

Practical considerations

Regional analysis, using indicators described in this framework, requires the use of concordances (to allocate a level of remoteness on the basis of an individual's postcode or statistical local area (SLA)) and statistical techniques such as age standardisation and calculation of confidence intervals. Regional analysis also benefits from an understanding of regional issues and of data issues peculiar to regional analysis.

Reporting against the indicators in this framework will, in many cases, require collaboration between data custodians and regional analysts (i.e. those who specialise in the analysis of regional issues), each of which have different levels of access to the data, different perspectives and different sets of skills. Experience has shown that data custodians and regional analysts tend to be characterised as follows:

- The regional analyst is aware of general issues relating to regional data and has experience in statistical techniques pertinent to regional analysis and to fitting the geographical concordances to data sets. Regional analysts tend not to have as great a level of expertise in individual subject areas as data custodians and they tend not to have direct or easy access to the data. Regional analysts would also tend to view the population living in each area, rather than a service, as the focus of interest.
- Data custodians have expertise in particular data collections or subjects. They generally have a clear understanding of the capabilities of their data and have direct access to their data sets. Compared with regional analysts, data custodians may have less experience with statistical techniques and concordances used in regional analysis, and tend not to be as aware of regional data issues. Data custodians may view their data, or particularly the service detailed by the data (e.g. the Pharmaceutical Benefits Scheme, the Medical Benefits Scheme) as the focus of interest, rather than the population who live in each area.

Collaboration between the regional analyst and data custodians can be complicated by a range of issues, broadly grouped as:

- data access issues, relating to cost, confidentiality and ownership;
- statistical expertise relevant to regional analysis and experience using concordances;
- time constraints and competing priorities of data custodians; and
- issues of trust.

Data access issues

Data custodians are usually not able to hand over unit data sets for others to analyse – most data sets are necessarily subject to confidentiality constraints and/or rely on the cooperation of several parties (e.g. the state and territory jurisdictions). Custodians may be able to provide aggregate data (e.g. by postcode). This can be cumbersome when data are also required by age, sex and year of collection, but it is a practical and serviceable option.

Because of confidentiality issues and ownership of the data by stakeholders (e.g. states and territories), provision of data from some custodians may require the consent of each of the stakeholders (e.g. states and territories), and the signing of legally binding agreements that give stakeholders or data custodians authority over what is finally published.

The preceding two paragraphs outline the main complications for the regional analyst in obtaining data from data custodians. However, constraints also operate in the opposite direction. In particular, the regional analyst is not able to provide copies of regional population data and concordances to the data custodian, because they are the commercial property of a third entity, typically the ABS. If the data custodians were to complete the regional analyses, each one of them would be required to purchase concordances, and population data (if required) from the ABS.

Regional statistical expertise

Concordances can be difficult to apply, at least partially because one-to-one matches of regional classification boundaries with postcodes and SLAs are unlikely and also because SLAs and postcodes change over time. Regional analysts are more likely to regularly utilise and understand these concordances than data custodians.

Data custodians may not be familiar with some of the statistical techniques such as why, when and how to apply age standardisation and statistical significance. The need to become familiar with these statistical issues can add to the time and effort required for analysis and reporting.

Time constraints

Due to the issues outlined in this section, regional analysis is relatively complicated (at least compared with state or national reporting), which increases the time and effort required to complete analysis and interpretation. The need for data custodians to inject substantial resources into analysis can delay the start of analysis, not least because of competition with the custodians' pre-existing work priorities.

Issues of trust

It is recommended that the proposed analysis be discussed between the analyst and the custodian prior to ordering the data, and that interpretation of the results is also discussed with the custodian. Including the custodian in the analysis and interpretation has the benefit of building trust, benefiting from their understanding of the data and also of involving and alerting the custodian should there be any unexpected findings.

Other issues to consider

If it is planned to report against all (or a large number) of the indicators in this framework, the regional analyst is warned to avoid the 'Painting the Sydney Harbour Bridge' (PSHB) syndrome. In brief, it can take so long to gather data, analyse it and report on each indicator, that, by the time the work is completed, some of it may be regarded as old or out of date. To avoid the PSHB syndrome, options include ensuring that there are sufficient staff working on the project, or releasing the indicators in several, less lengthy volumes.

Data availability can change over time, and so, irrespective of the documentation provided in this framework, the full capabilities of the data should be assessed, afresh, each time indicators are to be reported. As data quality and availability improve, it is likely that the capacity of the data to report against the indicators will improve accordingly.

Accurate denominators are critical for valid inter-regional comparisons. Indicator denominators are frequently population data, which are available from the Australian Bureau of Statistics (ABS), by sex and age group, state and ASGC remoteness area, for the total population and for Indigenous people.