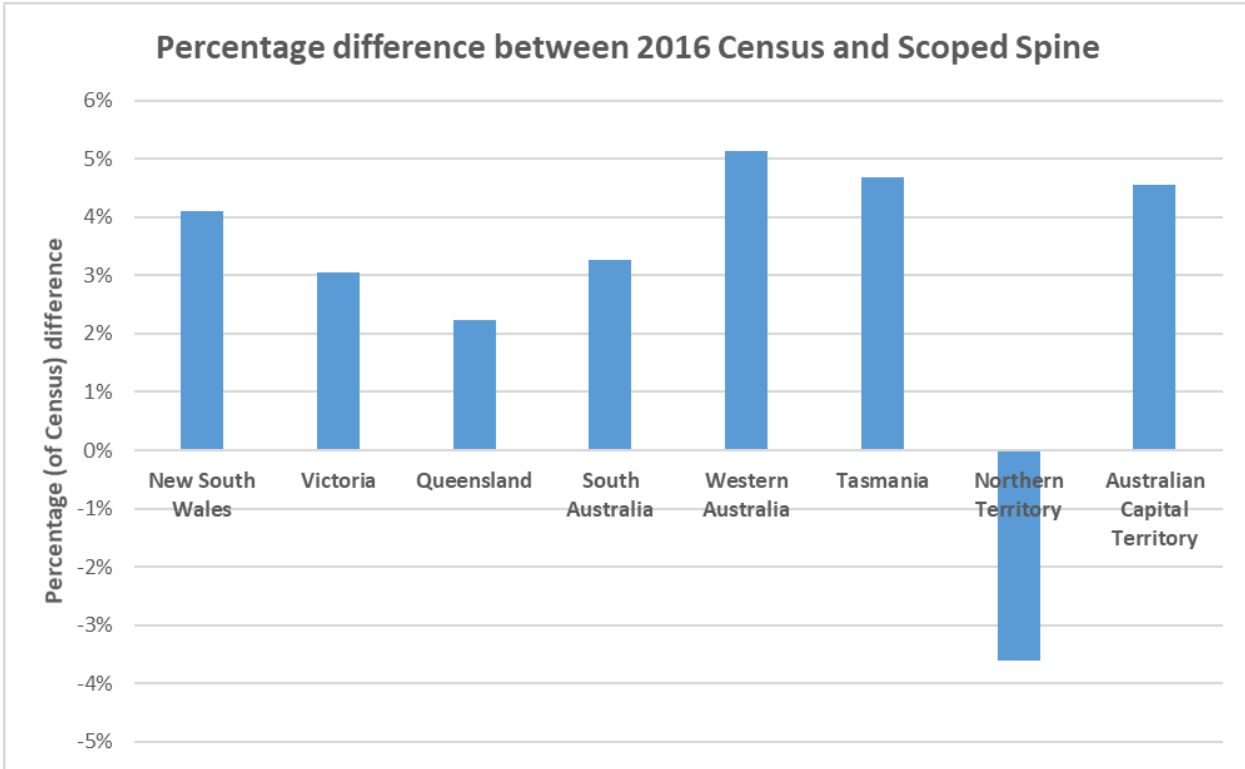
# Coverage by age



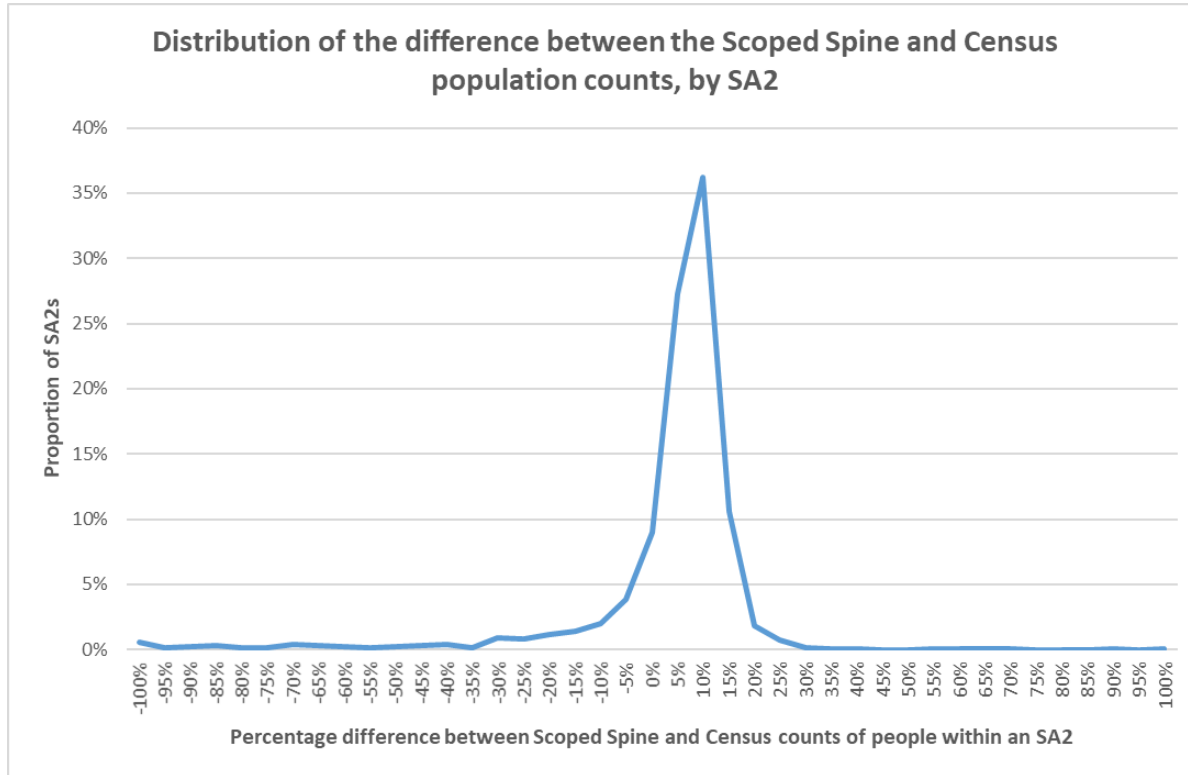
# Coverage by State and Territory



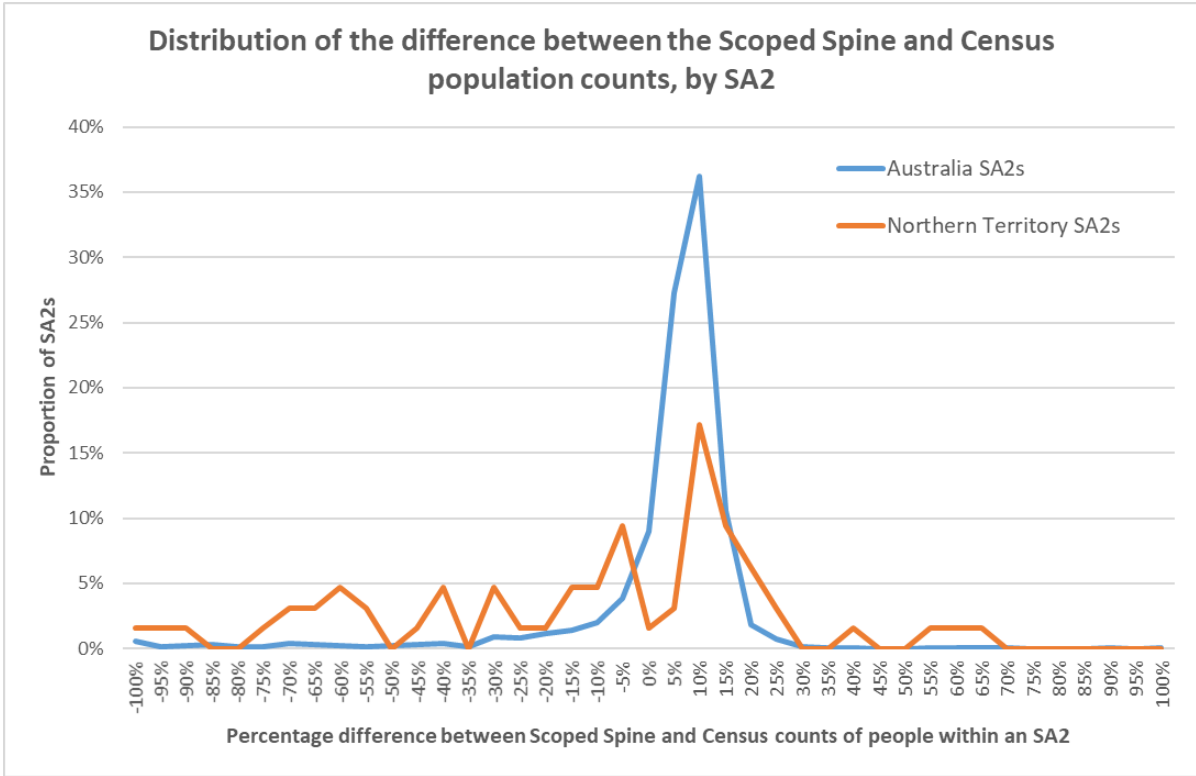
# Coverage by State and Territory



# Coverage of small areas



# Coverage of small areas

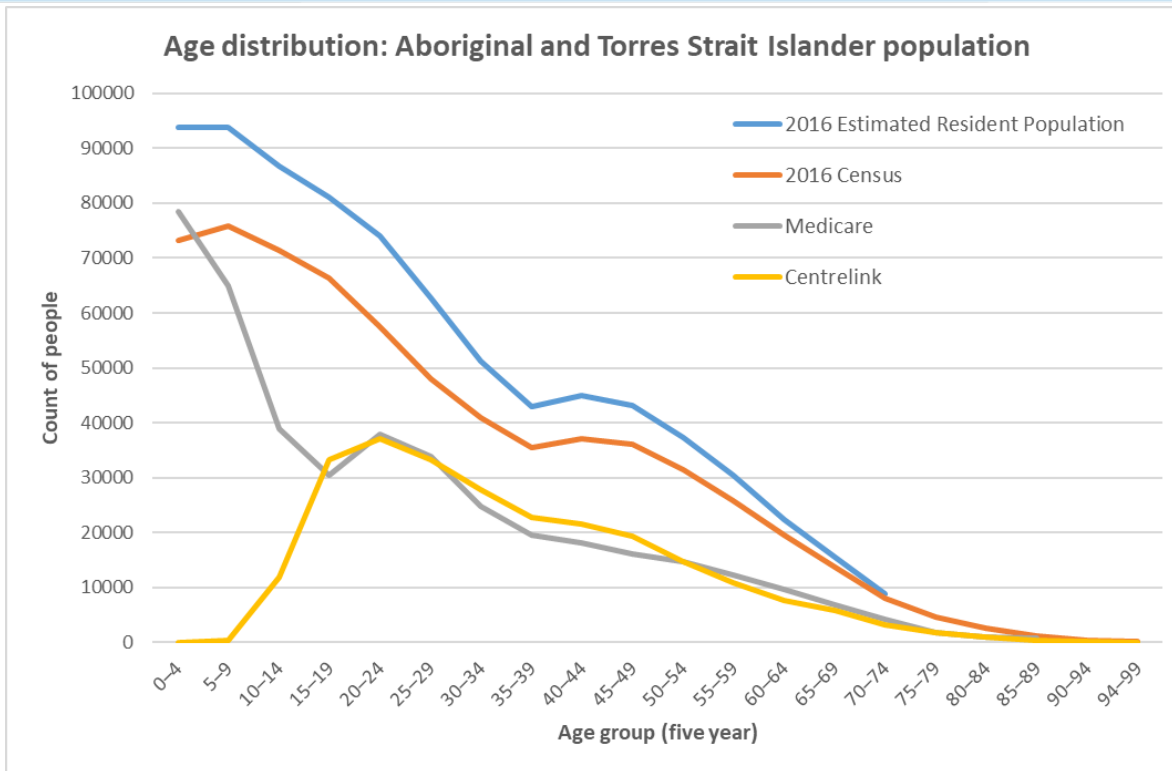


# Coverage of the Aboriginal and Torres Strait Islander population

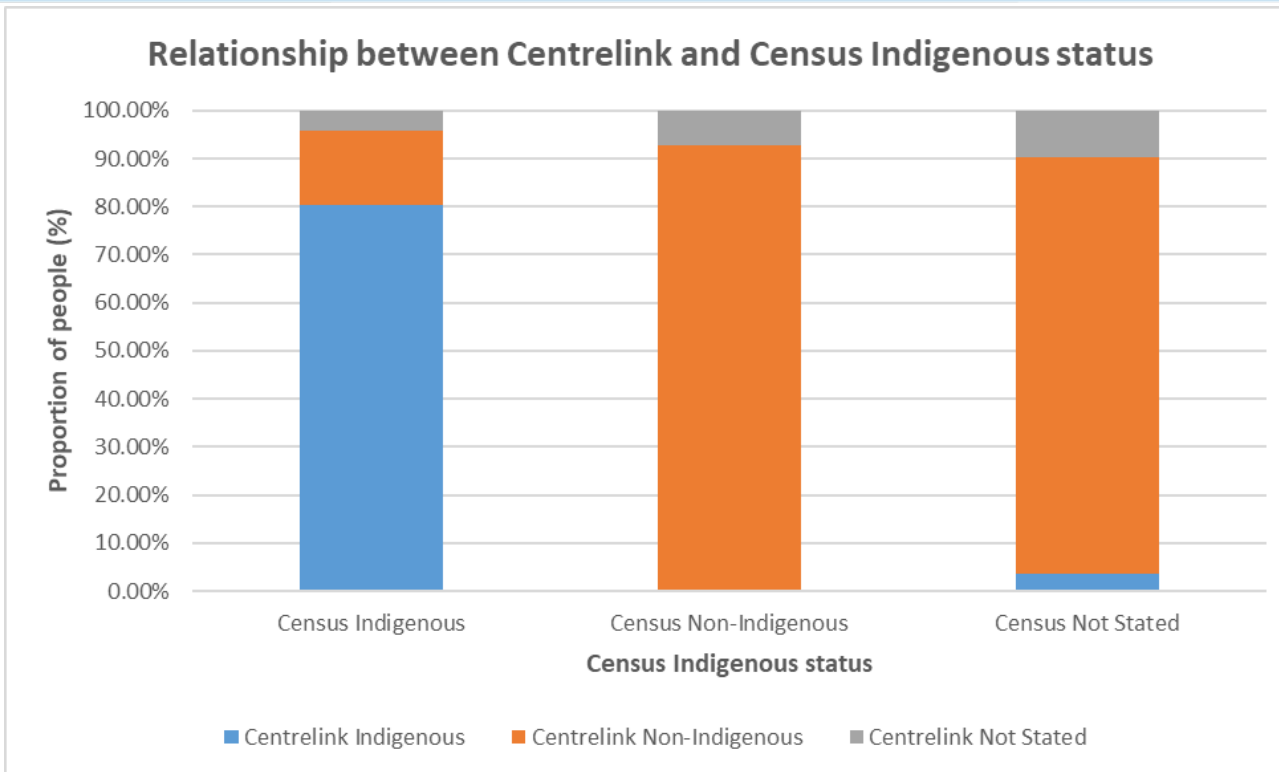


- ▶ In Australia, there are 3 components of the Commonwealth definition for Indigenous status:
  1. Descent
  2. Self-identification ← **Census relies on this**
  3. Community acceptance
  
- ▶ There are two administrative sources of Indigenous status: Medicare and social services.
  
- ▶ The administrative data concept of Indigenous status is different to the Census concept.

# Coverage of the Aboriginal and Torres Strait Islander population



# Differences in Indigenous identification



# Where to from here?



- ▶ The Spine has good coverage of the Australian population, but improvements can be made.
- ▶ Next steps could include:
  - Inclusion of new data sources to enable adjustments for over and undercoverage of the population.
  - Improvements to location data, particularly for small areas.
  - Further understanding the different concepts between the Census and administrative data Indigenous status information.

Questions?