Royal Commission
into Aged Care Quality and Safety

RESIDENTIAL CARE QUALITY INDICATOR PROFILE

VOLUME 3 – BY FACILITY REMOTENESS

RESEARCH PAPER 15

NOVEMBER 2020

The Royal Commission into Aged Care Quality and Safety was established by Letters Patent on 8 October 2018. Replacement Letters Patent were issued on 6 December 2018, and amended on 13 September 2019 and 25 June 2020.

The Honourable Tony Pagone QC and Ms Lynelle Briggs AO have been appointed as Royal Commissioners. They are required to provide a final report by 26 February 2021.

The Royal Commission releases consultation, research and background papers. This research paper has been prepared by staff of the Office of the Royal Commission, for the information of Commissioners and the public. The views expressed in this paper are not necessarily the views of the Commissioners.

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Executive summary

As part of the research conducted by the Office of the Royal Commission, detailed residential aged care quality and safety indicators were collated, for the first time in Australia, in a series of reports.

The reports improve understanding of quality and safety in the aged care system. They also demonstrate the value of making data publicly available to inform the community about aged care services, support consumer choice, encourage continuous improvement, and foster research and innovation.

The quality and safety indicators include: clinical outcomes from the Registry of Senior Australians; Aged Care Quality and Safety Commission accreditation, compliance, complaints, Consumer Experience Interviews data, compulsory reporting of assaults and missing residents; the Australian Government Department of Health's national mandatory quality indicators; and workforce levels from StewartBrown and selected aged care providers. The organisations which collect the data were invited to review a draft of the report and provide feedback.

The methods used to compile the indicators are set out transparently in the reports. The indicators are the same as, or very similar to, how other organisations use the data. If the data were publicly available independent experts could try alternative methods.

Volume 3 profiles the quality and safety of facilities by remoteness, split into five categories: metropolitan areas, regional centres, large rural towns, medium rural towns and small rural towns.

Aged care facilities in small rural towns returned the best result on 5 of the quality and safety indicators, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups where differences were statistically significant with respect to every other location group. The analysis of an additional 29 indicators showed facilities in small rural towns returned the best result, however differences were only statistically significant with respect to at least one but not all other location groups.

Facilities in metropolitan areas returned the best result on 1 indicator, applying the same processes as mentioned above.

Facilities in medium rural towns returned the best result for 4 indicators, however differences were only statistically significant with respect to at least one but not all other location groups.

Introduction

As part of the research conducted by the Office of the Royal Commission, over 100 gigabytes of granular data from different parts of the aged care system were analysed. This data is not publicly available but was able to be acquired under the Royal Commission's legal authority. This data was used to present a wide range of detailed aged care quality and safety indicators for the first time in Australia.

The indicators compiled by the Office of the Royal Commission are for residential aged care. Home care services are not included as little data is available about the quality and safety of these services.

The indicators are presented in a series of reports for the information of the Commissioners and the public. The views expressed in the reports are not necessarily the views of the Commissioners.

The residential indicators in the reports include clinical outcomes from the Registry of Senior Australians; Aged Care Quality and Safety Commission's (ACQSC) accreditation, compliance, complaints, Consumer Experience Interviews data, compulsory reporting of assaults and missing residents; the Australian Government Department of Health's national mandatory quality indicators; and workforce levels from StewartBrown and selected aged care providers. The organisations which collect the data were invited to review a draft of the report and provide feedback.

In the reports, the indicators are de-identified and summarised by various residential aged care facility characteristics. The characteristics are provider type, facility size and remoteness.

The methods used to compile the indicators are set out transparently in the reports. The indicators are the same as, or very similar to, how other organisations use the data. If the data were publicly available independent experts could try alternative methods.

The reports demonstrate a very large amount of granular data is collected within the aged care system that could be made available to the public and would assist to improve aged care services.

In this third volume, the residential aged care quality and safety indicators are compared across remoteness areas based on the Modified Monash Model classification. Remoteness is split into five categories: metropolitan areas, regional centres, large rural towns, medium rural towns and small rural towns.

Scope

Facilities in remote and very remote communities are not included in the report due to the low number of facilities in these areas. The low numbers make it difficult to draw statistical conclusions from the data and introduce an unacceptable risk of being able to identify facilities.

Only residential aged care facilities were included in the analysis. Multi-Purpose Services and the National Aboriginal and Torres Strait Islander Flexible Aged Care Program were excluded.

Facilities with an occupancy rate of less than 10% were excluded, of which there were 36 facilities in 2018/2019 and 19 facilities in 2016/17. These facilities were excluded because they were considered outliers.

Interpretation of the indicators

Each indicator is presented with a brief description of the indicator, dot plots that show the distribution of results across the facilities, and descriptive statistics that show aggregate results for

each group of facilities. Further information about how the different indicators are collected and derived are provided in Appendix 2.

The facility group showing the best result is mentioned to assist readers in interpreting the results. The group with the best result has only been mentioned where the differences between the groups are statistically significant (explained further in the section *Tests of statistical significance of difference between the facility groups*).

The report does not aim to identify causal factors or draw conclusions about the merits of the different facility characteristics.

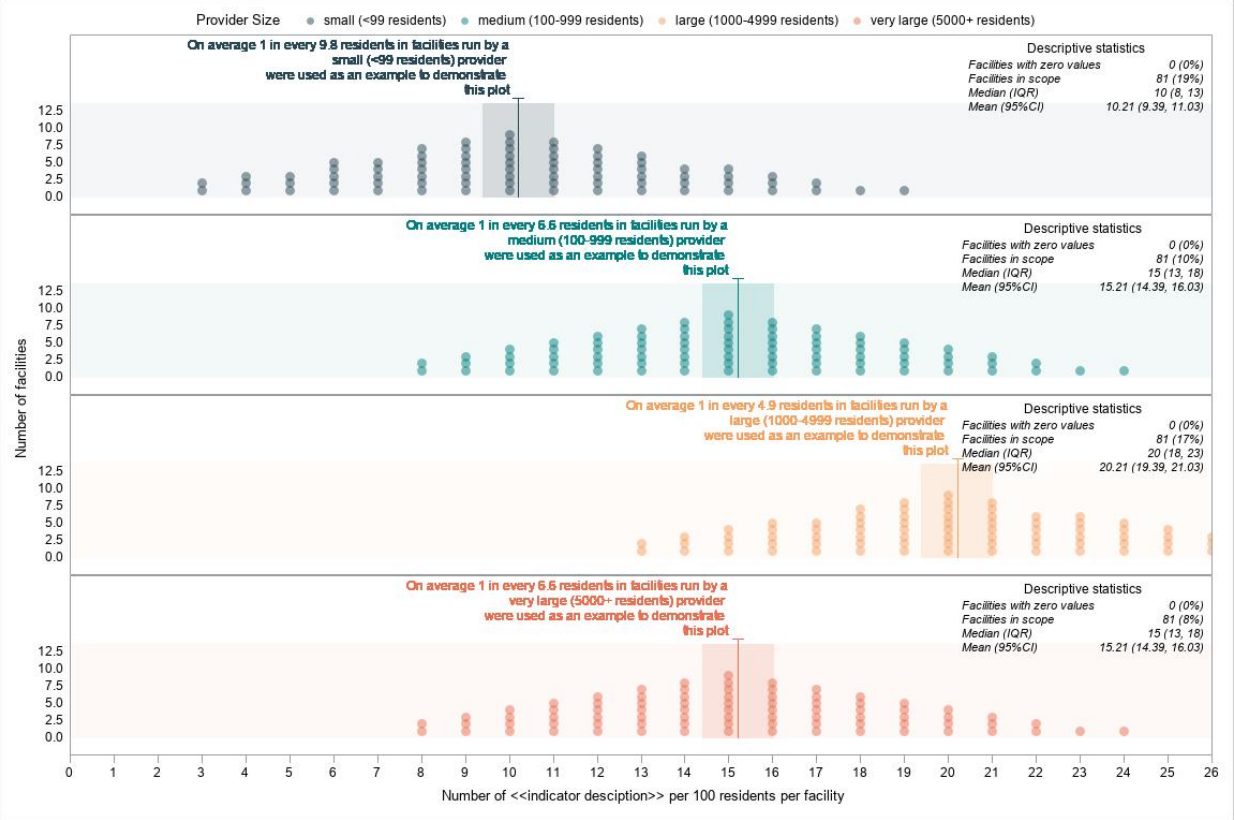
In some cases individual indicators are influenced by factors outside facilities' control or that do not relate entirely to quality and safety provided within an aged care facility. For example, a facility that fully complies with its obligations in relation to Compulsory Reporting might submit a high number of reports whereas a facility that submits a low number of reports may not be meeting its Compulsory Reporting requirements. Similarly a low number of missing residents may be a result of a higher use of restraints which would not be considered a better indication of quality and safety. Adjustments for such factors are stated where they have been made. Such adjustments can be complex and are often not possible as the data that would be needed is unavailable.

Dot plots

Wilkinson dot plots show the distribution of the indicators – see Figure A below for an example. The plots are colour coded to identify the different categories for a given characteristic with a legend at the top of each plot. To make the data easier to visualise, facilities with zero values and values greater than the 99th percentile are not displayed on the plot. In addition, where counts of facilities were less than three across the different provider characteristic permutations, facility values were not displayed on the plot to avoid the inadvertent identification of individual facilities.

In each panel of the plots, the vertical needle line represents the average (or mean) rate of that indicator for all facilities in a given category. For example, the average indicator rate in Figure A is 10.2 per 100 residents for facilities in metropolitan areas, and 15.2 per 100 residents for facilities in regional centres. Additional text describing the average rates are included next to the needle, showing on average 1 in how many residents experienced the given indicator. For example, the rate of 10.2 per 100 residents in facilities in metropolitan areas can be interpreted as 1 in every 9.8 residents in facilities in metropolitan areas experienced the given indicator (1/(10.21/100)). Indicators are described as 'one in X residents' where the underlying raw data was available for individual residents. Where the underlying raw data was available for aged care facilities rather than for individual residents, the indicators have been described in ways appropriate to the source data.

Figure A. Example plot showing the distribution of facilities by an indicator rate per 100 residents per facility by remoteness



The individual dots represent the rate of an indicator for an individual facility. In Figure A, the first two dots in the top panel represent two facilities in metropolitan areas with an average rate of 3 per 100 residents. The second set of dots represent three facilities with an average rate of 4 per 100 residents, the third set of dots represent 4 facilities with a rate of 5 per 100 residents, and so on.

The transparent vertical lines on either side of the vertical needle line represent the 95% Confidence Intervals (CI) of the average indicator value for each category. A CI is the range of plausible values for an unknown parameter (such as the mean). The interval has an associated confidence level that the true parameter is in the proposed range. In Figure A, the lower confidence interval for facilities in metropolitan areas is 9.4 and the upper confidence interval is 11.

The descriptive statistics at the top right of each plot present more in-depth information about the indicators in each category of facilities.

Facilities with 0 values shows the number (and percent) of facilities where the indicator rate is 0 and that are not visible on the plot.

Facilities in scope shows the number (and percent) of facilities in a given category where data were present, and/or that were included in the calculation of the indicator rate.

The **median** is a middle value separating the higher half from the lower half of a data sample, so that at most half of the population is less than the proposed median and at most half is greater than the proposed median. Medians are often considered a better descriptor of the central tendency for skewed, non-normal data. Included with the median is the **interquartile range (IQR)**, which is a measure of statistical dispersion, being equal to the difference between 75th and 25th percentiles (the upper and lower quartiles).

The **mean** is the average of the indicator; however it can be strongly affected by extreme values and is not considered as a good measure of central tendency when data is skewed or non-normally distributed.

Tests of statistical significance of difference between the facility groups

To examine the differences between the facility groups, for each quality indicator formal tests of statistical significance were performed. Where the Shapiro-Wilk normality test determined that the indicator was normally distributed, one-way Analysis of Variance (ANOVA) was performed to test the mean differences between the groups. Where normality was not present, the Kruskal-Wallis test was performed as a more appropriate test for significant differences between the groups. In both cases, where the p-value of the test statistic is below the threshold of alpha=0.05, the null hypotheses can be rejected and it can be concluded that there is a statistically significant difference between the groups (between at least two of the remoteness categories). We further performed post-hoc tests to identify which pairs of groups were significantly different.

Where the significance test of the differences between the group with the highest/lowest mean (for ANOVA) or mean indicator score (for Kruskal-Wallis test) and all other groups were below the 0.05 threshold, the results are followed by the statement that "On average 'Group X' facilities showed the best result out of 'all groups' for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups."

Where the significance test of the differences between the group with the highest/lowest mean (for ANOVA) or mean indicator score (for Kruskal-Wallis test) and at least one other group exceeded the 0.05 threshold, the results are followed by: "On average, 'Group X' facilities showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between 'Group X' facilities and other 'Groups' were not all significant at $p<0.05$ level."

Where Kruskal-Wallis test exceeded the 0.05 threshold, or where the significance tests of all of the differences between the group with the highest/lowest mean (for ANOVA) or mean indicator score (for Kruskal-Wallis test) and other groups exceeded the 0.05 threshold, the results are followed by: "Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the 'Groups' showed clear best result for this indicator."

The complete outcomes of significance tests and post-hoc analyses are presented in Appendix 3.

Clinical indicators

Clinical indicators measure the physical and mental wellbeing of residents in aged care.

ROSA outcome monitoring indicators

The Registry of Senior Australians (ROSA) designed an outcome monitoring and benchmarking system to examine the quality and safety of services received by individuals obtaining aged care services in Australia. These include medication-based indicators using data from the Australian Government Pharmaceutical Benefits Scheme (PBS), hospitalisation-based indicators sourced from the State health authorities' hospitalisation and emergency department data collections, and a mortality-based indicator using National Death Index data. The indicators are case-mix adjusted to allow for meaningful comparisons between facilities with residents who have differing health conditions.

PBS data, which included the Repatriation PBS (RPBS), was used to examine the quality and safety indicators measuring the rates of antipsychotic use, chronic opioid use and high sedative load.

Hospitalisation admitted patient and emergency department data was used for the quality and safety indicators related to dementia/delirium, emergency department re-hospitalisations, falls, fractures, medication-related adverse events, pressure injuries and weight loss or malnutrition.

Mortality data was used to examine the indicator measuring the rate of premature deaths.

Each of the indicator specifications is explained in the ROSA Outcome Monitoring System which can be found on the publications page of the ROSA website or in the *International Journal of Quality Health Care*. The indicator specifications are highly complex and are not set out in this report.

Limitations and interpretation

The hospitalisation admitted patient and emergency department data is for the 2016-17 financial year and is available only for New South Wales, South Australia and Victoria.

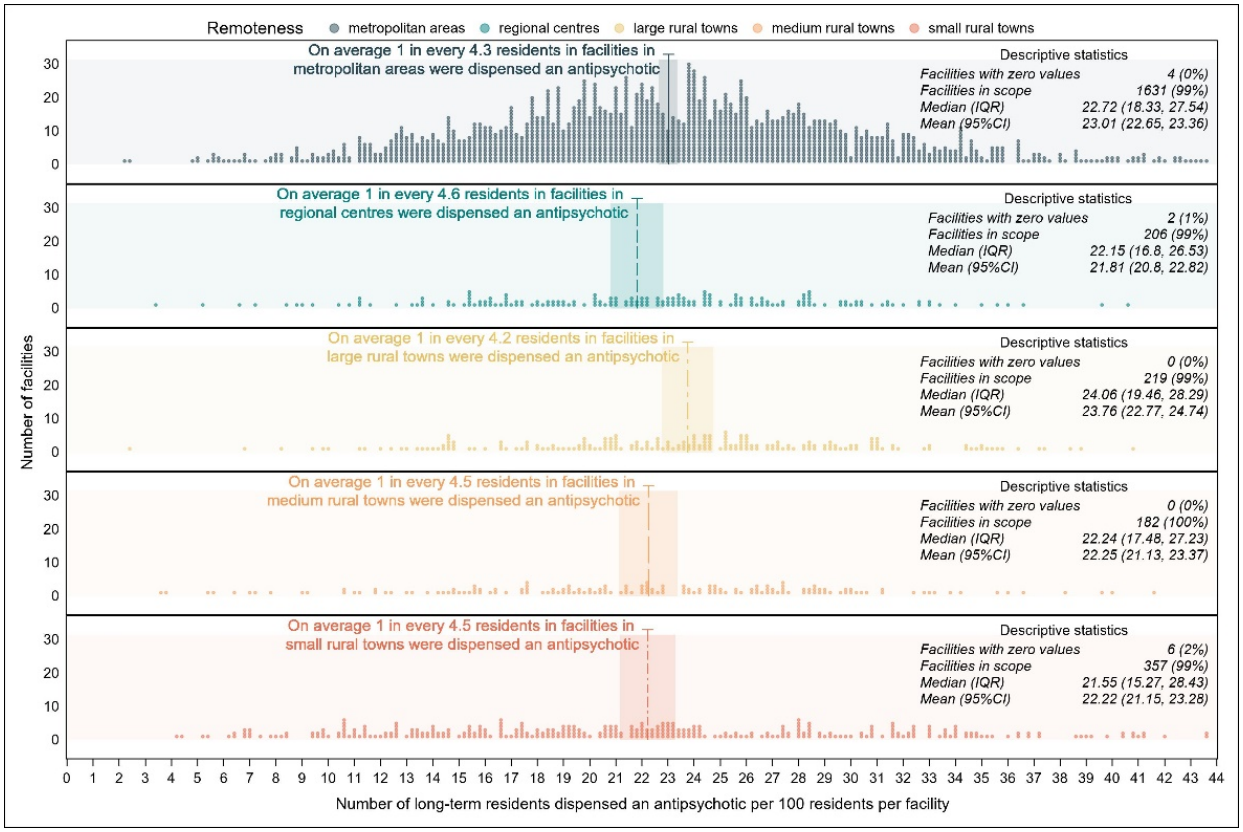
There is no mandatory requirement for facilities to use the PBS and some medications included in the medication-based quality and safety indicators are inexpensive, meaning it is possible that there may be some slight underreporting of these indicators.

Antipsychotic use[1]

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 1. Number of long-term residents dispensed an antipsychotic per 100 residents per facility by remoteness

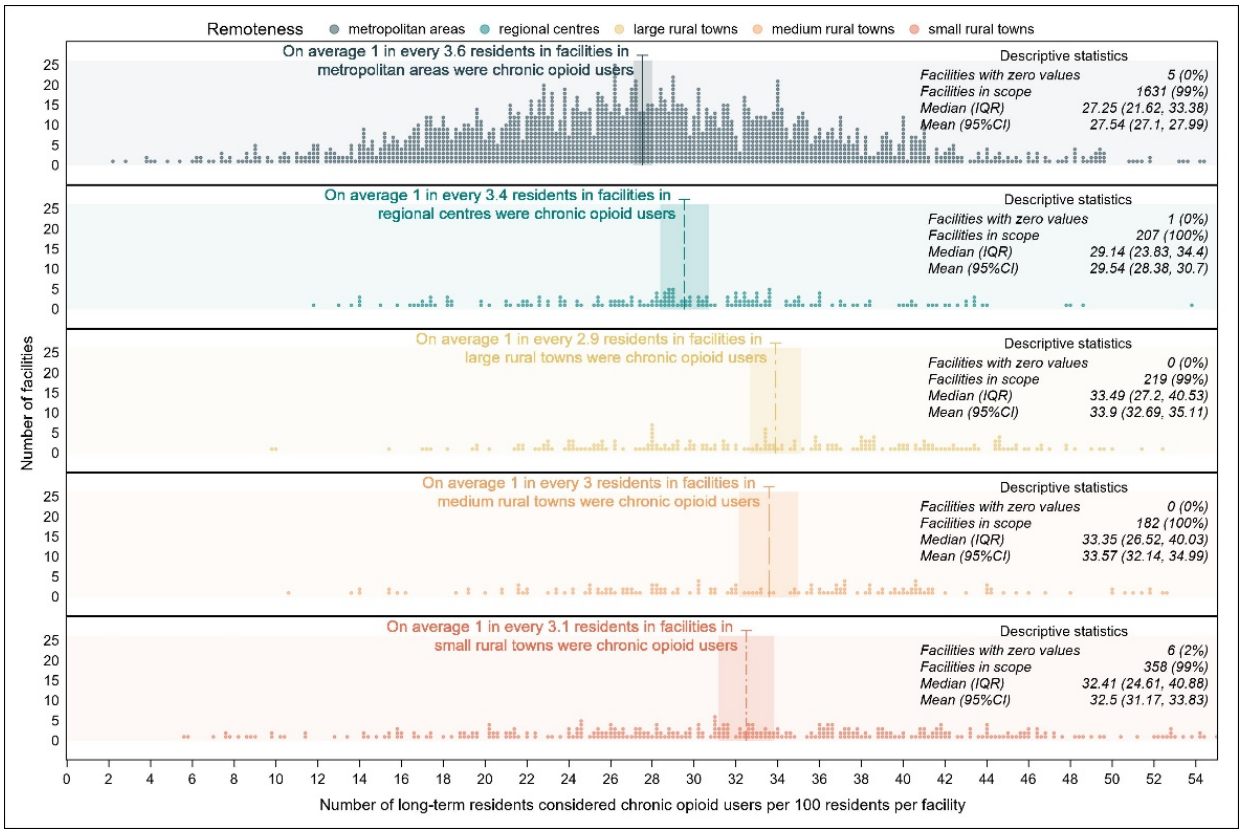


[1] This indicator is not adjusted for dementia status. When the indicator is stratified by dementia status, the mean for residents with dementia is 30.5 for metropolitan areas; 29.9 for regional centres; 32.8 for large rural towns; 31.4 for medium rural towns and 31.6 for small rural towns; and the mean for residents with no dementia is 12.5 for metropolitan areas; 12.0 for regional centres; 12.8 for large rural towns; 11.9 for medium rural towns and 12.3 for small rural towns.

Chronic opioid use[2]

In the 2016/17 financial year, facilities in metropolitan areas on average showed the best result out of the five remoteness categories for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups.

Figure 2. Number of chronic opioid users per 100 residents per facility by remoteness

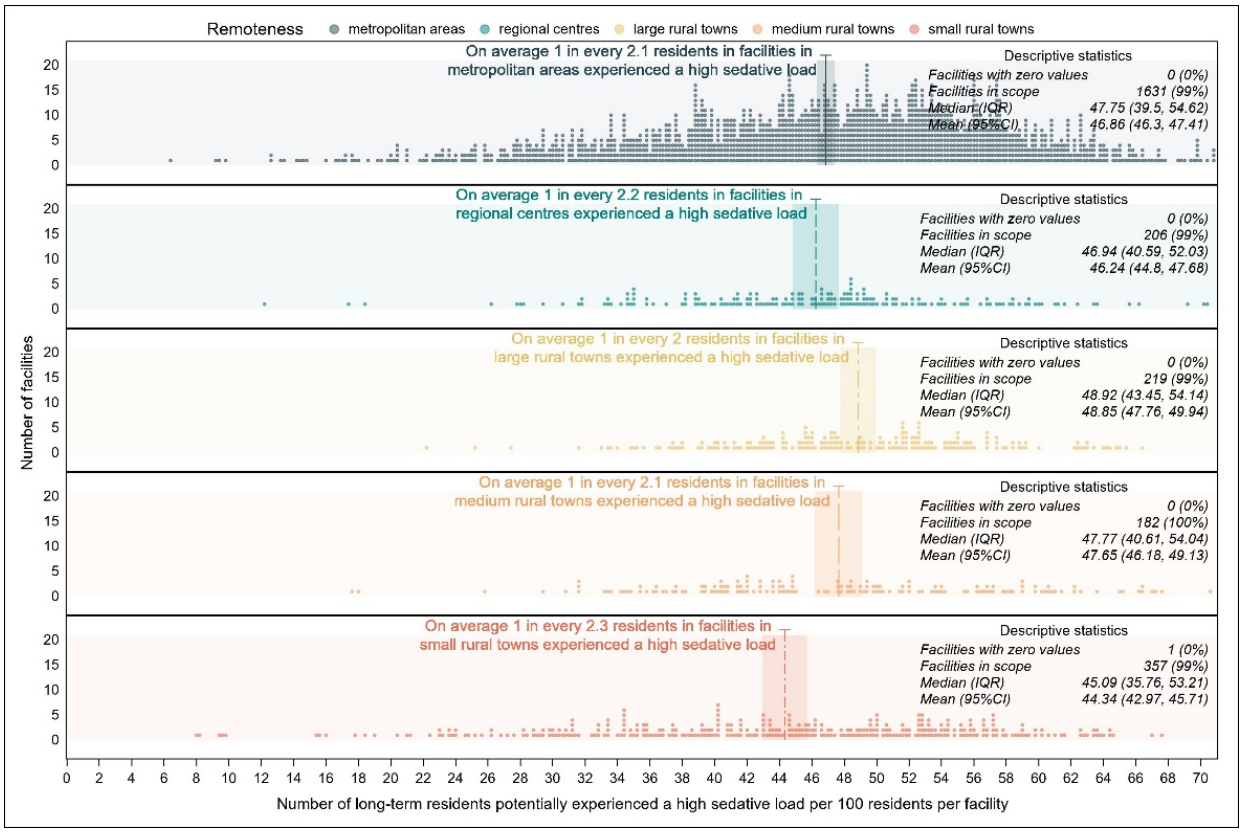


[2] Chronic opioid use is defined as receiving any number of opioid medications for at least 90 days continuously, or for 120 non-consecutive days. It does not include people who have a current diagnosis or history of cancer or who are receiving palliative care.

High sedative load[3]

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 3. Number of long-term residents potentially experiencing a high sedative load per 100 residents per facility by remoteness

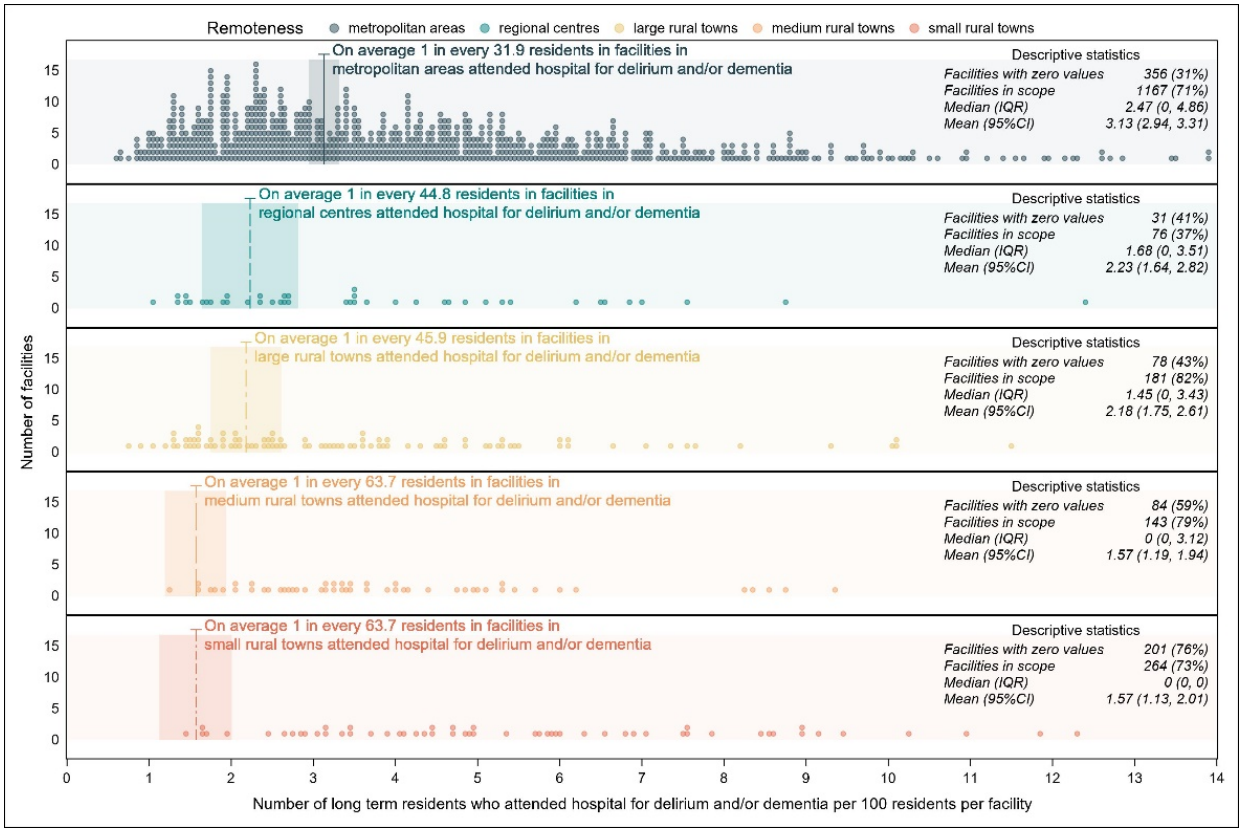


[3] This indicator is not adjusted for dementia status. When the indicator is stratified by dementia status, the mean for residents with dementia is 44.7 for metropolitan areas; 43.8 for regional centres; 46.5 for large rural towns; 45.5 for medium rural towns and 41.7 for small rural towns; and the mean for residents with no dementia is 49.5 for metropolitan areas; 49.0 for regional centres; 51.8 for large rural towns; 51.0 for medium rural towns and 48.2 for small rural towns.

Delirium and/or dementia

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

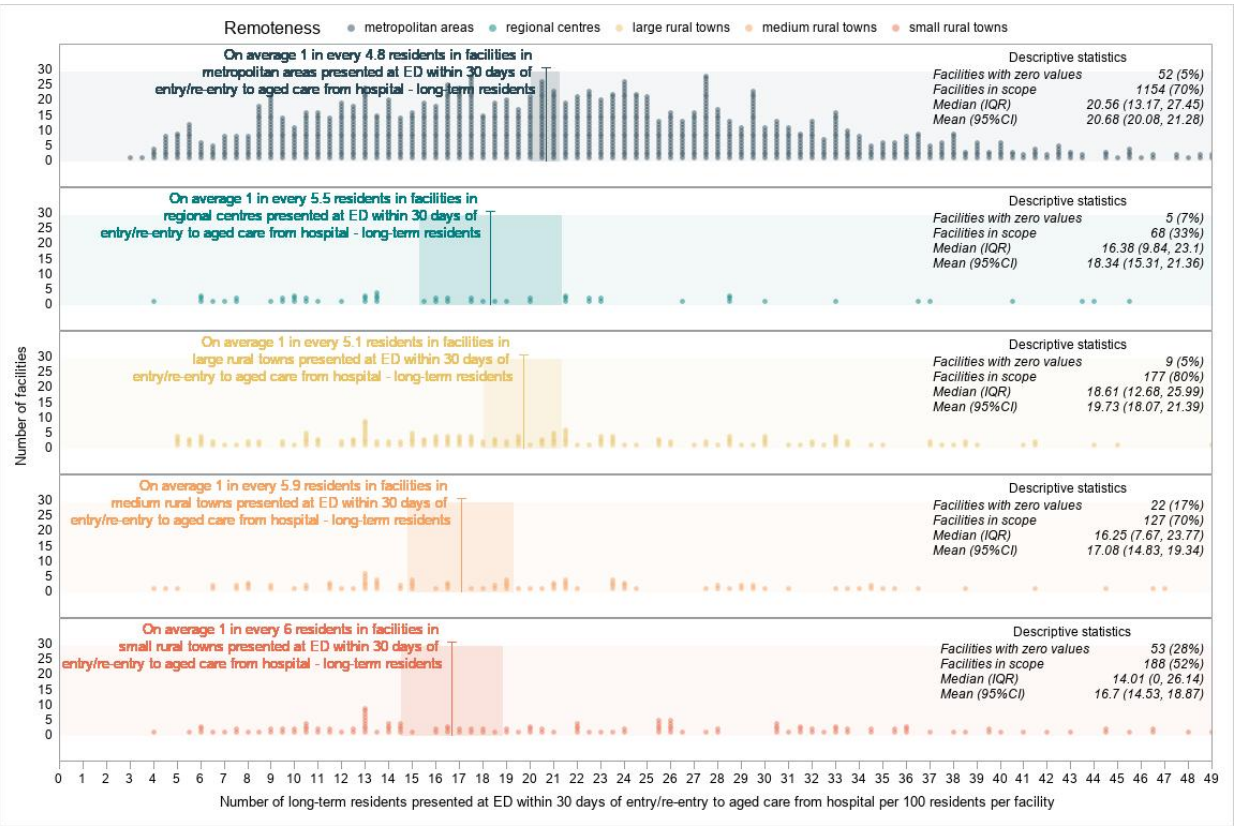
Figure 4. Number of long-term residents with dementia who had an emergency department presentation or hospitalisation where delirium and/or dementia were the principal discharge diagnoses per 100 residents per facility by remoteness



Emergency department readmission – long-term residents

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

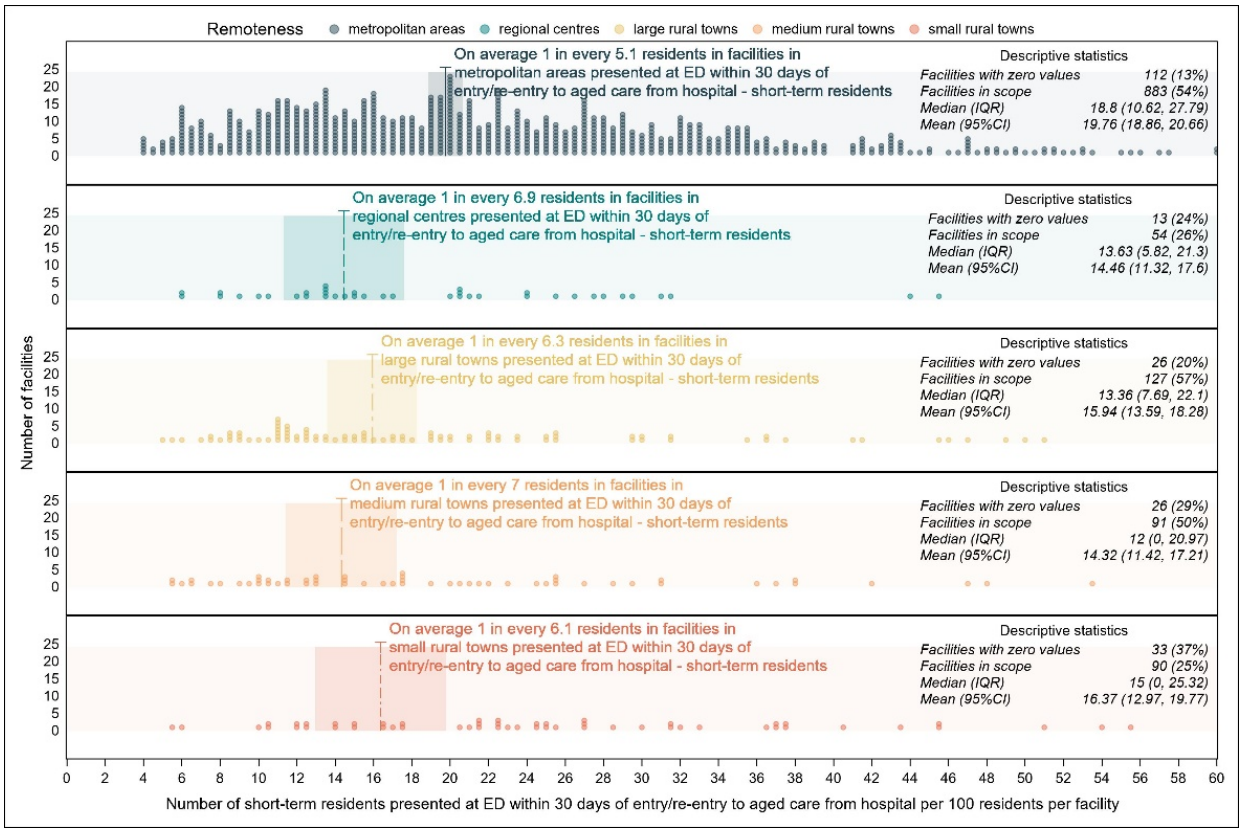
Figure 5. Number of long-term residents who had an emergency department presentation within 30 days of entry/re-entry to aged care from hospital per 100 residents per facility by remoteness



Emergency department readmission – short term residents

In the 2016/17 financial year, facilities in medium rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in medium rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

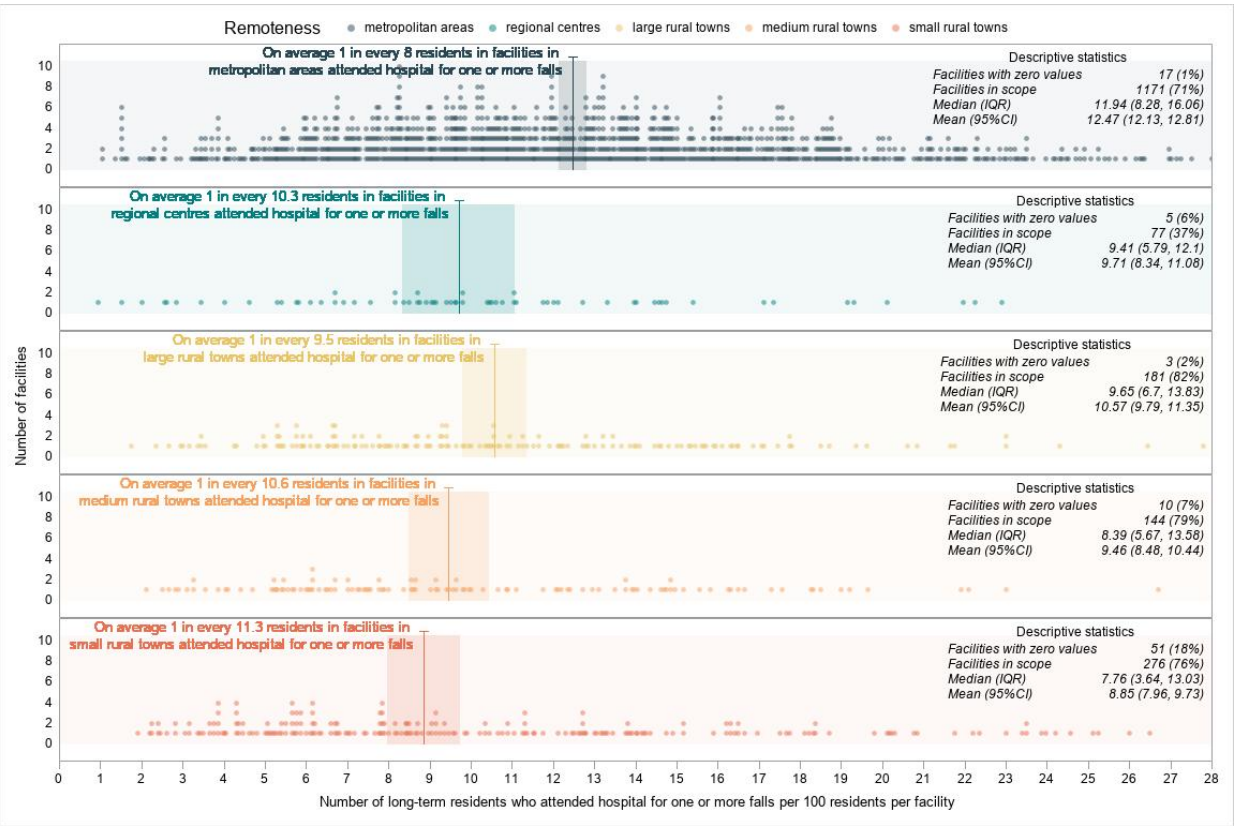
Figure 6. Number of short term residents who had an emergency department presentation within 30 days of entry/re-entry to aged care from hospital per 100 residents per facility by remoteness



Falls

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

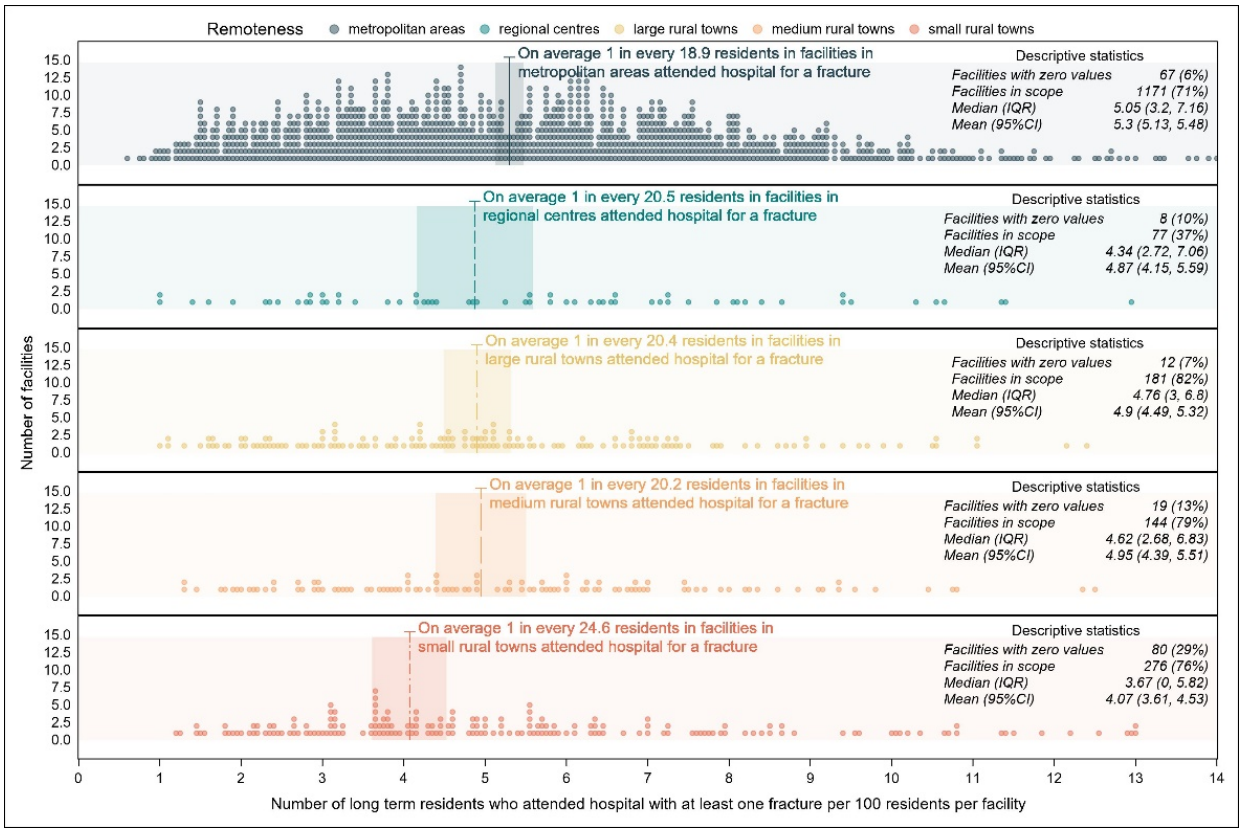
Figure 7. Number of long-term residents who had an emergency department presentation or hospitalisation for one or more falls per 100 residents per facility by remoteness



Fractures

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

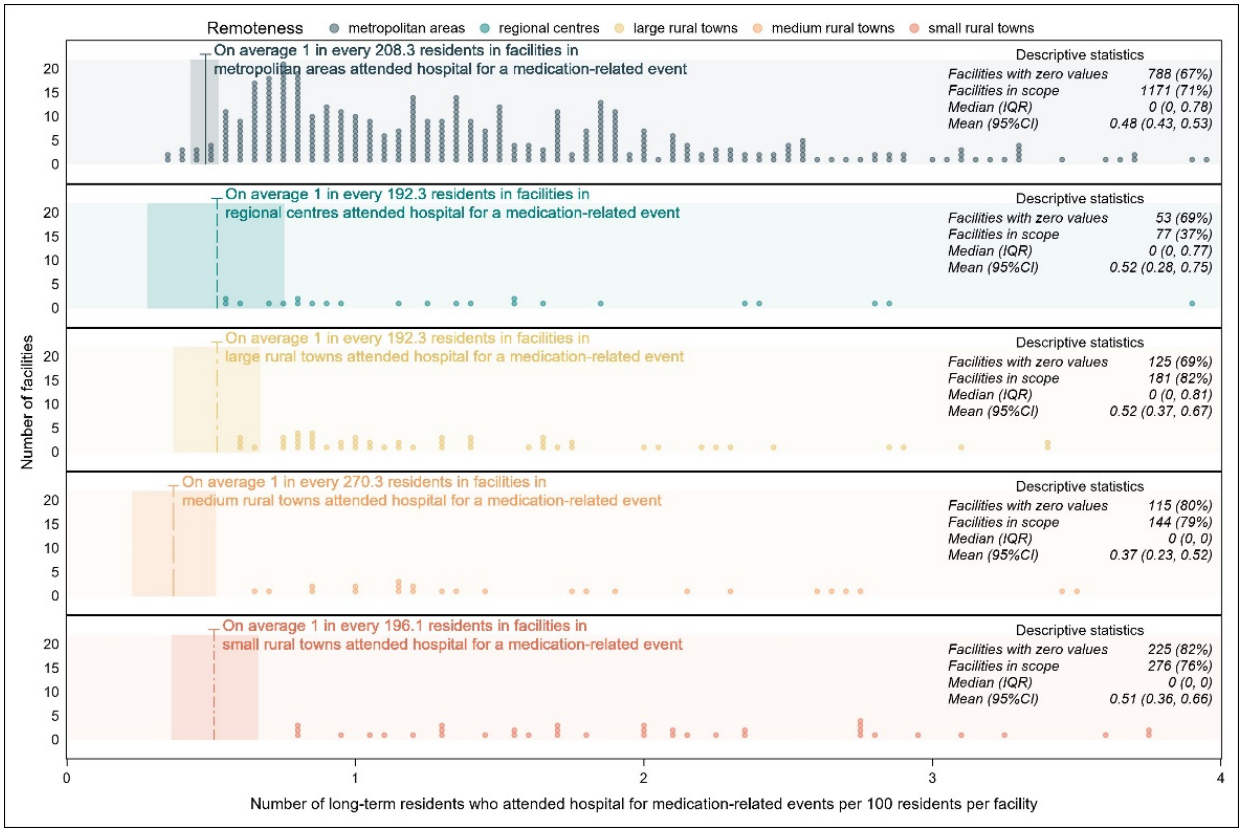
Figure 8. Number of long-term residents who had an emergency department presentation or hospitalisation for at least one fracture per 100 residents per facility by remoteness



Medication-related events

Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the remoteness groups showed clear best result for this indicator (see Appendix 3 for more details).

Figure 9. Number of long-term residents who had an emergency department presentation or hospitalisation for medication-related events per 100 residents per facility by remoteness

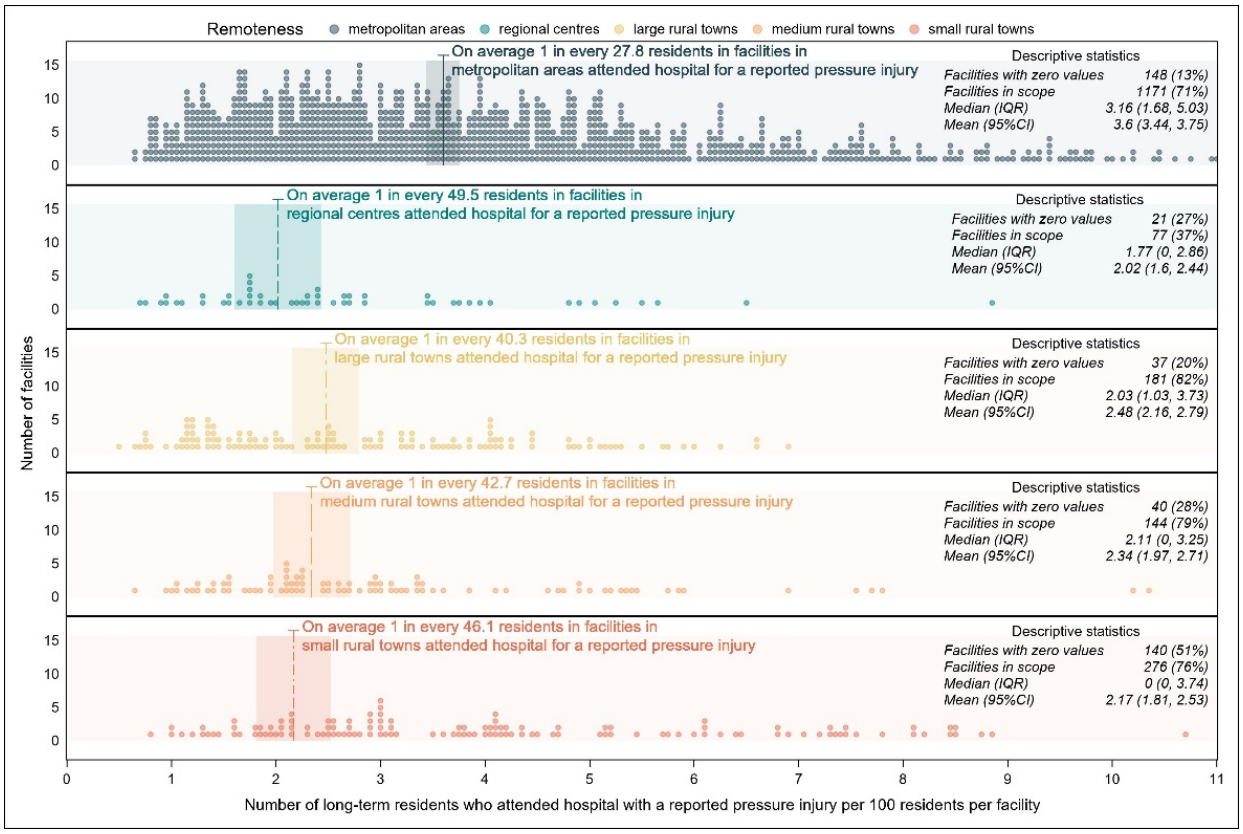


Pressure injuries

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

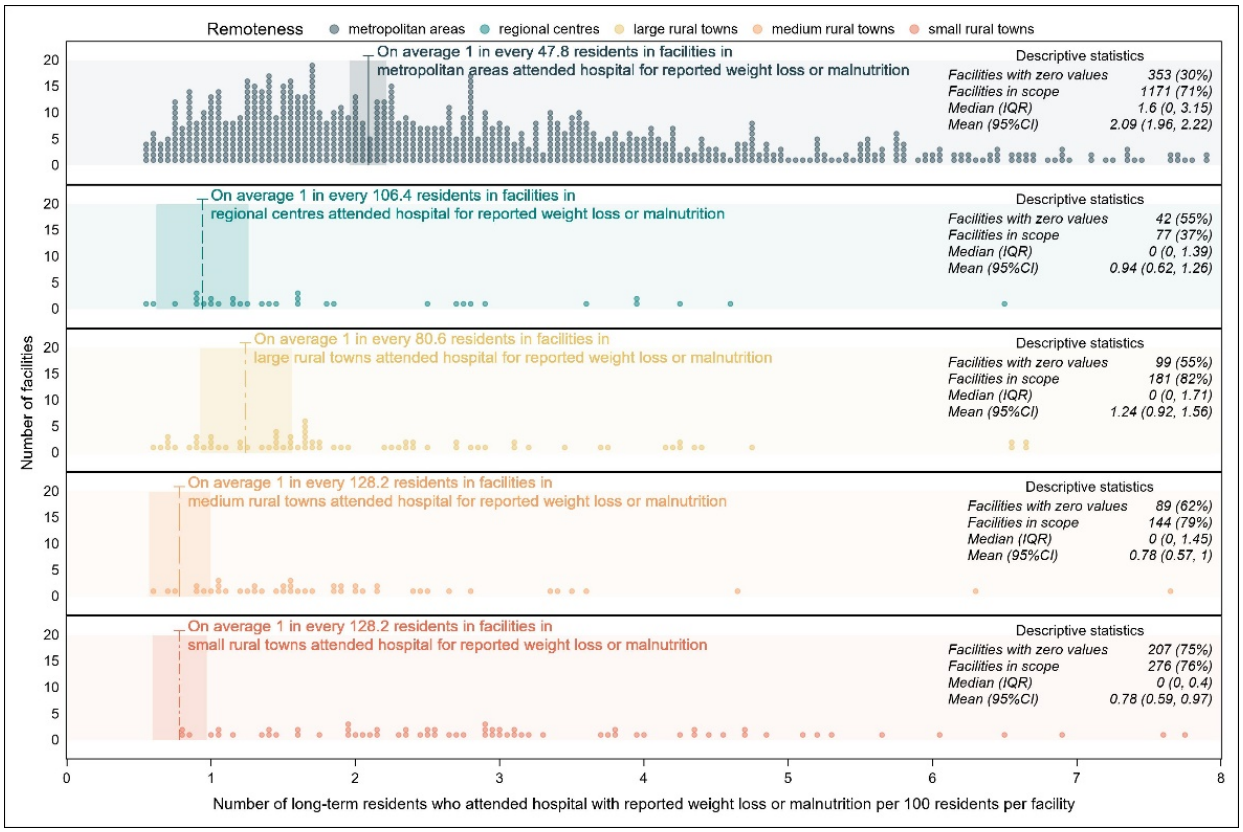
Figure 10. Number of long-term residents who had an emergency department presentation or hospitalisation where a pressure injury was reported per 100 residents per facility by remoteness



Weight loss or malnutrition

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 11. Number of long-term residents who had an emergency department presentation or hospitalisation where weight loss or malnutrition were reported per 100 residents per facility by remoteness

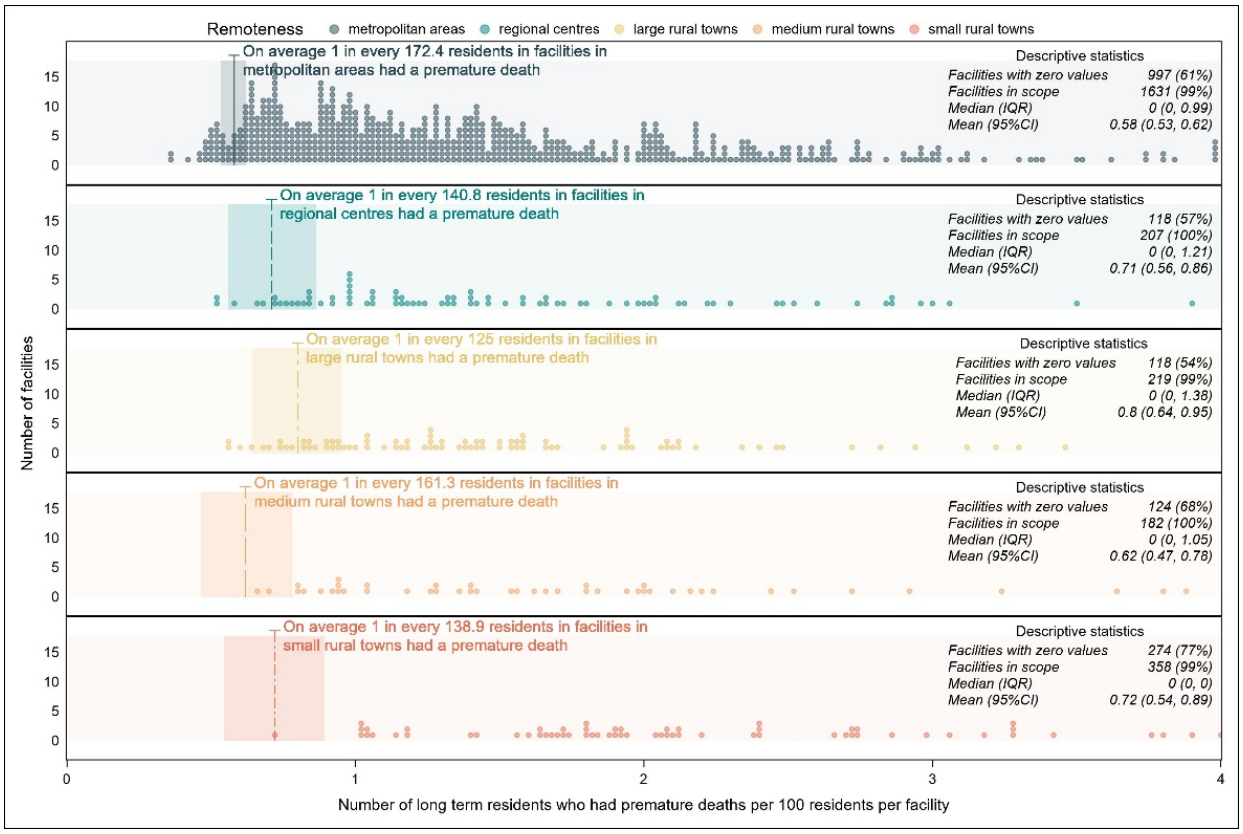


Premature death

In the 2016/17 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 12. Number of long-term residents who had premature deaths per 100 residents per facility by remoteness



National Mandatory Quality Indicators

The National Aged Care Mandatory Quality Indicator Program is run by the Department of Health and collects quality indicator data from residential aged care services every three months. Every service must report against the three quality indicators for each care recipient. The three indicators are unplanned weight loss, pressure injuries[4] and the use of physical restraints. The use of physical restraints measure is reported in the 'restraint, assaults and missing residents' chapter of this report.[5]

Limitations and interpretation

The indicators are calculated from raw data with no risk adjustment. This means that it has not been possible to take into account variation in the complexity of residents' care needs at the facility level (casemix), nor how this interacts with other factors such as location, service size, or healthcare services.

The indicators are also self-reported by aged care facilities and are therefore subject to reporting bias.

The quality of the raw indicator data provided by providers, was affected by issues such as unexplained outliers and inconsistencies in the calculated quality indicators, and therefore caution should be exercised when interpreting the quality indicators. Data quality issues include instances where aged care providers may have misreported information, such as residents that are on weight reduction diets being reported as residents experiencing unplanned weight loss.

[4] Definitions of pressure injuries was sourced from the www.alberta.ca government health website.

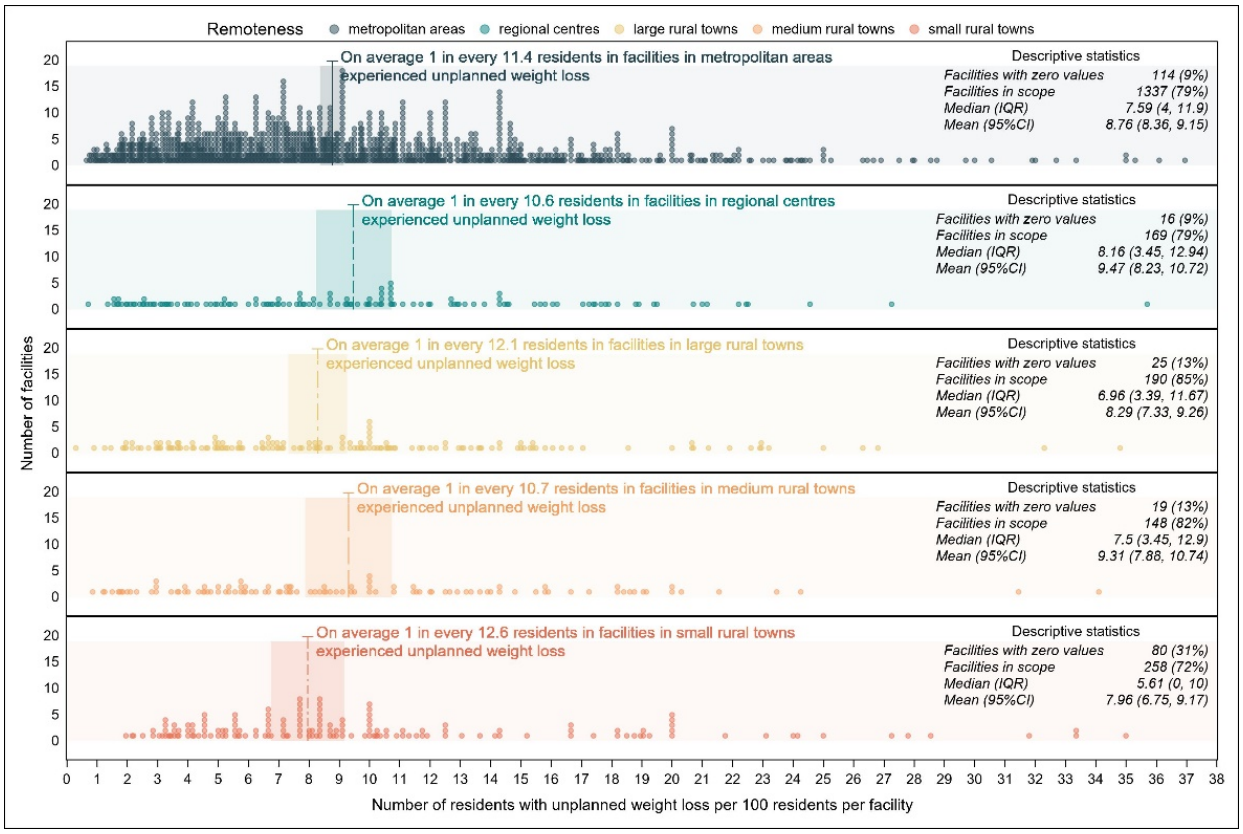
[5] Further information about the National Aged Care Mandatory Quality Indicator Program can be found on the Department of Health website under: Home > Initiatives and programs.

Unplanned weight loss

Unplanned weight loss is unplanned weight loss of any amount every month over three consecutive months of the quarter.

In the first quarter of the 2019/20 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 13. Number of residents with unplanned weight loss over three consecutive months per 100 residents per facility by remoteness

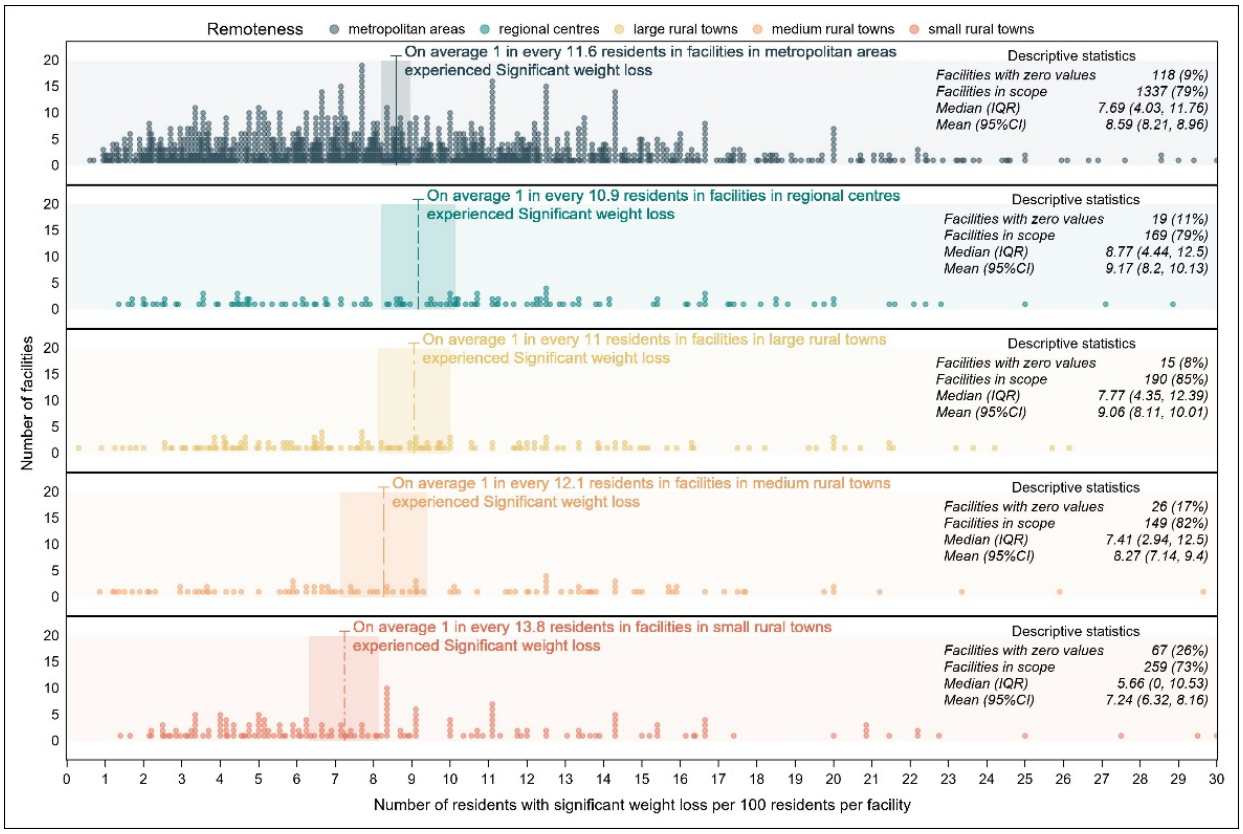


Significant unplanned weight loss

Significant unplanned weight loss is unplanned weight loss equal to or greater than three kilograms over a three-month period.

In the first quarter of the 2019/20 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 14. Number of residents with significant unplanned weight loss per 100 residents per facility by remoteness

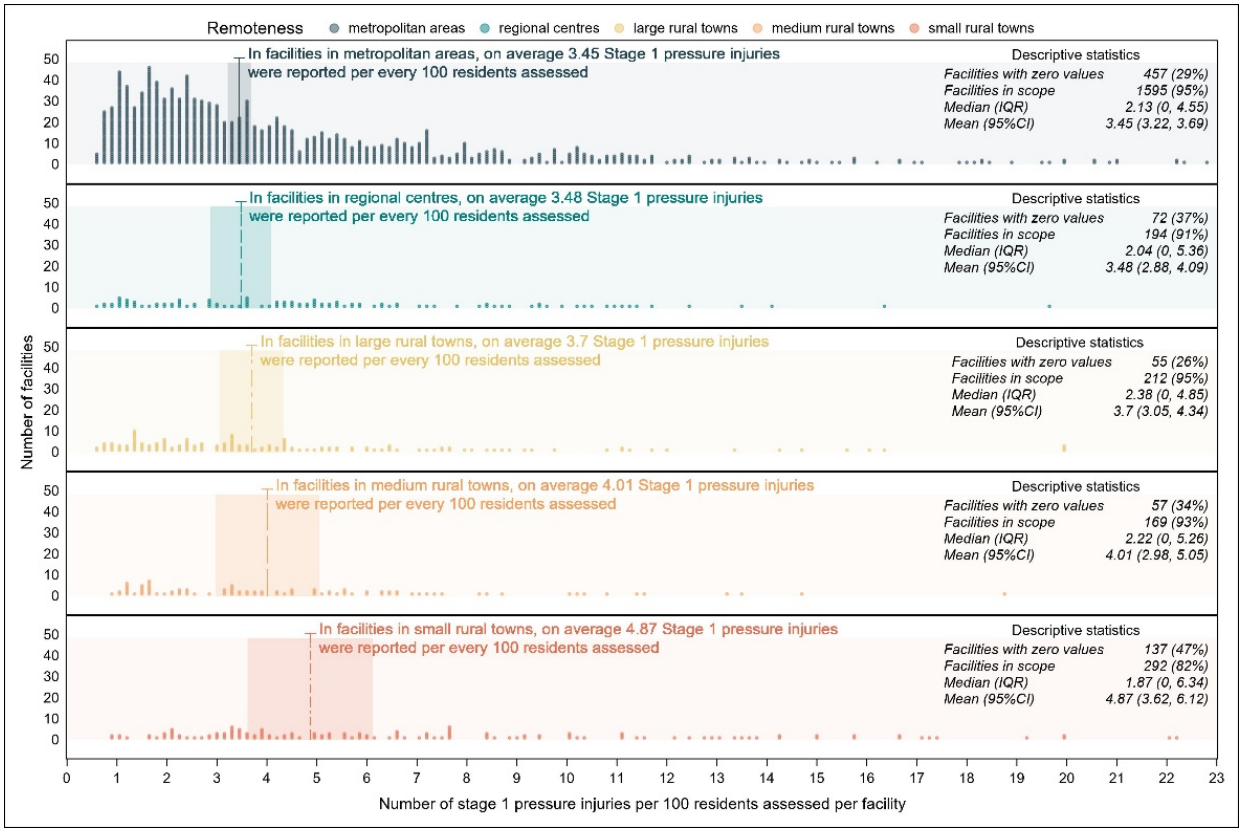


Stage 1 pressure injuries

Stage 1 pressure injuries are not open wounds. The skin may be painful, but it has no breaks or tears.

Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the remoteness groups showed clear best result for this indicator (see Appendix 3 for more details).

Figure 15. Number of Stage 1 pressure injuries per 100 residents assessed per facility by remoteness

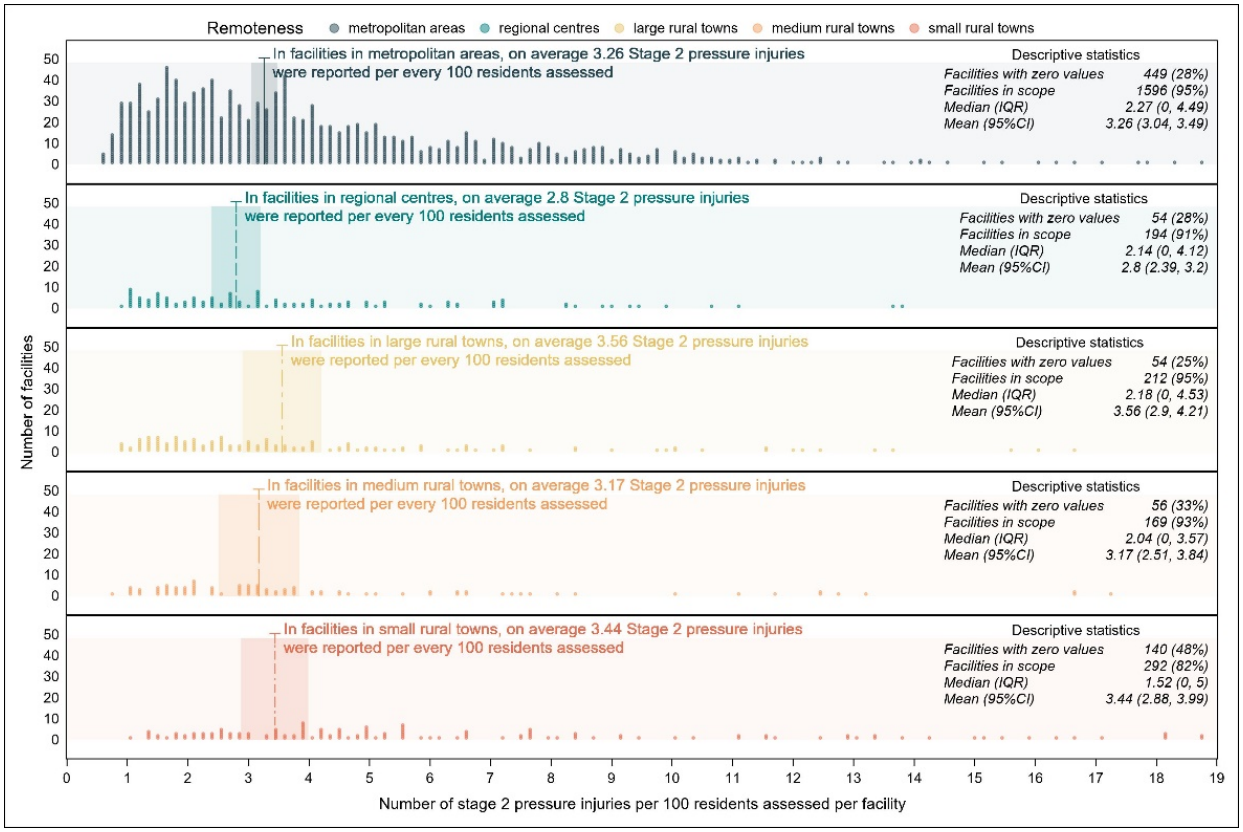


Stage 2 pressure injuries

In stage 2 pressure injuries the skin breaks open, wears away, or forms an ulcer, which is usually tender and painful.

Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the remoteness groups showed clear best result for this indicator (see Appendix 3 for more details).

Figure 16. Number of Stage 2 pressure injuries per 100 residents assessed per facility by remoteness



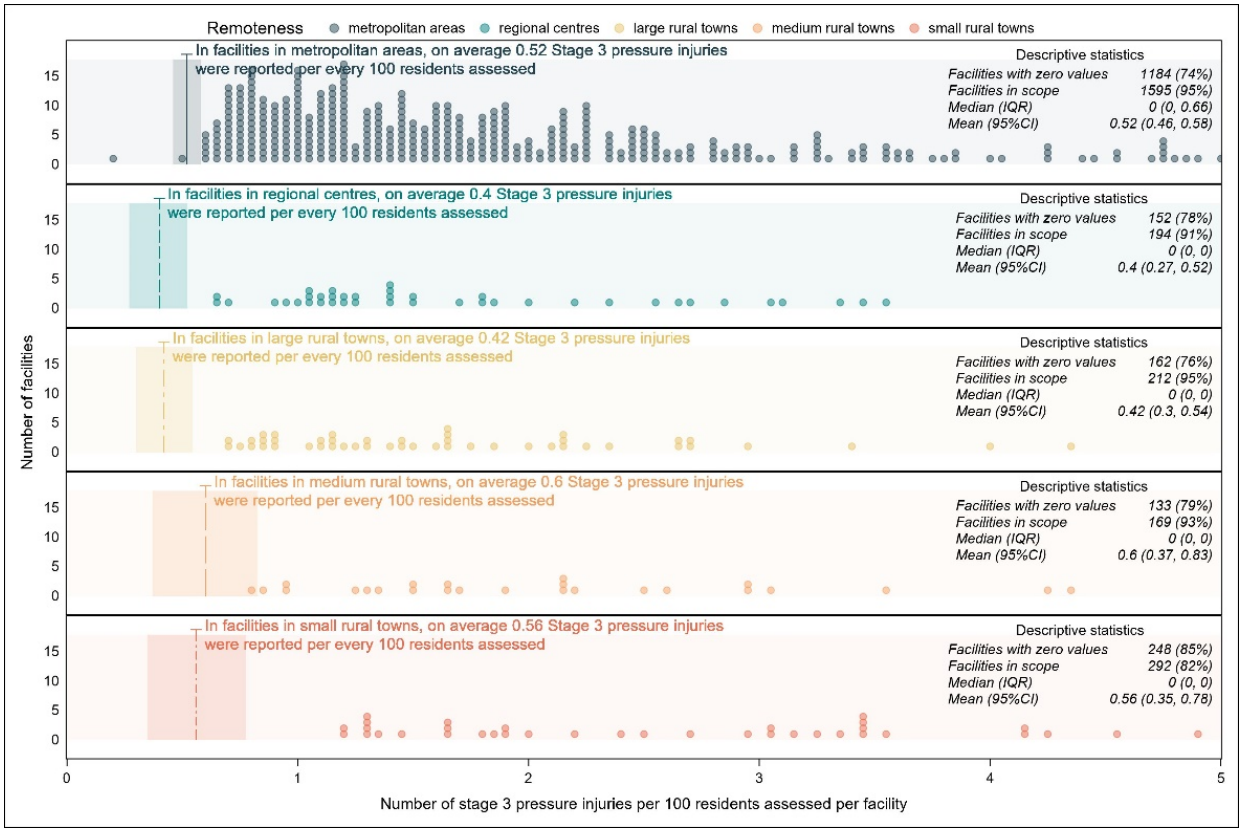
Stage 3 pressure injuries

During stage 3 pressure injuries the sore gets worse and extends into the tissue beneath the skin, forming a small crater. Fat may show in the sore, but not muscle, tendon, or bone.

In the first quarter of the 2019/20 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 17. Number of Stage 3 pressure injuries per 100 residents assessed per facility by remoteness

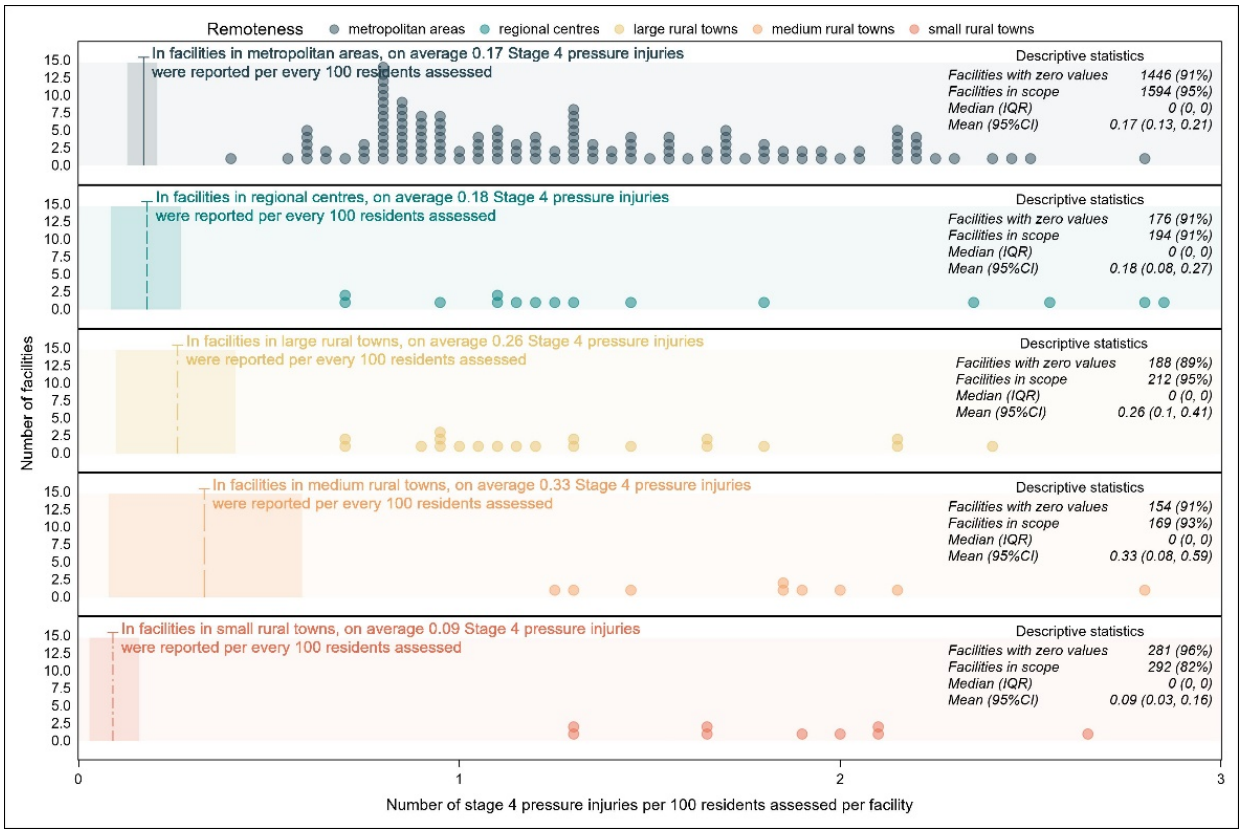


Stage 4 pressure injuries

At stage 4, the pressure injury is very deep, reaching into muscle and bone and causing extensive damage.

In the first quarter of the 2019/20 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 18. Number of Stage 4 pressure injuries per 100 residents assessed per facility by remoteness



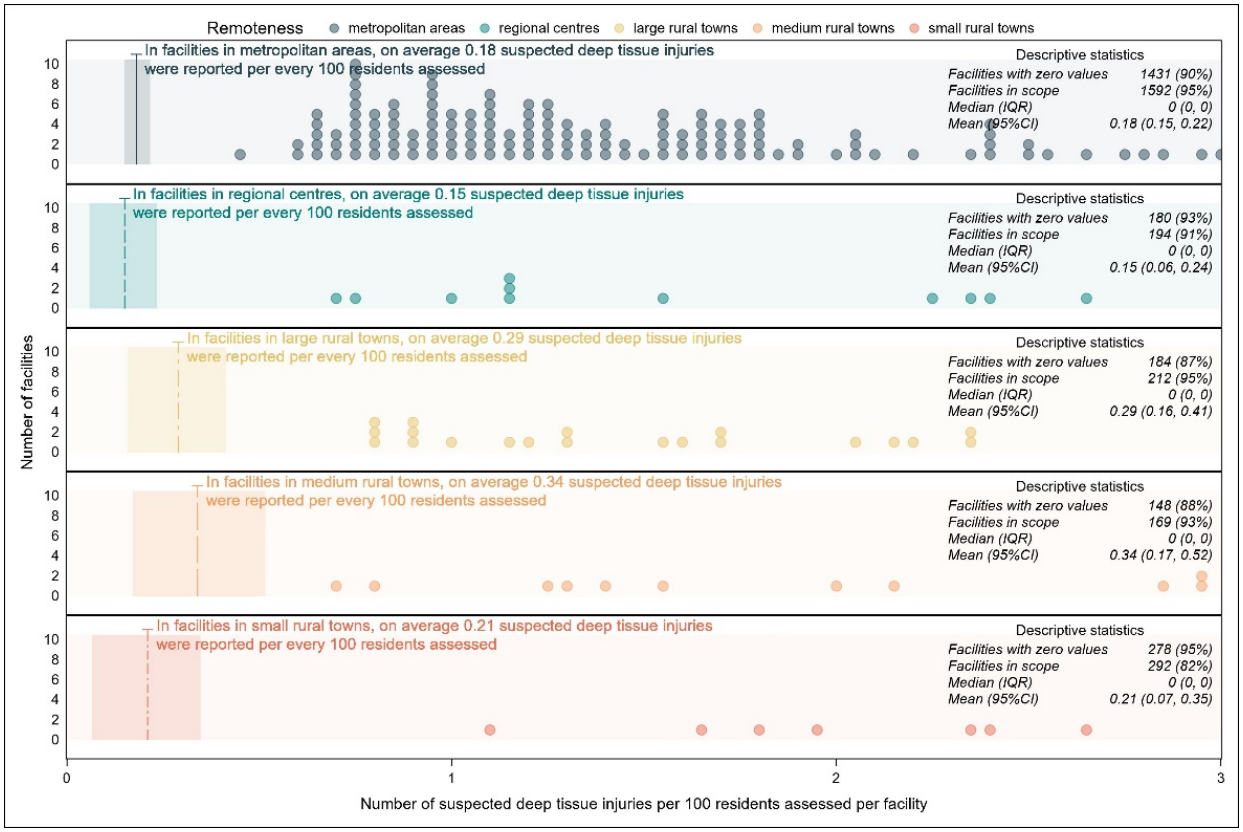
Suspected deep tissue injury

In some cases, a deep pressure injury is suspected but cannot be confirmed. The area of skin may look purple or dark red, or there may be a blood-filled blister.

In the first quarter of the 2019/20 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 19. Number of suspected deep tissue injuries per 100 residents assessed per facility by remoteness

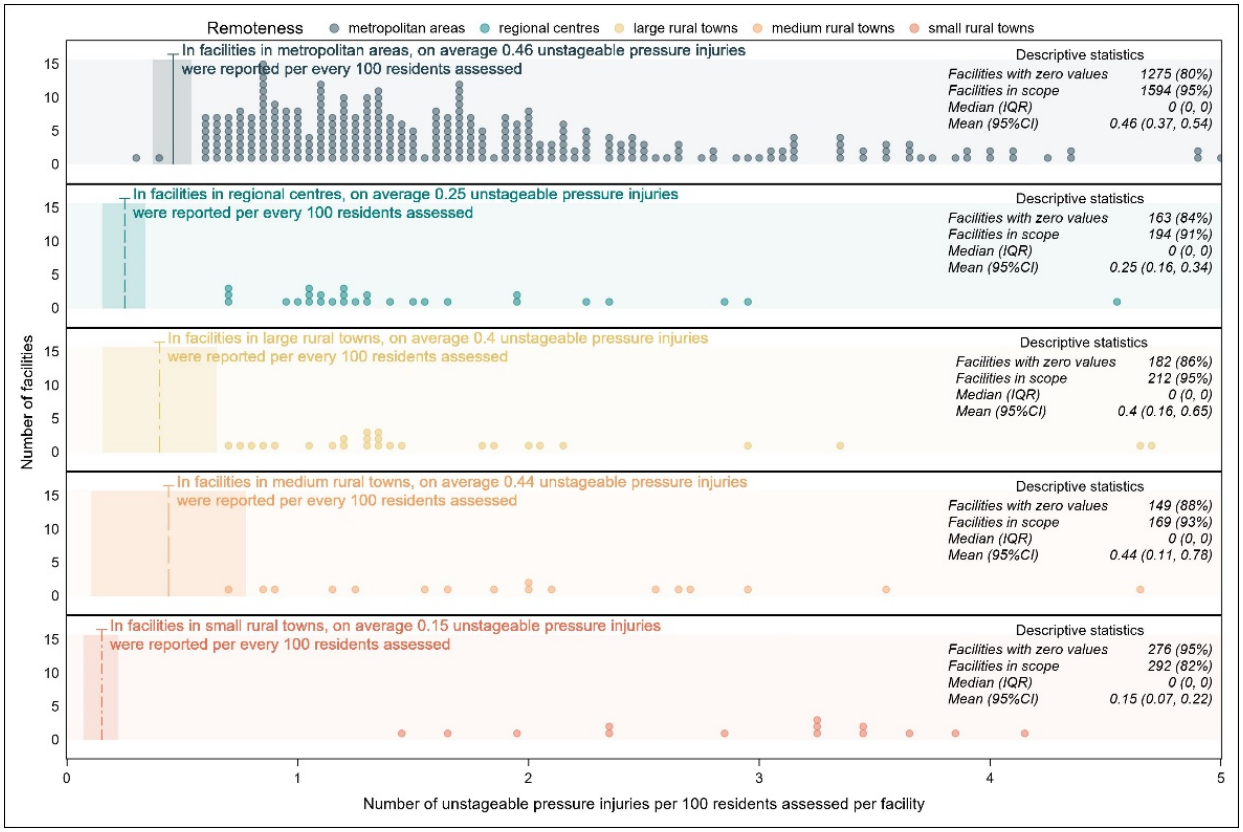


Unstageable pressure injuries

There are also pressure injuries that are "unstageable" meaning that the stage is not clear. In these cases, the base of the sore is covered by a thick layer of other tissue and pus that may be yellow, grey, green, brown, or black. The doctor cannot see the base of the sore to determine the stage.

In the first quarter of the 2019/20 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

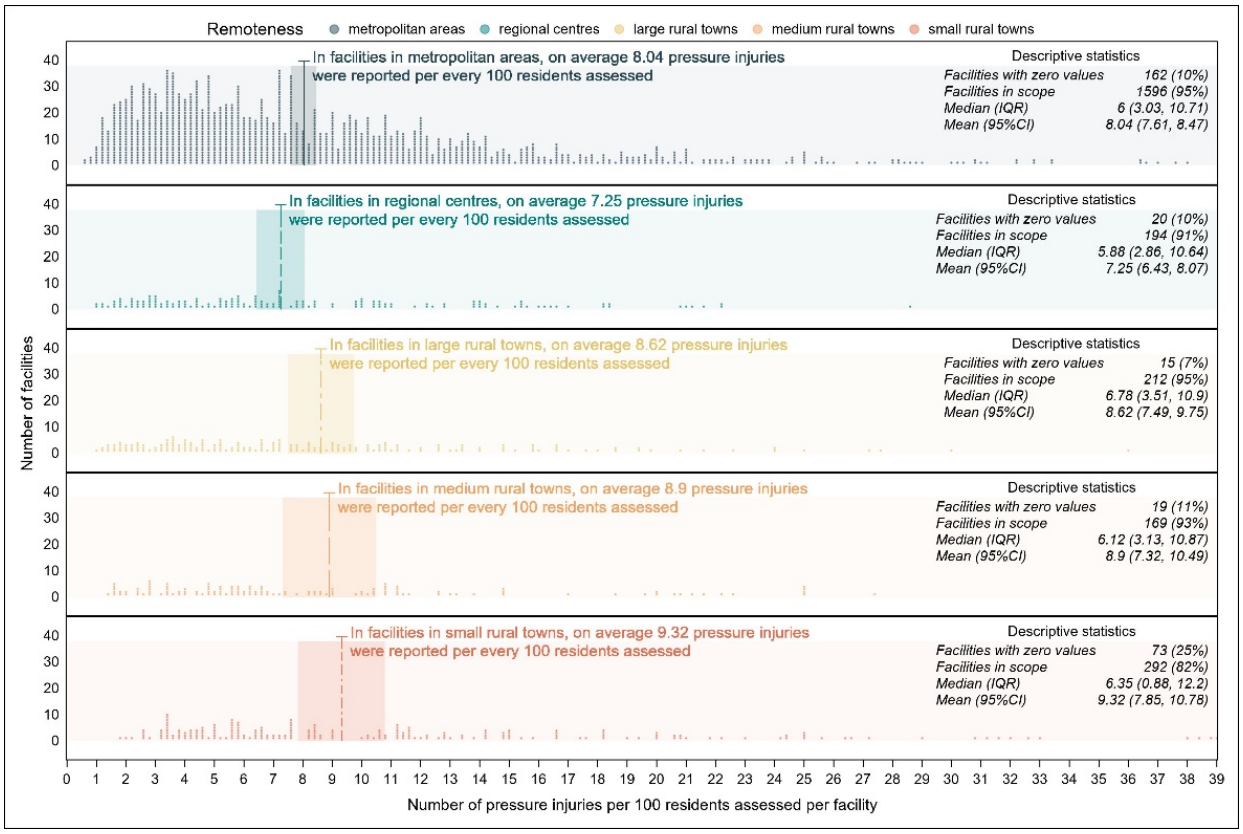
Figure 20. Number of unstageable pressure injuries per 100 residents assessed per facility by remoteness



Total pressure injuries

Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the remoteness groups showed clear best result for this indicator (see Appendix 3 for more details).

Figure 21. Number of pressure injuries per 100 residents assessed per facility by remoteness



Resident feedback indicators

Residential feedback indicators provide a subjective depiction of how a person in care, or a loved one, experience the aged care system.

Complaints

The Aged Care Quality and Safety Commission (ACSQC) receives complaints regarding the aged care sector. The ACQSC assesses the risks in each complaint received and may respond using flexible approaches ranging from supporting people to resolve their concerns with the aged care service provider to investigation.[6]

Limitations and interpretation

The complaints data is for the 2018/19 financial year and covers matters raised with or by ACQSC, which may not be all matters of concern for people receiving care.

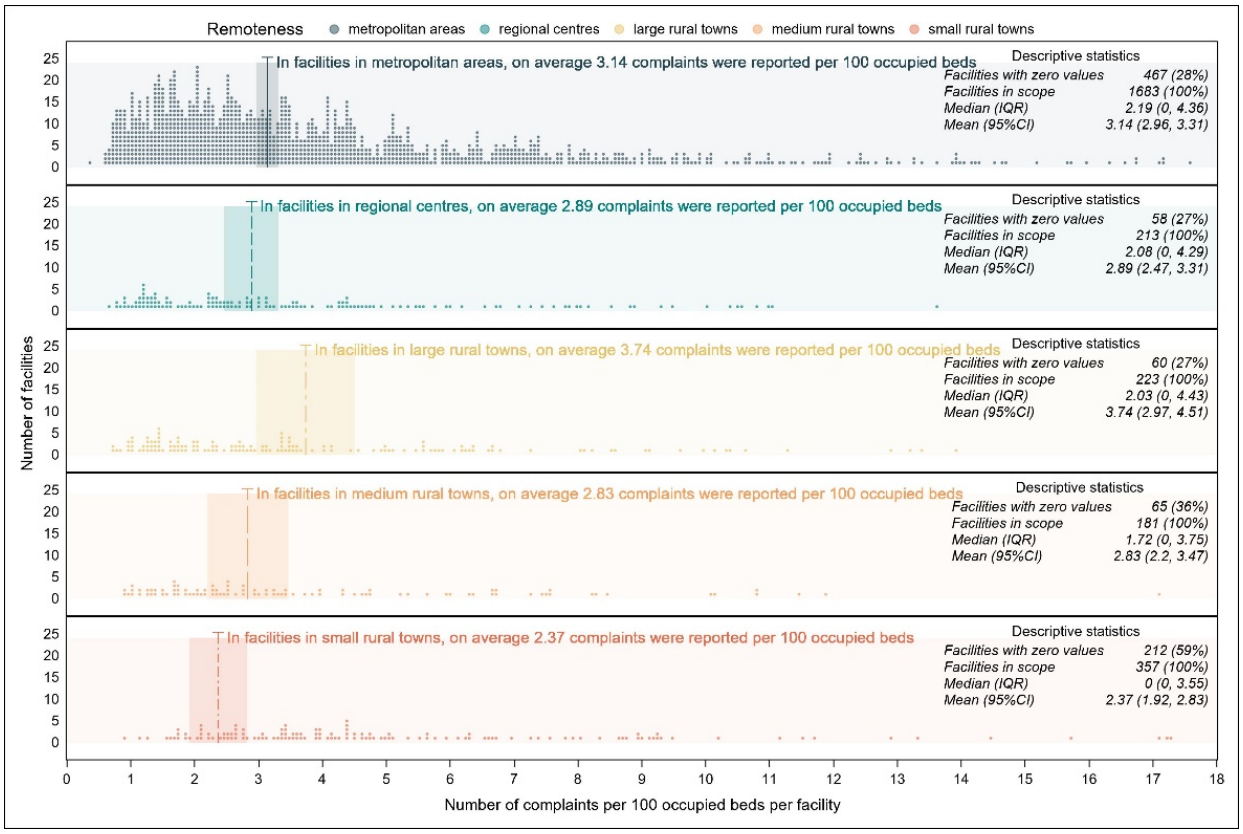
Within this section only the most common types of complaint issues are presented. The issues which are less common are included in Appendix 4.

[6] Further information about complaints can be found in the ACQSC annual report or on the ACQSC website under: Home > Making a complaint.

Complaints

During the 2018/19 financial year, facilities in small rural towns on average showed the best result out of the five remoteness categories for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups.

Figure 22. Number of complaints per 100 occupied beds per facility by remoteness

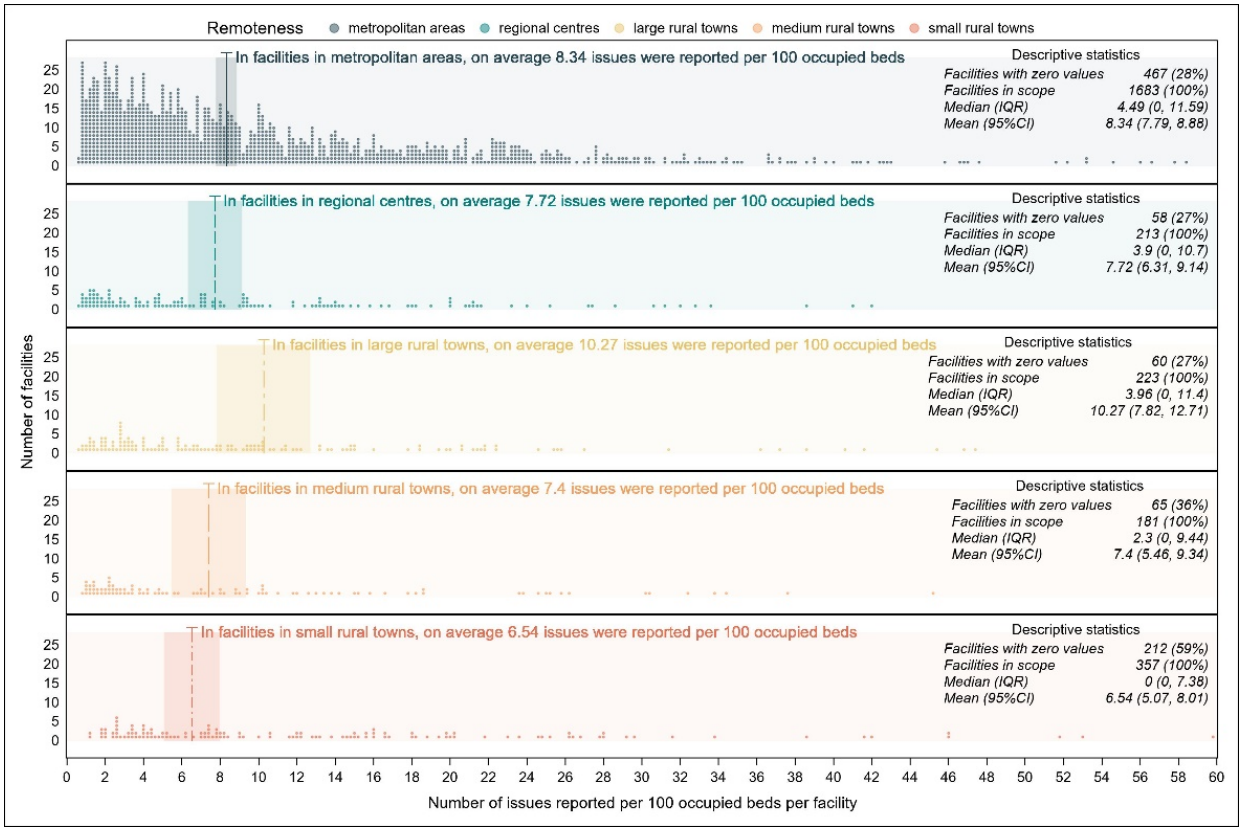


Issues

During the complaints process at the ACQSC, multiple issues can be recorded. Recording singular issues is important as they provide an extra layer of specificity around the problems with aged care services. For example, a complaint could involve both ‘Choice and Dignity’ and ‘Financial’ matters.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result out of the five remoteness categories for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups.

Figure 23. Number of issues per 100 occupied beds per facility by remoteness

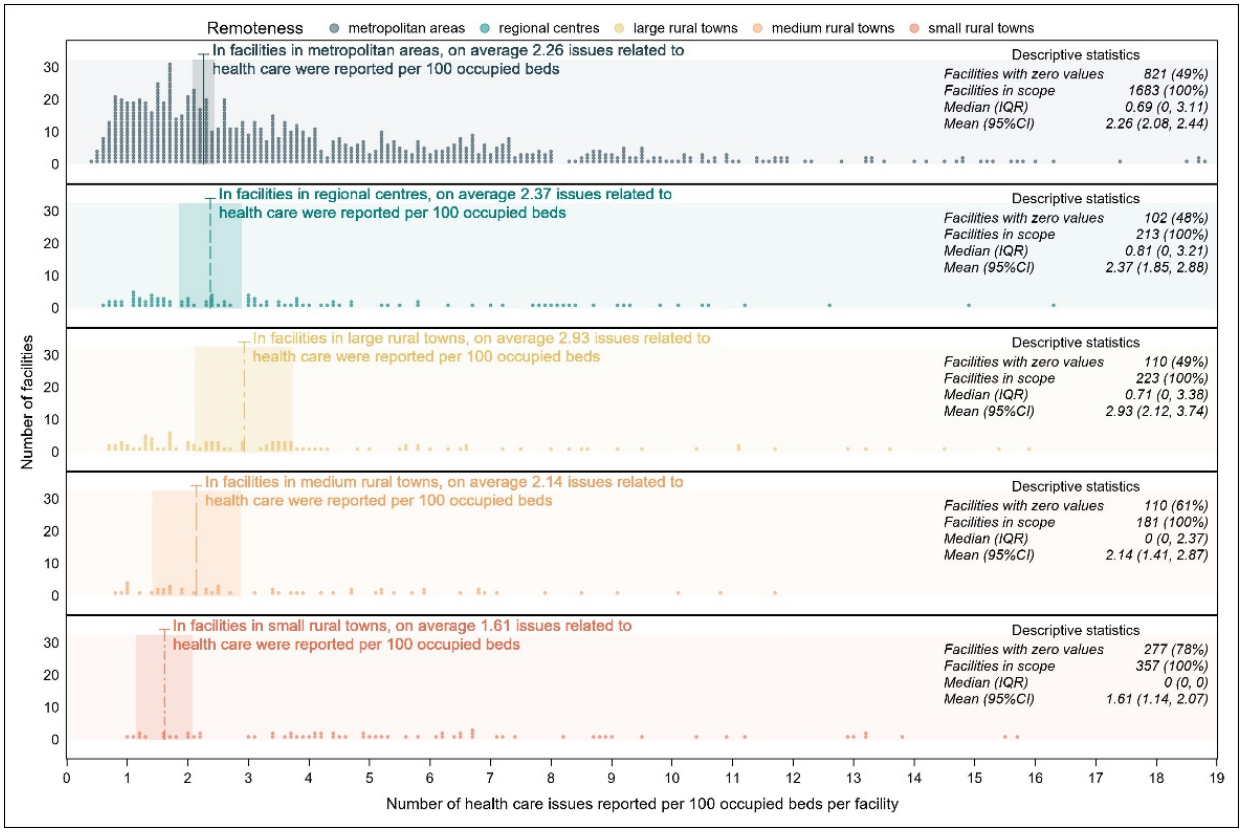


Issues – health care

Issues relating to health care include adequate nutrition and/or hydration, allied health assessment and services, assistance with client self-administration of medicine, assistance with self-care, chemical restraint, constipation and continence management, dementia management, falls prevention and post fall management, infectious diseases/infection control, medication administration and management, nursing, pain management, palliative/end of life care, physical restraint, pressure care and wound management.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result out of the five remoteness categories for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups.

Figure 24. Number of health care issues reported per 100 occupied beds per facility by remoteness

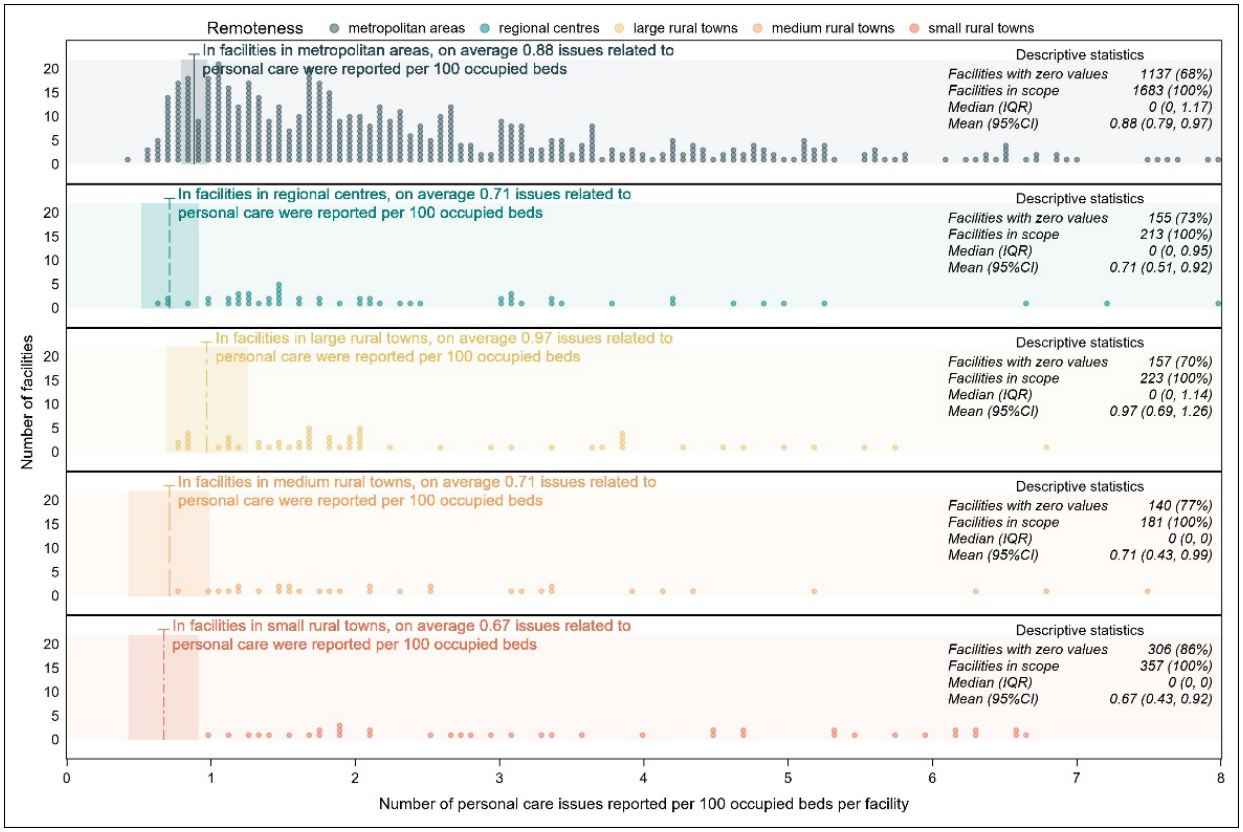


Issues – personal care

Issues relating to personal care include behaviour management, communication/reading aids, feeding assistance, mental health, mobility, monitoring weights, personal and oral hygiene, personal safety and interventions, skin care and sleep.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Figure 25. Number of personal care issues reported per 100 occupied beds per facility by remoteness



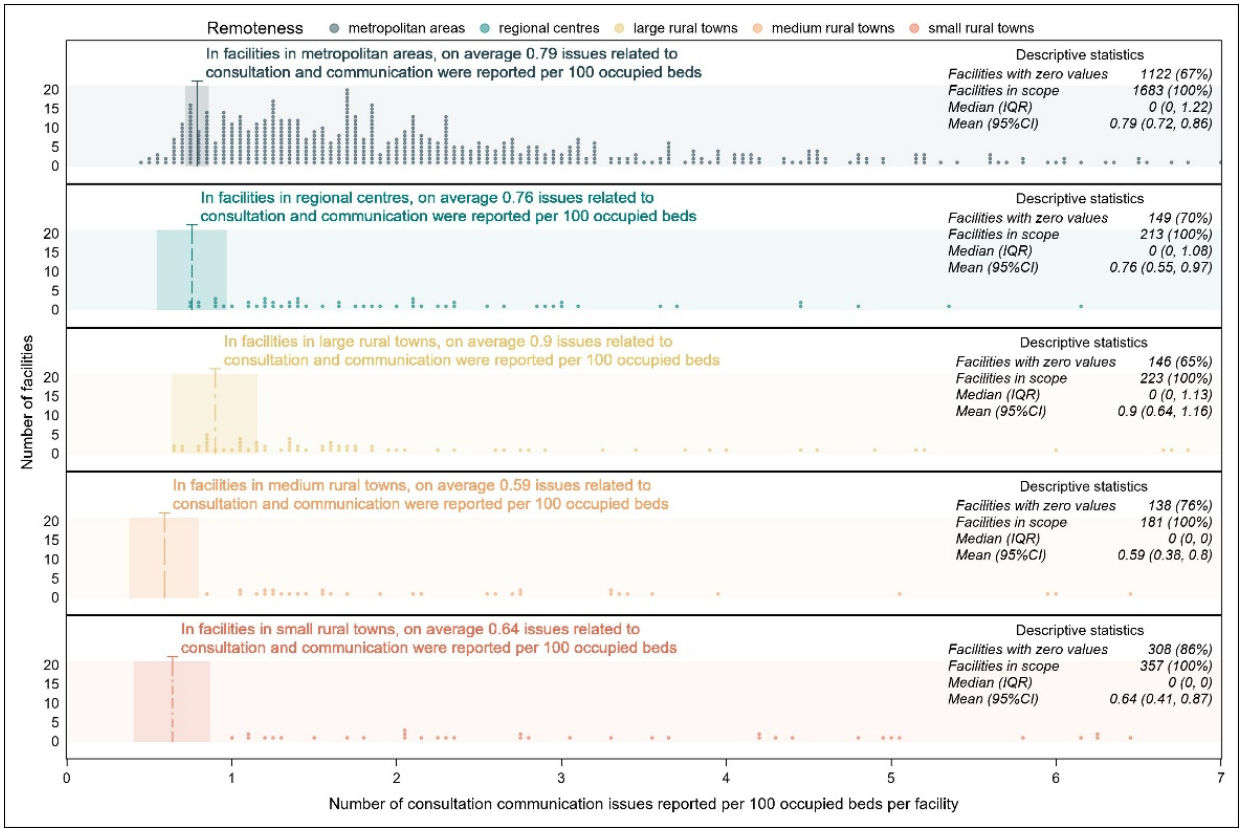
Issues – consultation and communication

Issues raised in complaints relating to consultation and communication include ability to express needs/wants, access to personal and medical records, communication barriers, information about medication, internal complaints process, lack of consultation/communication, referral to appropriate person/agency, representative/family consultation and communication.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 26. Number of consultation and communication related issues reported per 100 occupied beds per facility by remoteness

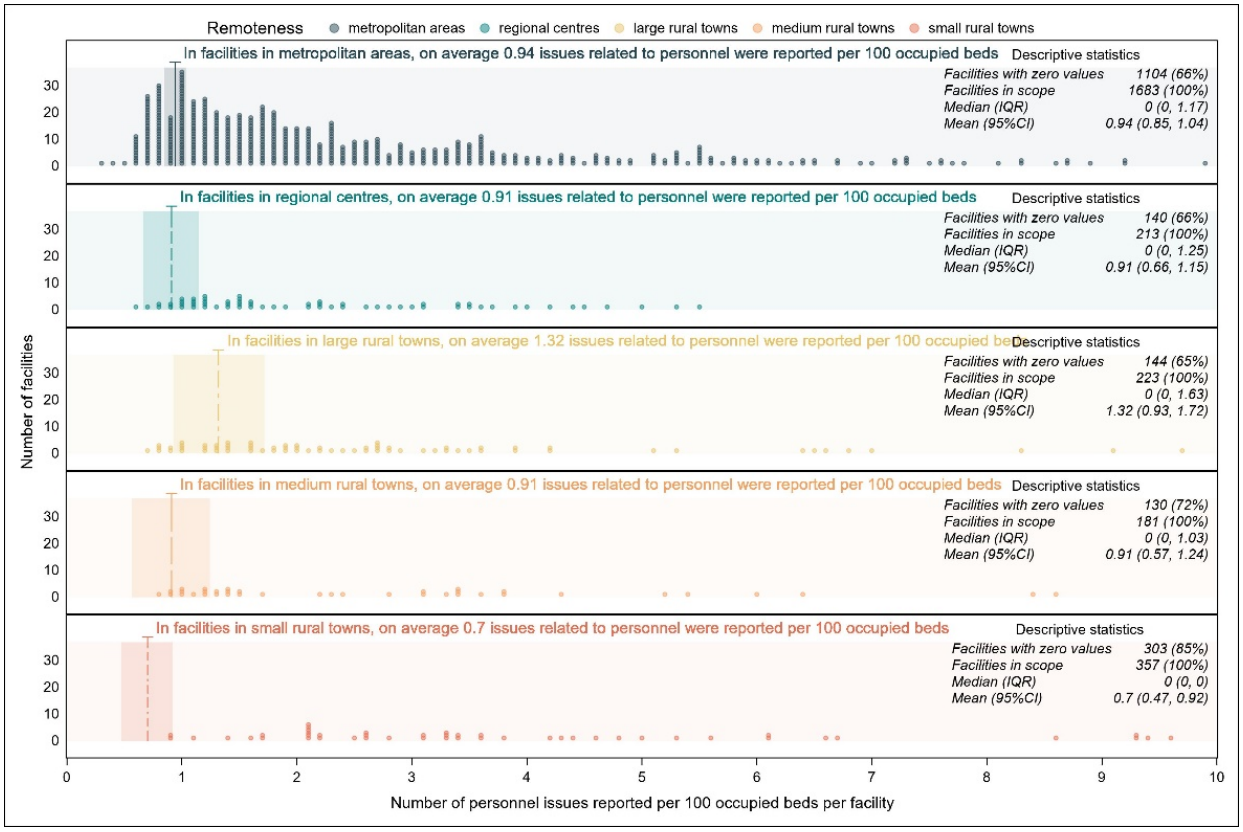


Issues – personnel

Issues raised in complaints relating to personnel include behaviour, conduct, call for assistance, legislated requirements (e.g. police checks), number/sufficiency of staff, staff training, skills, qualifications and suitability.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result out of the five remoteness categories for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups.

Figure 27. Number of personnel related issues reported per 100 occupied beds per facility by remoteness

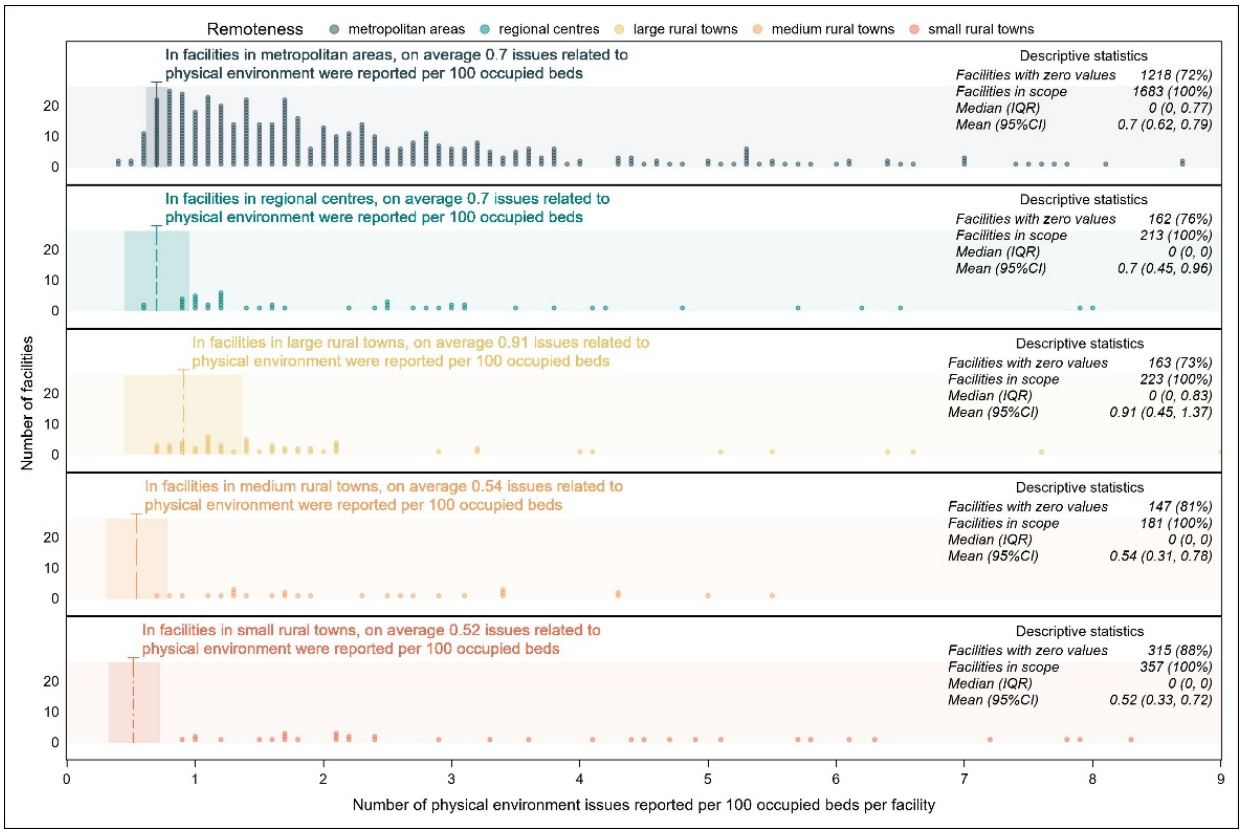


Issues – physical environment

Issues raised in complaints relating to physical environment include building and ground aesthetics, call bells, cleanliness, client safety, hazards, pest infestation control, temperature and fire safety.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Figure 28. Number of physical environment related issues reported per 100 occupied beds per facility by remoteness



Consumer Experience Interviews

The Consumer Experience Interview (CEI) is a questionnaire filled out when an ACQSC team visits a residential aged care service to undertake a site audit, part of the re-accreditation process. The CEI is used to collect data on the experiences of quality of care in residential care facilities.[7]

Limitations and interpretation

The CEI includes at least 10% of those living in the home. The indicators are based on one year of data and may not be indicative of the entire sector as site audits are conducted on a 3 year cycle.

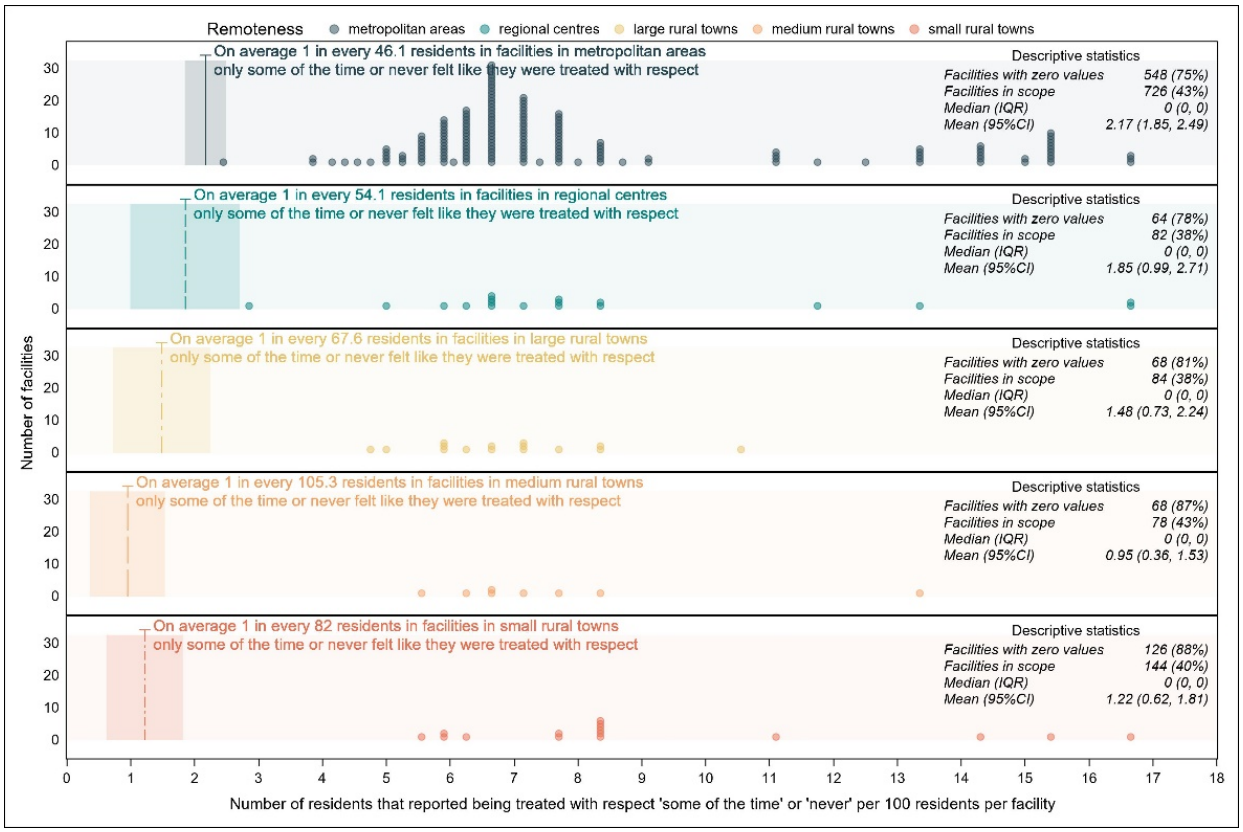
[7] Further information about the CEI can be found on the ACQSC website under: Home > Consumers > Consumer experience reports in residential aged care services.

Respect

This indicator relates to the average number of respondents answering “some of the time” or “never” to the question “Do staff treat you with respect?”

Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the remoteness groups showed clear best result for this indicator (see Appendix 3 for more details).

Figure 29. Number of residents that reported being treated with respect ‘some of the time’ or ‘never’ per 100 residents per facility by remoteness

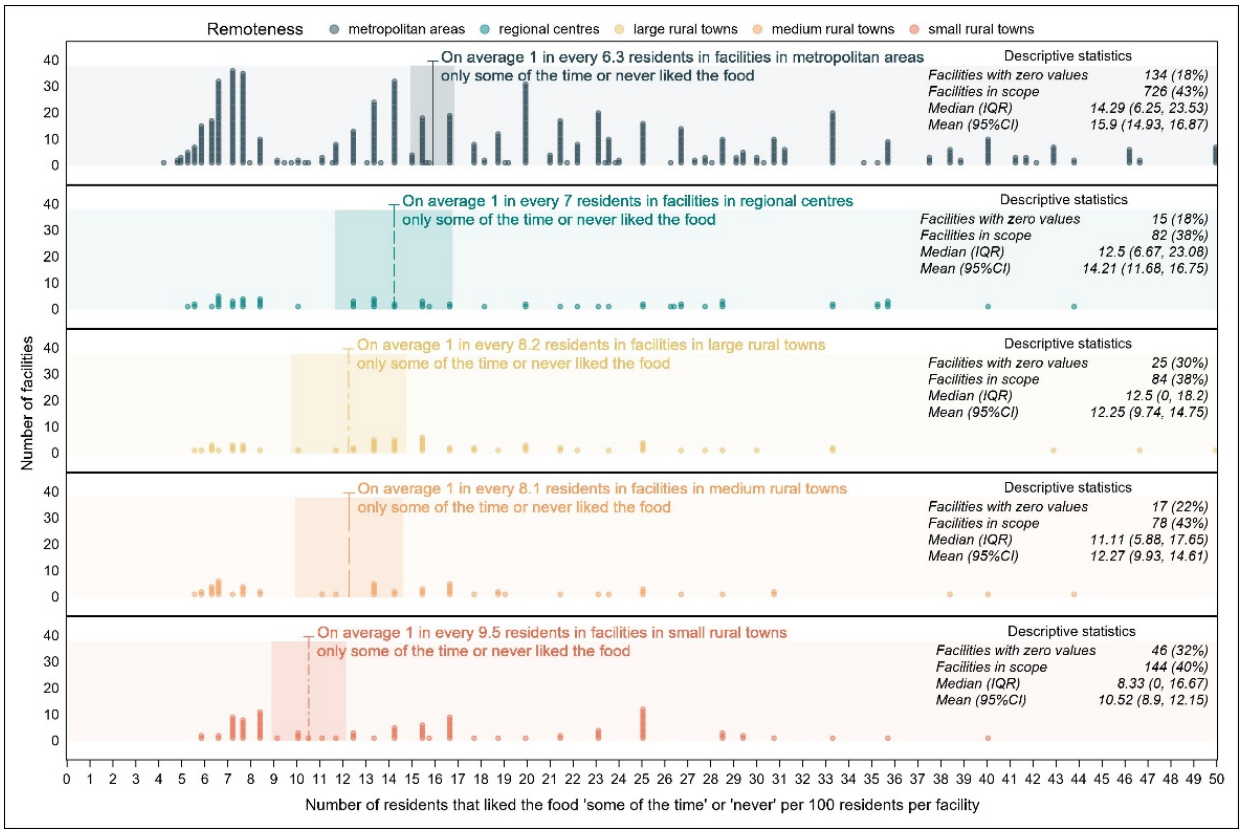


Food

This indicator relates to the average number of respondents answering “some of the time” or “never” to the question “Do you like the food here?”

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 30. Number of residents that reported liking the food ‘some of the time’ or ‘never’ per 100 residents per facility by remoteness



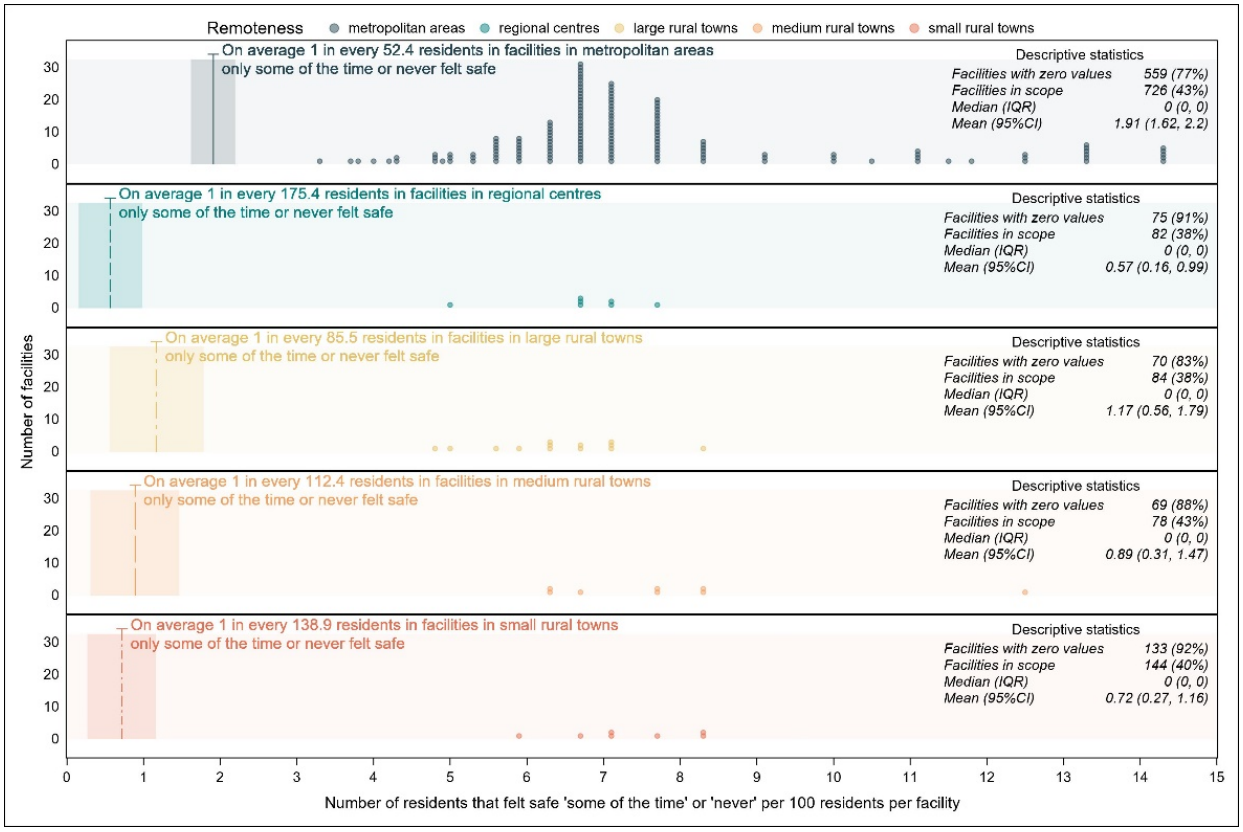
Safety

This indicator relates to the average number of respondents answering “some of the time” or “never” to the question “Do you feel safe here?”

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 31. Number of residents that reported feeling safe ‘some of the time’ or ‘never’ per 100 residents per facility by remoteness

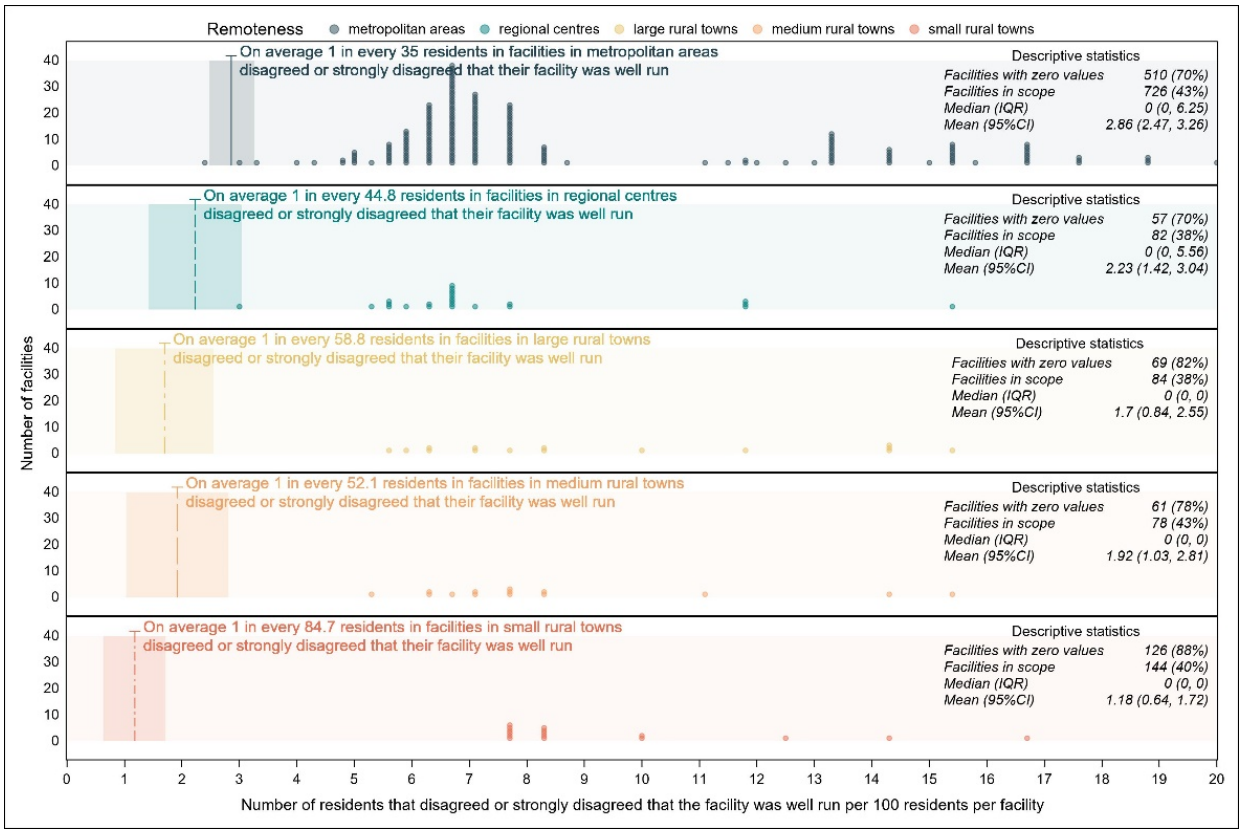


Well run

This indicator relates to the average number of respondents answering “Disagree” or “Strongly Disagree” to the statement “This place is well run”.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 32. Number of residents that disagreed or strongly disagreed their facility was well run per 100 residents per facility by remoteness

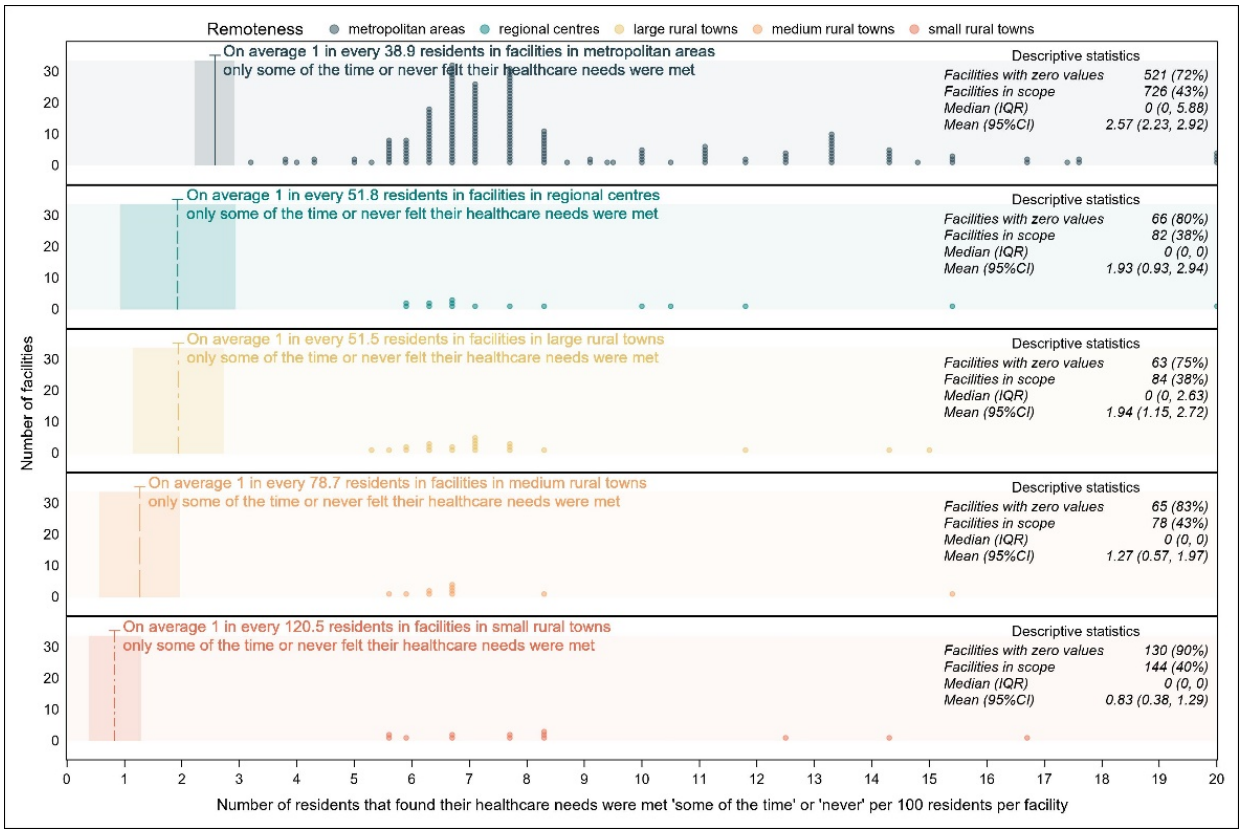


Health care

This indicator relates to the average number of respondents answering “some of the time” or “never” to the question “Do staff meet your healthcare needs?”

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 33. Number of residents that reported their health care needs were met ‘some of the time’ or ‘never’ per 100 residents per facility by remoteness

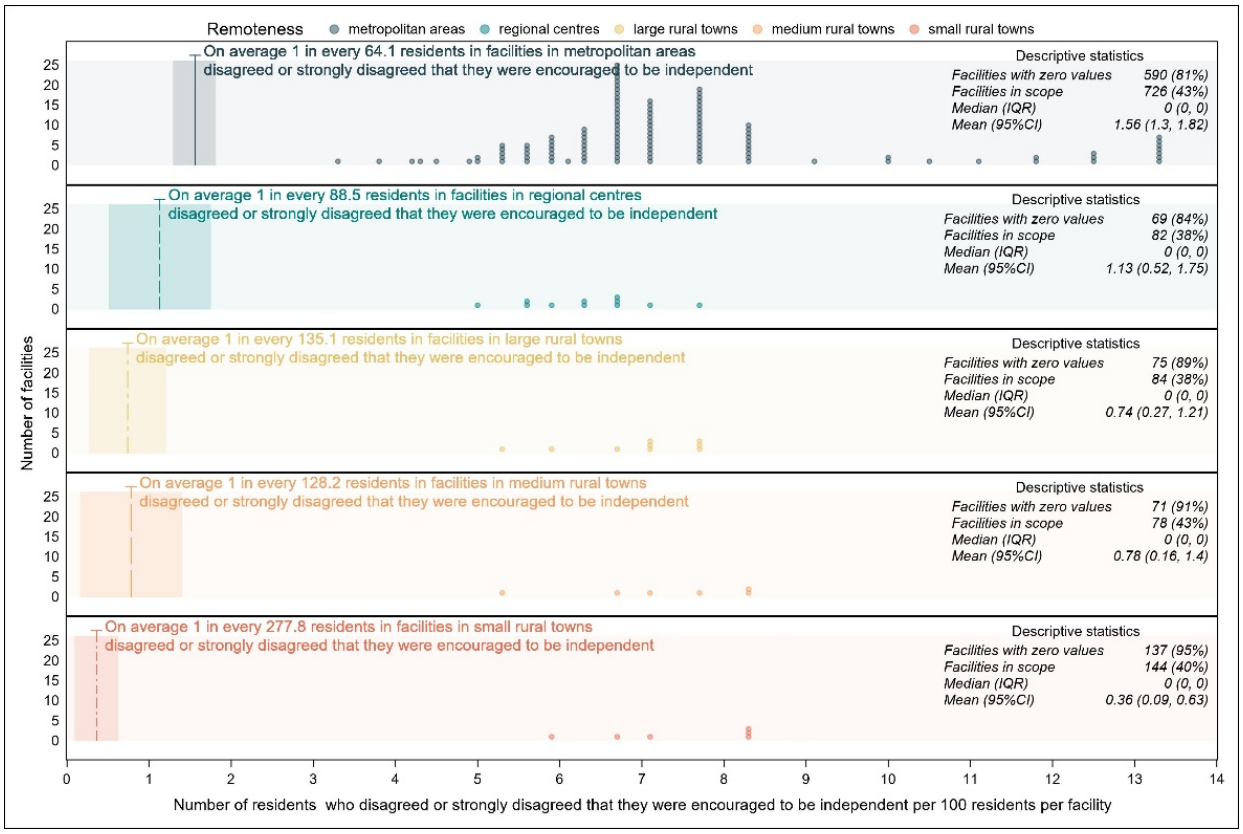


Independence

This indicator relates to the average number of respondents answering “Disagree” or “Strongly Disagree” to the statement “I am encouraged to do as much as possible for myself”.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 34. Number of residents that disagreed or strongly disagreed they were encouraged to be independent per 100 residents per facility by remoteness



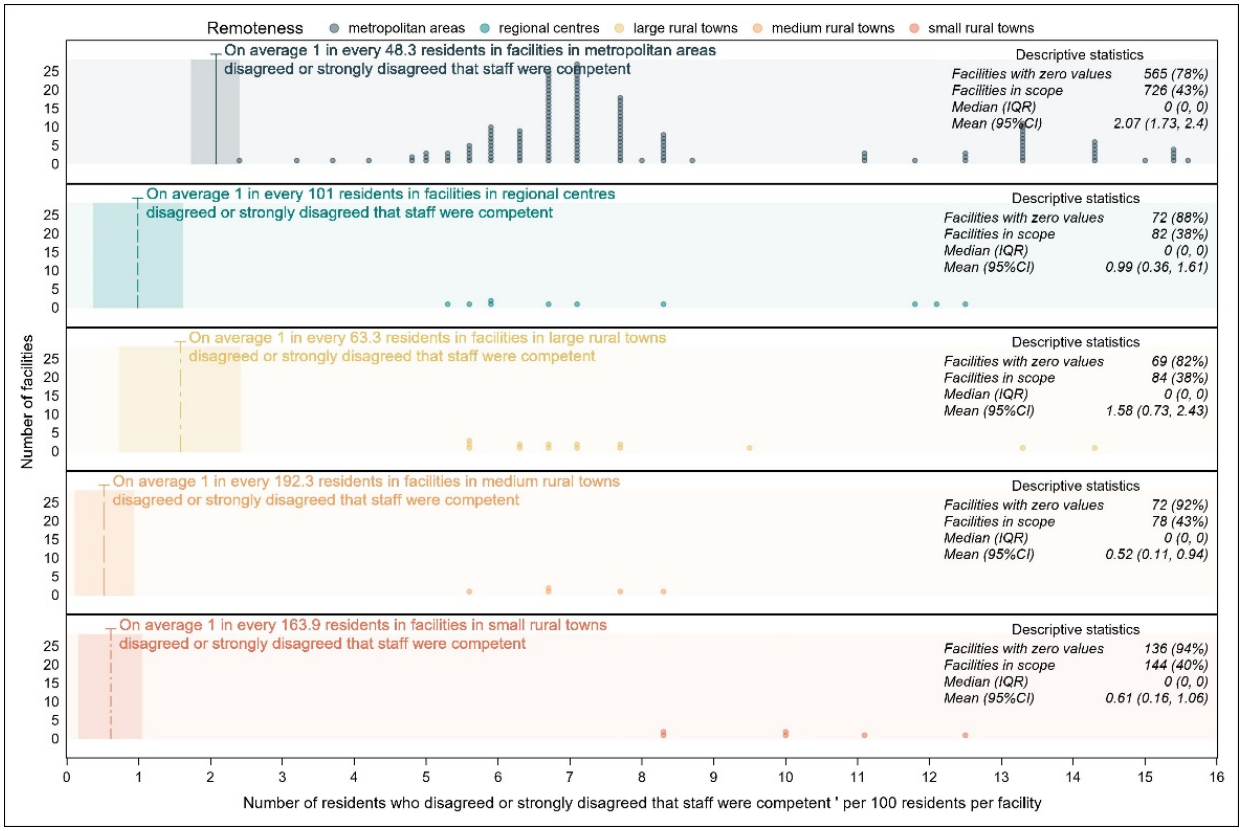
Staff Competence

This indicator relates to the average number of respondents answering “Disagree” or “Strongly Disagree” to the statement “The staff know what they are doing”.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 35. Number of residents that disagreed or strongly disagreed staff were competent per 100 residents per facility by remoteness

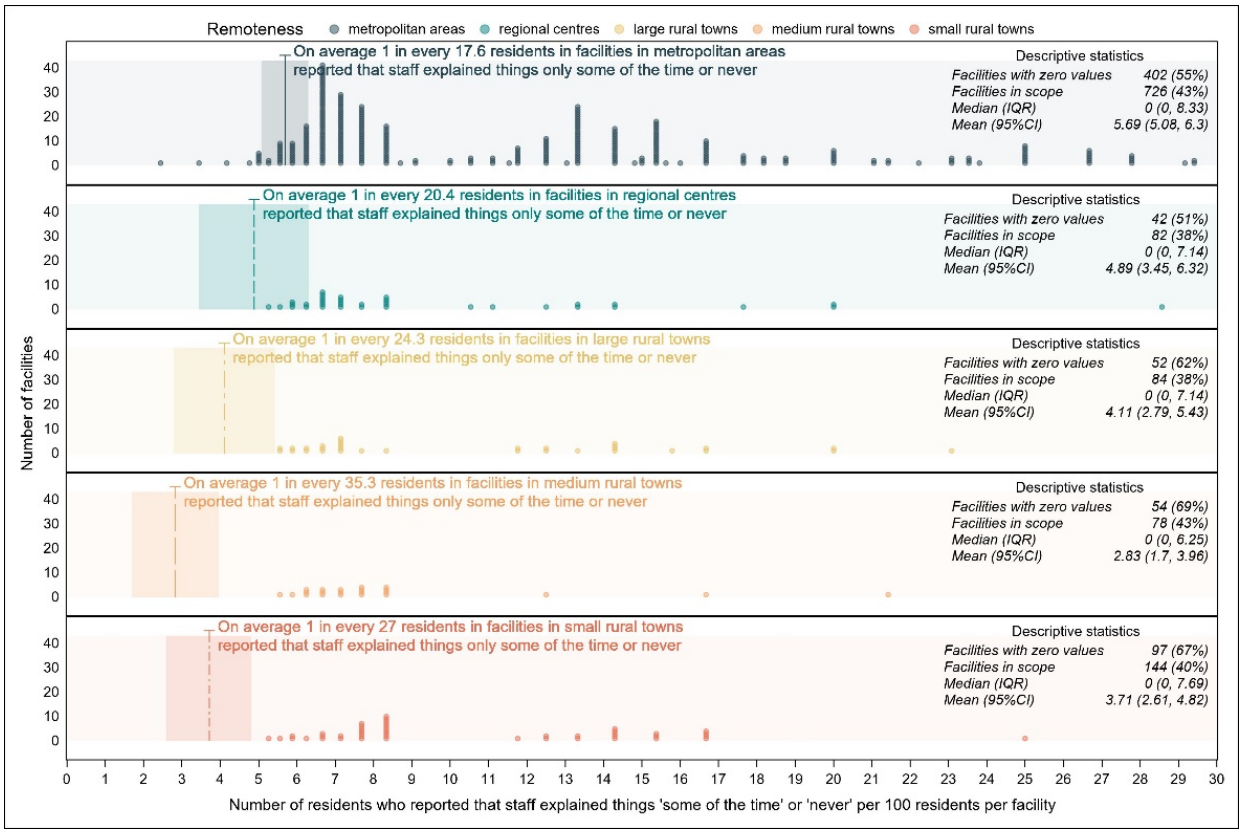


Staff explain

This indicator relates to the average number of respondents answering “some of the time” or “never to the question “Do staff explain things to you?”

During the 2018/19 financial year, facilities in medium rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in medium rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 36. Number of residents that reported staff explained things ‘some of the time’ or ‘never’ per 100 residents per facility by remoteness

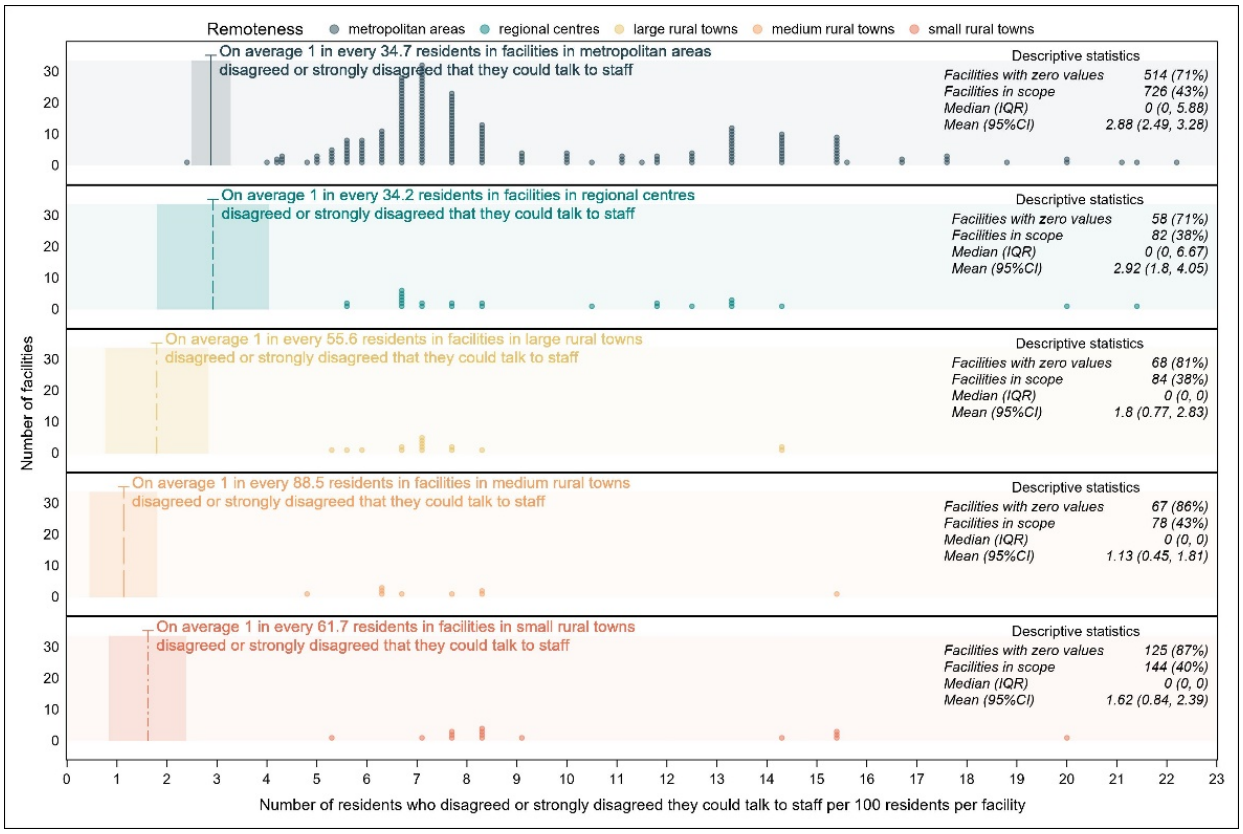


Staff care

This indicator relates to the average number of respondents answering “Disagree” or “Strongly Disagree” to the statement “If I’m feeling a bit sad or worried, there are staff here who I can talk to”.

During the 2018/19 financial year, facilities in medium rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in medium rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 37. Number of residents that disagreed or strongly disagreed there were staff they could talk to if they were feeling worried or sad per 100 residents per facility by remoteness

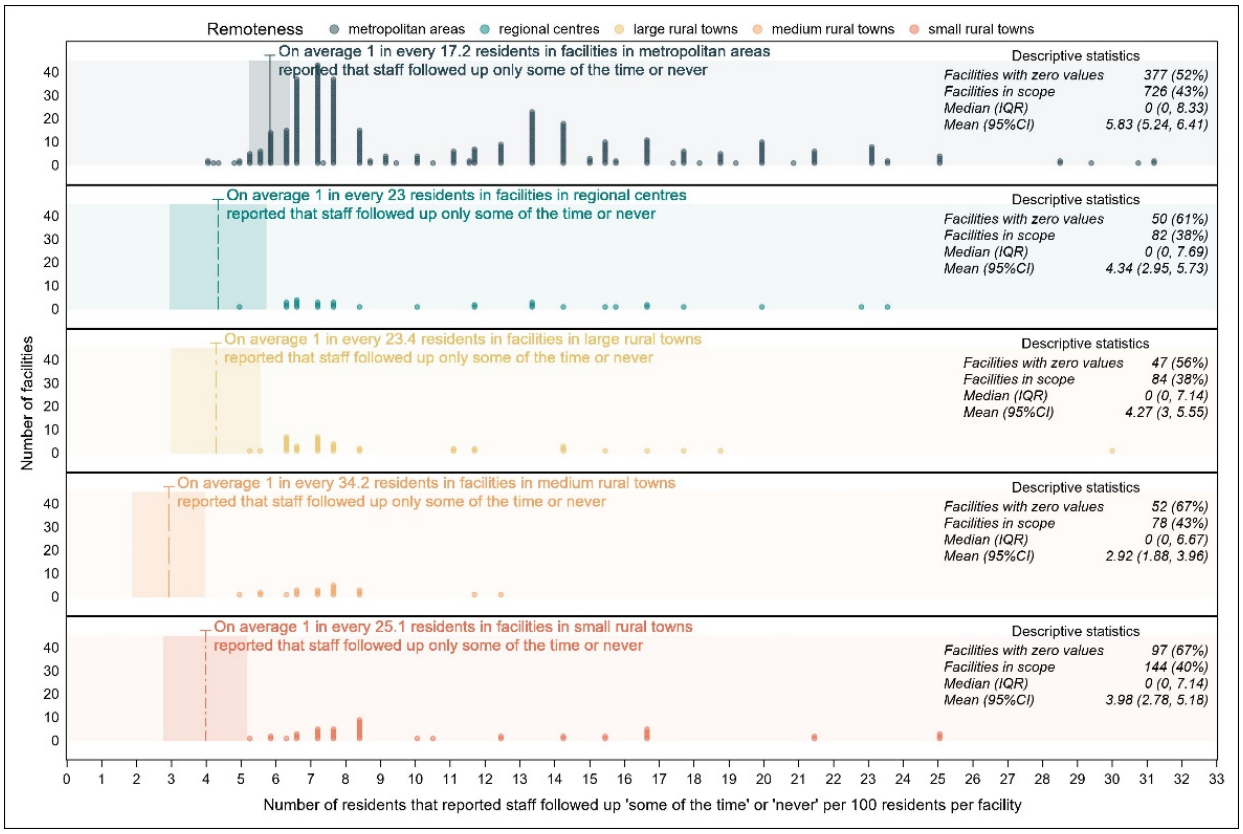


Staff follow-up

This indicator relates to the average number of respondents answering “some of the time” or “never to the question “Do staff follow up when you raise things with them?”

During the 2018/19 financial year, facilities in medium rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in medium rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 38. Number of residents that reported staff following up ‘some of the time’ or ‘never’ per 100 residents per facility by remoteness



Compliance Indicators

Residential aged care services are assessed and approved under the *Aged Care Quality and Safety Commission Act 2018 (Cth)* (Commission Act) to provide services under the *Aged Care Act 1997 (Cth)* (the Aged Care Act) The Australian Government subsidises approved aged care providers to deliver aged care services. Further information about the approval process is available on the Aged Care Quality and Safety Commission (ACQSC) website.[8]

Accreditation and re-accreditation processes are detailed on the ACQSC website[9]. As part of the re-accreditation process the ACQSC appoints an Assessment Team to conduct an unannounced site audit of a service following an application for re-accreditation. Site audits assess the approved provider's performance against the Aged Care Quality Standards (prior to 1 July 2019 the Accreditation Standards[10]).

Prior to January 2020, where the ACQSC found that a provider of a residential service had failed to comply with the applicable standards, a decision was made whether there was evidence that the failure has placed, or may place, the safety, health or well-being of a consumer of the service at serious risk. When a finding of serious risk was made, the provider of the service would receive a written decision outlining the reasons for and evidence of the risk, and the ACQSC would notify the Department of Health.

The Department of Health's aged care regulatory functions transferred to the ACQSC from 1 January 2020, giving the Commission new powers for monitoring and enforcing compliance under the Act and Aged Care Quality and Safety Commission Rules 2018 (Rules). These new powers included identifying where there is immediate and severe risk to consumers and considering whether to impose sanctions. To avoid duplication of the regulatory processes relating to serious risk to consumers, the serious risk provisions that existed prior to 1 January 2020 were removed from the Rules.

In undertaking assessment of performance against the Aged Care Quality Standards and monitoring the quality of care and services, the ACQSC continues to monitor for potential failure in the standard of care or service that may place a consumer's safety, health or well-being at risk. In cases where it is determined that a provider's non-compliance poses an immediate and severe risk to consumers, the ACQSC will respond by issuing a sanction.

Limitations and interpretation

The indicators are based on one year of data and may not be indicative of the entire sector as site audits are conducted on a 3 year cycle.

The indicators in this section are not presented using dot plots as facilities either do or do not have outcomes not met and a serious risk decision.

8 https://www.agedcarequality.gov.au/providers/becoming-approved-aged-care-provider

9 https://www.agedcarequality.gov.au/providers/assessment-processes/accreditation-and-re-accreditation/re-accreditation-of-residential-services.

10 https://www.agedcarequality.gov.au/providers/standards/old-standards

Expected outcomes not met under the Accreditation Standards

Organisations providing Commonwealth subsidised aged care services were required to comply with the former Accreditation Standards which applied until 30 June 2019 (from 1 July 2019 the Aged Care Quality Standards apply).

The statistics contained in this report relate only to the expected outcomes of the Accreditation Standards found to have been not met during the conduct of unannounced site audits during 2018/19.

When the ACQSC determines that a provider of a service is non-compliant with their responsibilities, under the Aged Care Act and the Aged Care Principles the Commission will notify the provider of the non-compliance.[11]

Outcomes not met

In 2018–19 unannounced site visits were conducted on 1515 metropolitan areas facilities, 252 (17%) of which failed to comply with the applicable standards.

In 2018–19 unannounced site visits were conducted on 194 regional centres facilities, 36 (19%) of which failed to comply with the applicable standards.

In 2018–19 unannounced site visits were conducted on 174 large rural towns facilities, 30 (17%) of which failed to comply with the applicable standards.

In 2018–19 unannounced site visits were conducted on 140 medium rural towns facilities, 27 (19%) of which failed to comply with the applicable standards.

In 2018–19 unannounced site visits were conducted on 279 small rural towns facilities, 39 (14%) of which failed to comply with the applicable standards.

[11] Further information about non-compliance with the Accreditation and Quality Standards can be found on the ACQSC website https://www.agedcarequality.gov.au/providers/standards/old-standards

Serious risk decisions

In undertaking an assessment of performance against the Accreditation Standards and monitoring the quality of care and services, the ACQSC may identify that a provider of a residential aged care service has failed to comply with the applicable standards. A decision is then made whether there is evidence that the failure has placed, or may place, the safety, health or well-being of a consumer of the service at serious risk.

The statistics contained in this report relate only to serious risk decisions made by the ACQSC on residential aged care facilities during the conduct of unannounced site visits under the Accreditation Standards in 2018/19.[12]

Serious risk decisions

In 2018–19 unannounced site visits were conducted on 1515 metropolitan areas facilities, 80 (5%) of which resulted in serious risk decisions.

In 2018–19 unannounced site visits were conducted on 194 regional centre facilities, 12 (6%) of which resulted in serious risk decisions.

In 2018–19 unannounced site visits were conducted on 174 large rural town facilities, 12 (7%) of which resulted in serious risk decisions.

In 2018–19 unannounced site visits were conducted on 140 medium rural town facilities, 12 (9%) of which resulted in serious risk decisions.

In 2018–19 unannounced site visits were conducted on 279 small rural town facilities, 7 (3%) of which resulted in serious risk decisions.

[12] Further information about serious risk decisions can be found on the ACQSC website under: Home > Aged care services performance > Serious risk decisions.

Workforce Indicators

Workforce indicators relate to the minutes worked per resident for different staffing types.

The Royal Commission obtained data from the StewartBrown Aged Care Financial Performance Survey, and supplemented this with workforce data acquired from 52 aged care providers capturing an additional 776 facilities. This data was used to create indicators for staffing minutes per resident per day, by staff type.[13]

Limitations and interpretation

The StewartBrown Aged Care Financial Performance Survey is a voluntary survey and while there is no incentive for residential aged care facilities to incorrectly report workforce data, there is no legal compulsion to report correct data. The supplemental workforce data supplied by residential aged care facilities to the Royal Commission did have a legal compulsion to report correct data, however a small proportion of approved providers reported difficulty in obtaining accurate workforce data, especially in non-direct care staff types. In addition there was no opportunity to confirm unusual data variations with individual aged care facilities therefore the data required removal of outliers.

The indicators have not been adjusted to take into account variation in the complexity of residents' care needs at the facility level (casemix) nor how this interacts with other factors such as location, service size, or health care services.

Direct care staff

The direct care staff minutes are likely to be understated for the following reasons:

Allied health contracting arrangements

- Many providers contract allied health services and they may not all record the allied health contract hours. This is because external allied health invoices are processed through the accounts payable system, therefore the hours are unlikely to be captured in the rostering and payroll systems. Some providers may have a method for capturing these hours, but many will not.

- It is common for allied health contractors to charge on a per resident basis rather than an hourly rate which would require the provider to devise a method reverse engineer the number of care sessions back to hours. This exercise for many providers is likely to be considered too time consuming to track given their other competing administration priorities.

Care staff agency arrangements

- Many providers who use agency staff do not use their rostering system to capture agency hours. The agency cost is captured in the accounts payable system which means the hours can go unrecorded.

Indirect/support staff

The data quality of the indirect care hours worked data is poorer than the direct care hours due to increased use of sub-contracting arrangements. Internal shared and support service arrangements

[13] Further information about the StewartBrown Aged Care Financial Performance survey can be found on the StewartBrown website under: Home > News > Aged Care.

are also likely to cause under reporting of staff minutes for providers who operate multiple homes and other business units:

Administration

- Administration staff minutes are likely to be significantly understated, particularly for providers who run multiple homes and other business streams. These providers will have back of office staff supporting the entire organisation and their costs will be allocated to individual aged care homes in the form of a corporate recharge allocation. For this cohort of providers, the full administration worked hours are unlikely to be reported at individual home level.

Hotel Services

- Many providers have contract service arrangements in place that can be external and internal. Some providers will report contract hours, however the majority will not be capturing the contract hours, hence the hotel service hours are generally understated.

Recurrent repairs and maintenance

- Providers with sub-contracting arrangements such as gardening and grounds are unlikely to be reporting the worked hours for these contract arrangements, therefore repairs and maintenance hours are generally under reported.

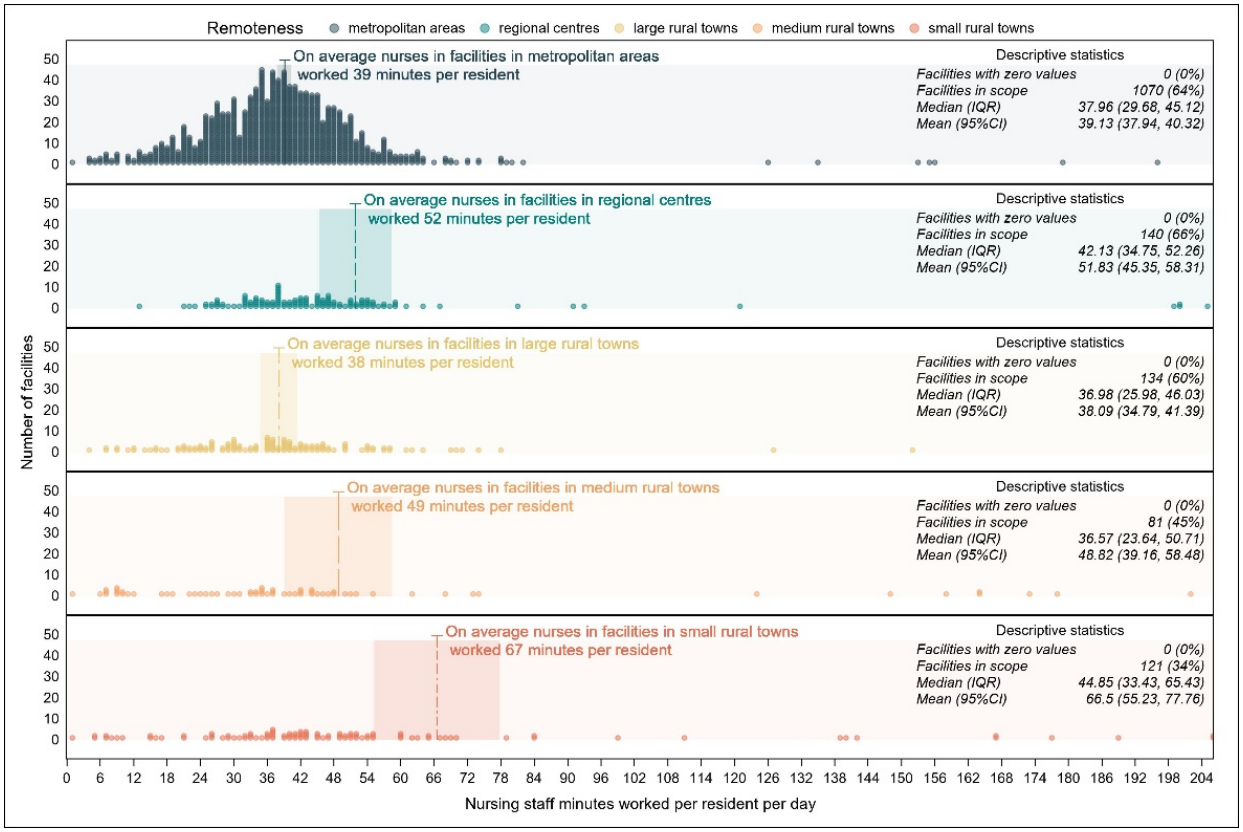
Nursing minutes

Nursing staff include registered nurses, enrolled nurses and licensed nurses.

In the 2018/19 financial year, facilities in regional centres on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in regional centres and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 39. Nursing staff minutes per resident per day per facility by remoteness

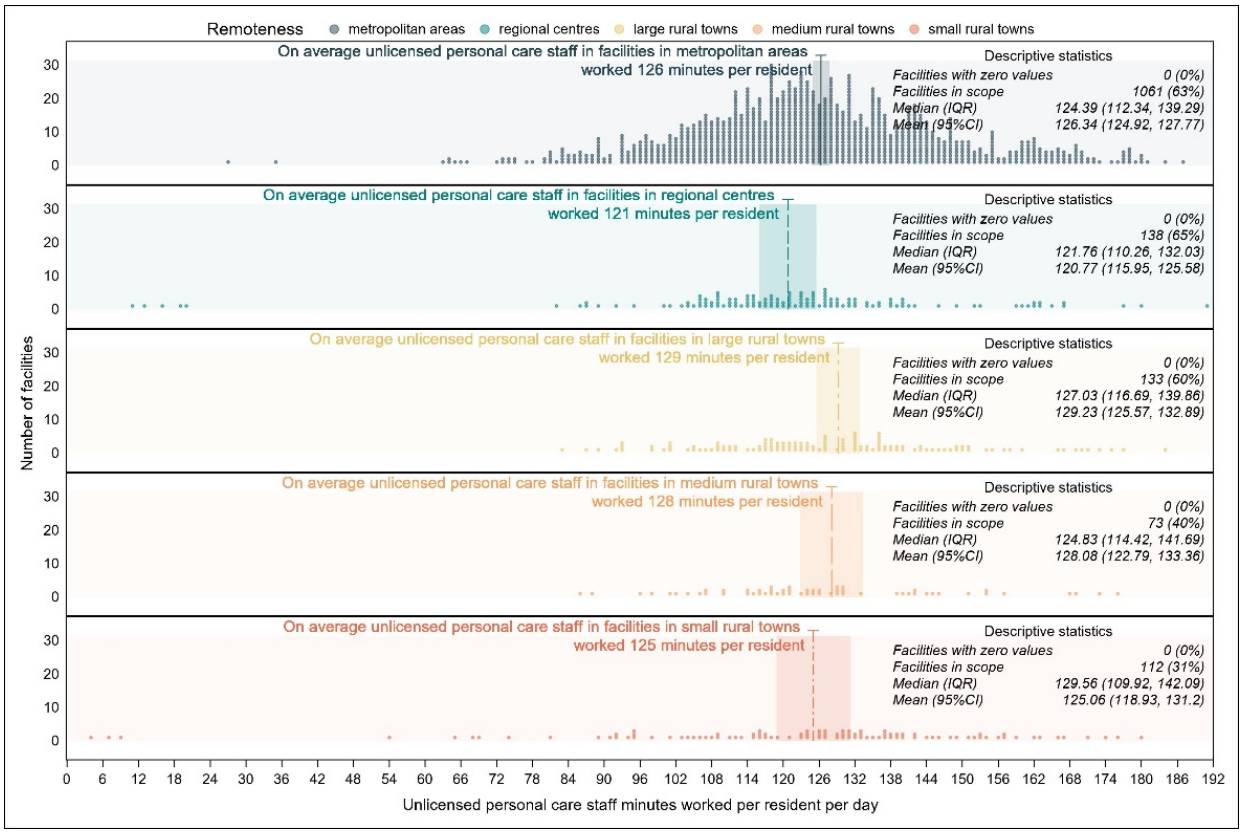


Personal care workers

Personal care/unlicensed staff assist with the day to day needs of residents including physical and emotional care. A high number of personal care workers are not necessarily a good result if it is accompanied by reduced nursing staff, as this suggests duties normally performed by nurses are being shifted to less trained personal care workers.

Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the remoteness groups showed clear best result for this indicator (see Appendix 3 for more details).

Figure 390. Personal care/unlicensed staff minutes per resident per day per facility by remoteness

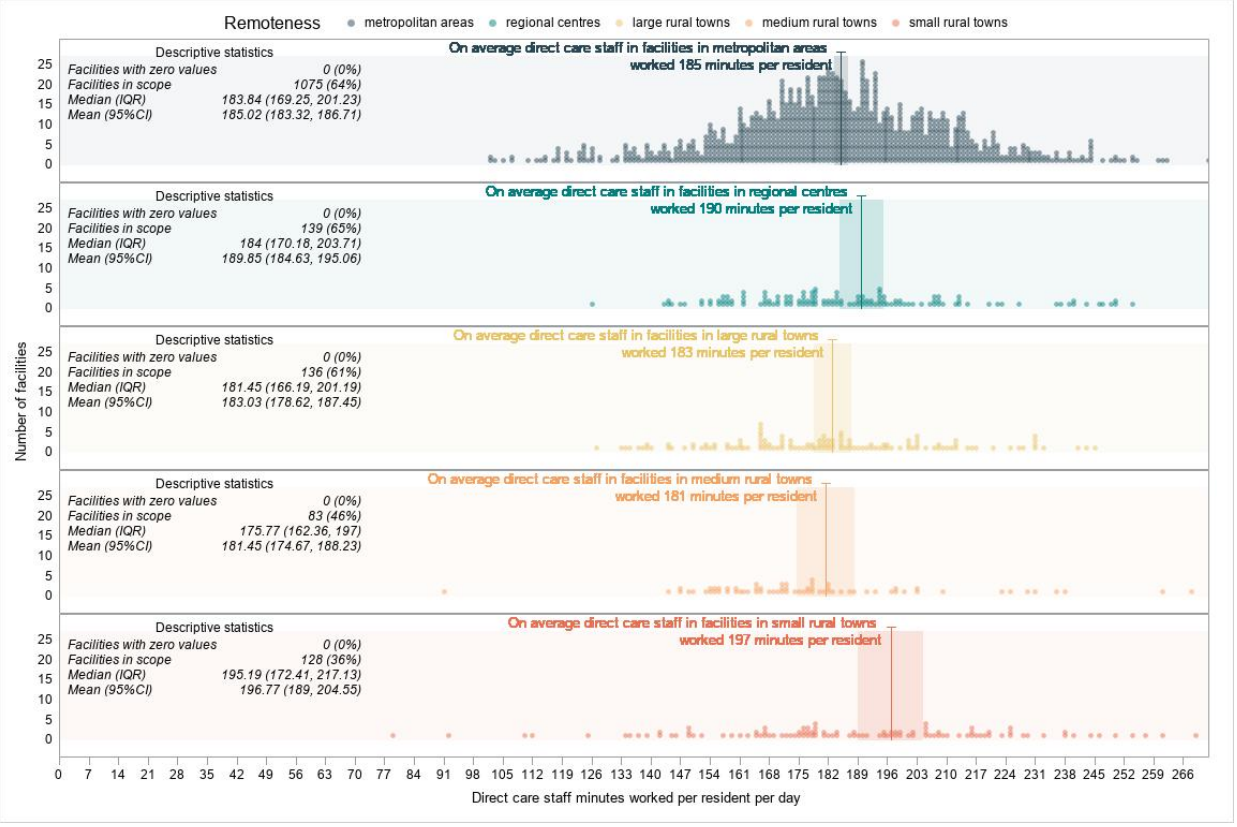


Direct care staffing minutes

Staff involved in direct care of residents include care management, nurses, personal care workers, allied health and lifestyle staff.

In the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Figure 41. Direct care staff minutes per resident per day per facility by remoteness

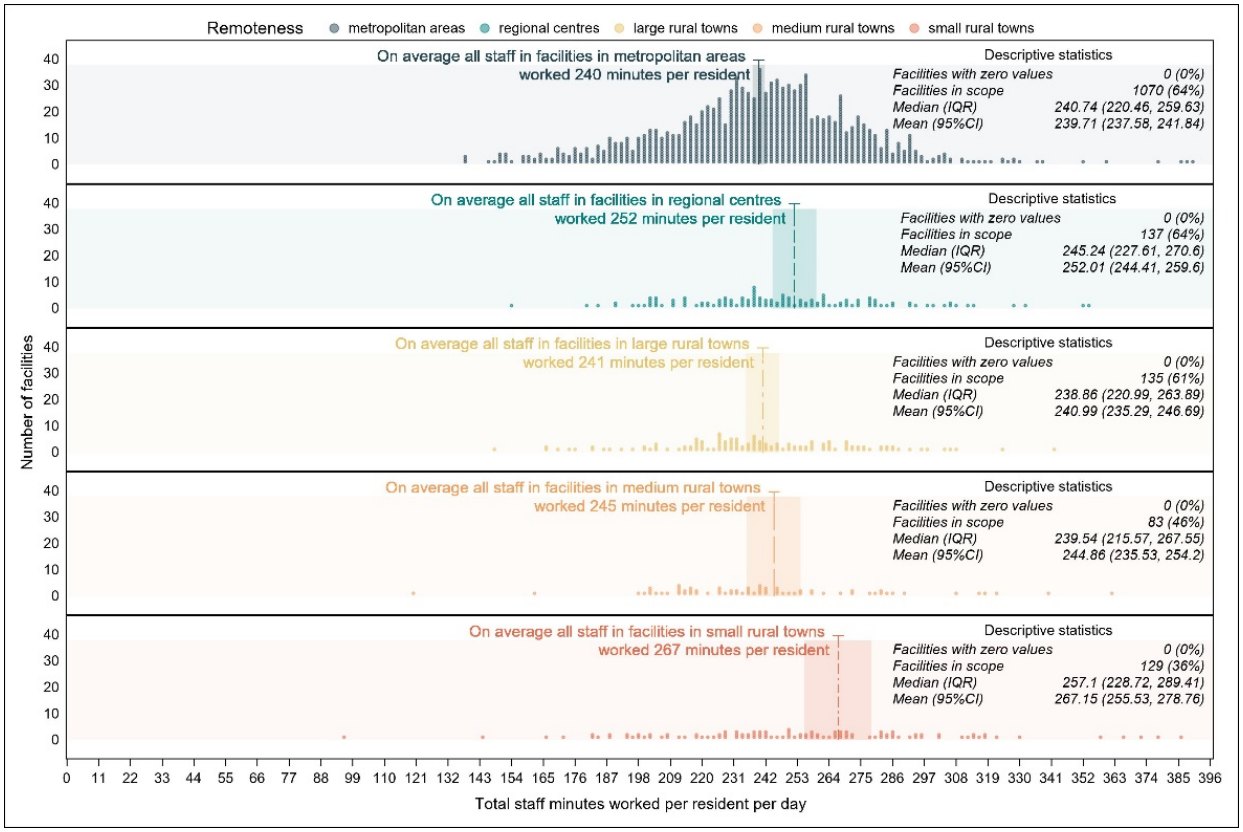


Total staff minutes

Staff not involved in direct care of residents include staff working in catering, cleaning, laundry, maintenance, administration, quality and education. Total staffing minutes include both these indirect care workers and direct care workers. The data quality of the indirect care hours worked data is poorer than the direct care hours due to increased use of sub-contracting arrangements.

In the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Figure 402. Total staff minutes worked per resident per day per facility by remoteness



Restraint, assault and missing resident indicators

National Mandatory Quality Indicators

The National Aged Care Mandatory Quality Indicator Program is run by the Department of Health and collects quality indicator data from residential aged care services every 3 months. Every service must report against the 3 quality indicators for each care recipient. The three indicators are unplanned weight loss, pressure injuries and the use of physical restraints. The unplanned weight loss and pressure injuries indicators are reported in the clinical indicators chapter of this report.[14]

Limitations and interpretation

The indicators are calculated from raw data with no risk adjustment. This means that it has not been possible to take into account variation in the complexity of residents' care needs at the facility level (casemix) nor how this interacts with other factors such as location, service size, or health care services.

The indicators are also self-reported by aged care facilities and are therefore subject to reporting bias.

The quality of the raw indicator data was affected by issues such as unexplained outliers and inconsistencies in the calculated quality indicators, and therefore caution should be exercised when interpreting the quality indicators. Data quality issues include instances where aged care providers may have misreported information, such as information regarding physical restraint being inaccurate, due to misinterpretations by providers of the physical restraint and reporting requirements.

[14] Further information about National Aged Care Mandatory Quality Indicator Program can be found on the Department of Health website under: Home > Initiatives and programs.

Intent to restrain

Intent to restrain is the intentional restriction of a care recipient's voluntary movement or behaviour by the use of a device, removal of mobility aids, or use of physical force for behavioural purposes. Locking care recipients in their rooms, the placement of furniture, use of concave mattresses, lap rugs with ties or any other devices used with the intention to restrict free movement, as well as more traditional physical restraint devices, are included in the intent to restrain.

In the first quarter of the 2019/20 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 413. Count of intent to restrain per 100 occupied beds per facility by remoteness

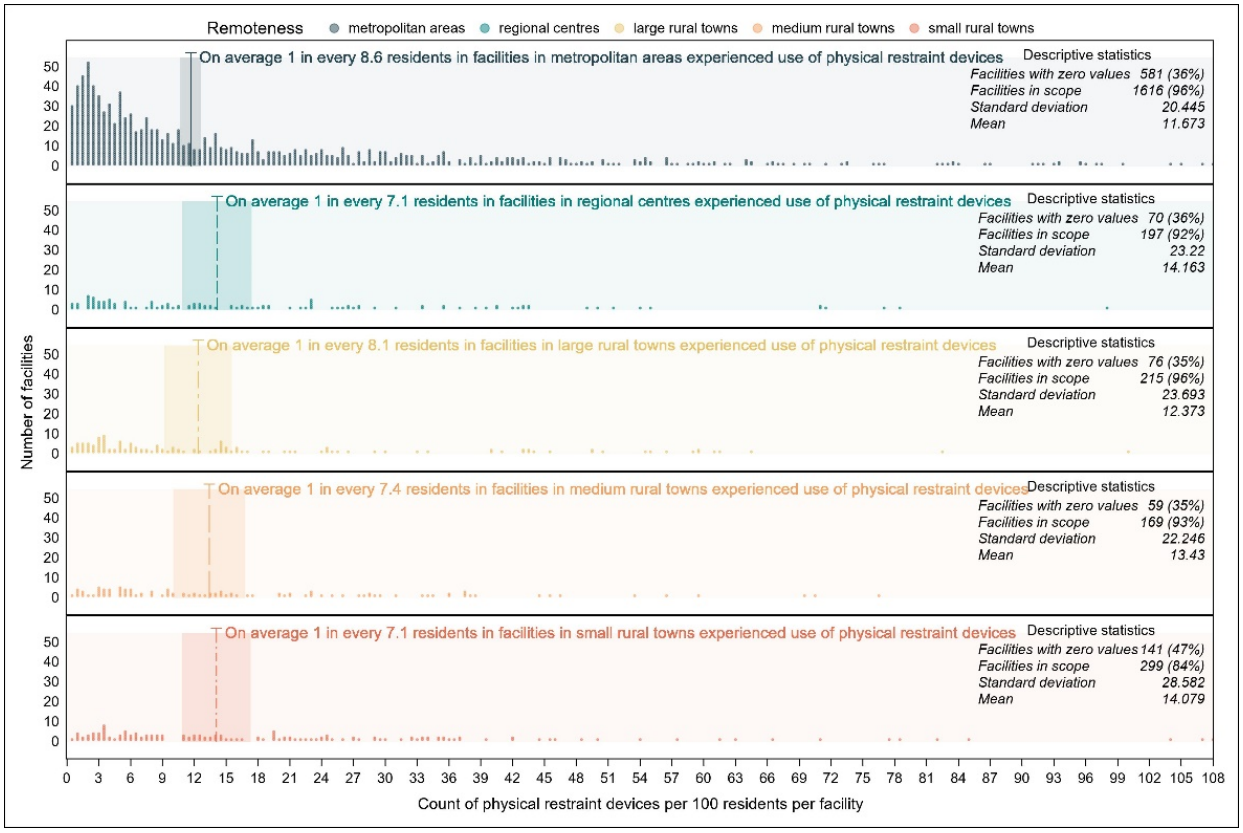
Physical restraint

Physical restraint devices are counted at the time of the assessments, whether they are being used to intentionally restrain a care recipient or not. Restraint devices include (but are not limited to) bedrails, chairs with locked tables, seatbelts (other than those used during active transport), safety vests, shackles and manacles.

Based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups, none of the remoteness groups showed clear best result for this indicator (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 44. Count of physical restraint devices per 100 occupied beds per facility by remoteness



Compulsory reporting indicators

To help protect aged care residents, the Aged Care Act 1997 has compulsory reporting provisions. This means that approved providers of residential aged care services are responsible for ensuring that suspicions or allegations of reportable assaults occurring at their services are reported. The law also requires service providers to report that a resident is absent without explanation (also known as a missing resident).

Further information about compulsory reporting for residential aged care services can be found on the ACQSC website under: Home > Providers > Compulsory reporting for approved providers of residential aged care services.

Limitations and interpretation

The indicators have not been adjusted to take into account variation in the complexity of residents' care needs at the facility level (casemix) nor how this interacts with other factors such as location, service size, or health care services.

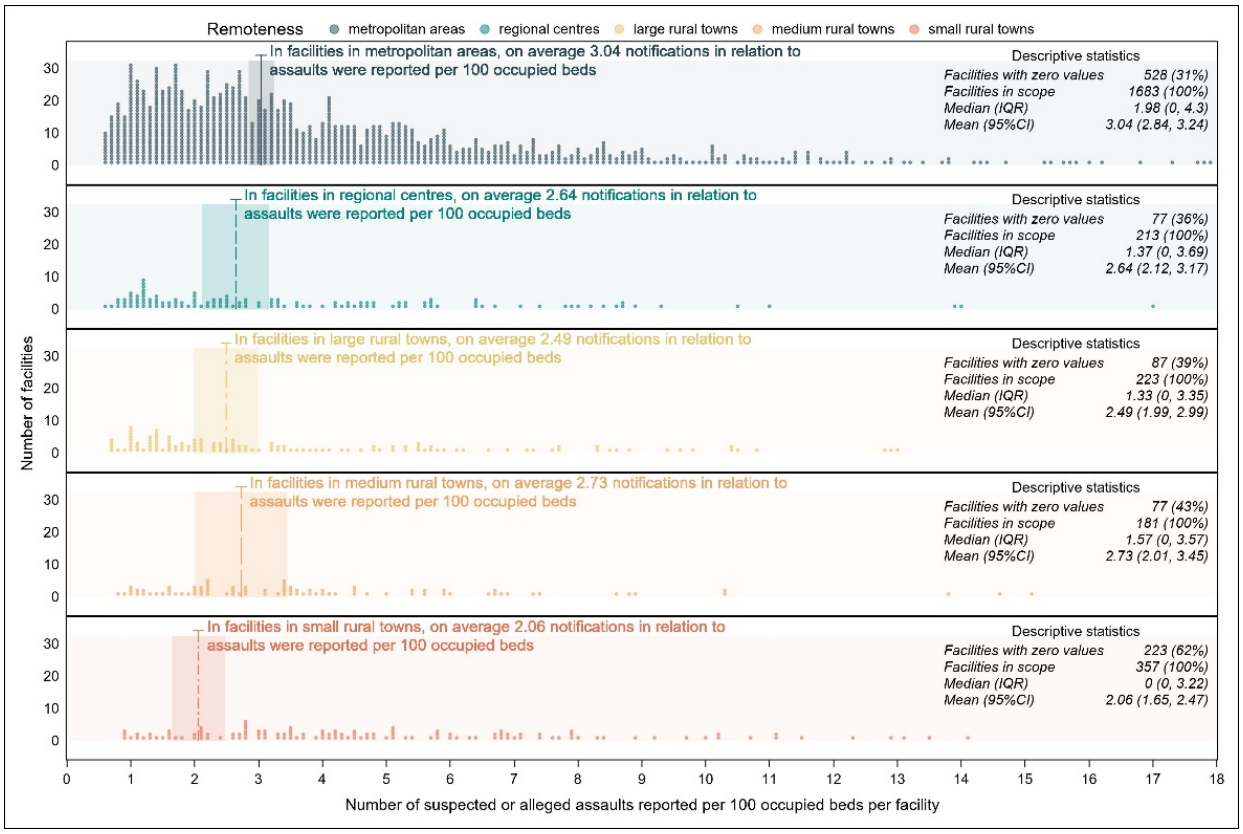
Assault

Approved providers of residential services must report suspicions or allegations of assaults to local police and the Department of Health within 24 hours of becoming aware of, or suspecting a reportable assault.

A reportable assault is an allegation, a witnessed incident, or suspicion of unreasonable use of force on a resident, ranging from deliberate and violent physical attacks on residents to the use of unwarranted physical force, or unlawful sexual contact, meaning any sexual contact with residents where there has been no consent.

In the 2018/19 financial year, facilities in small rural towns on average showed the best result out of the five remoteness categories for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups.

Figure 425. Number of suspected or alleged assaults reported per 100 occupied beds per facility by remoteness

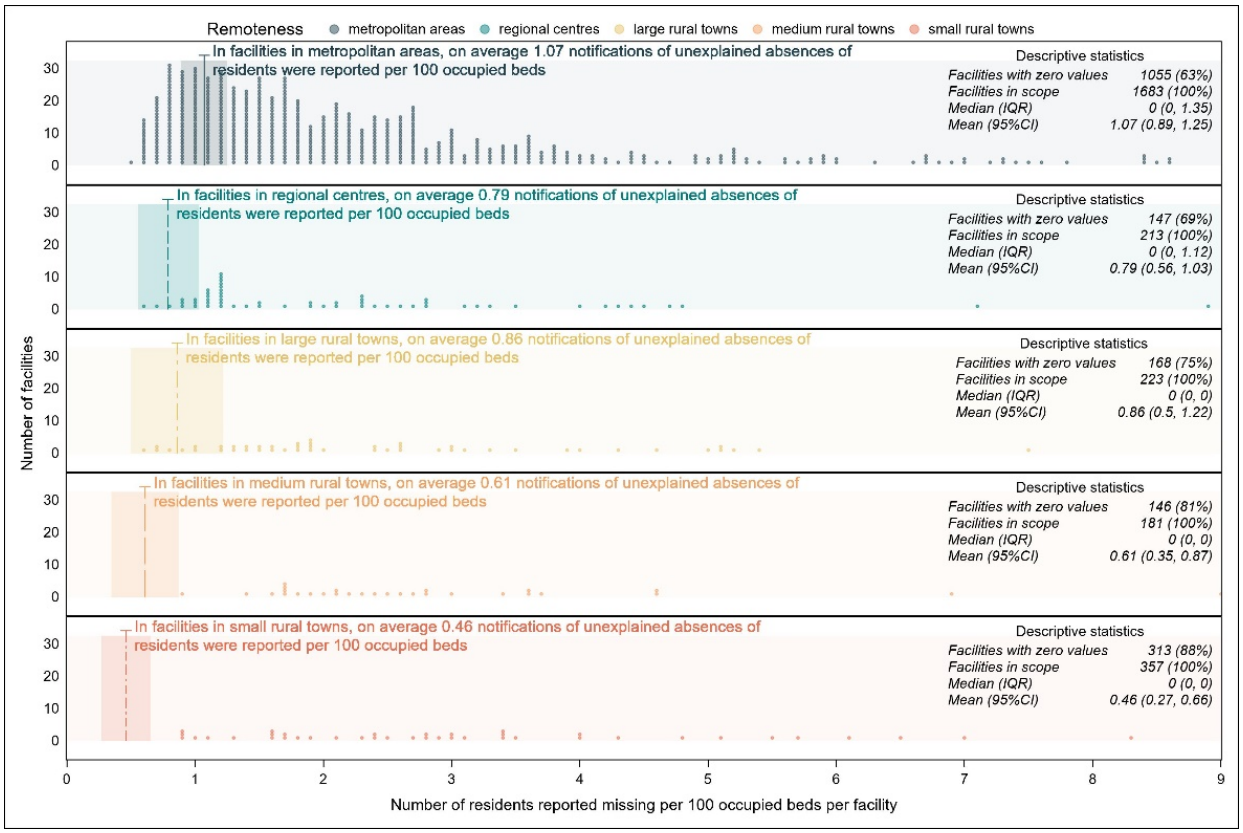


Missing residents

A resident is considered missing when they are absent and the facility is unaware of any reasons for the absence.

In the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 46. Number of residents reported missing per 100 occupied beds per facility by remoteness



Appendices

Appendix 1—Key definitions

Unless otherwise stated, an **occupied bed** is 365 days of residential care for which an Australia government subsidy was claimed. The term occupied bed is used rather than 'residents' as a way of acknowledging that people enter and leave residential care over the course of a year.

The **Occupancy rate**[15] is the percentage of available beds which have been occupied over the year– e.g. if in a non-leap year an Australia government subsidy was claimed for 50,000 days of residential care in a facility with 152 available beds, the occupancy rate = 50,000/(365*152) = 90.12%.

2018/2019 financial year refers to the financial year from 1 July 2018 to 30 June 2019.

2016/2017 financial year refers to the financial year from 1 July 2016 to 30 June 2017.

[15] This is the AIHW definition of occupancy rate used for hospitals and facilities with low occupancy have been excluded. The Department of Health uses a different definition of occupancy rate incorporating changes in numbers of operational places at a facility during the reporting period, and recommended not excluding facilities on the basis of low occupancy rates.

Appendix 2—Indicator calculation

ROSA outcome monitoring indicators

The case-mix adjusted rate of the ROSA Outcome Monitoring Indicators were provided at individual facility level.

Facilities where the number of residents was less than five were removed to avoid unreliable variations in data caused by small denominators.

Each of the indicator specifications is explained in full in the ROSA Outcome Monitoring System which can be found on the publications page of the ROSA website or in the *International Journal of Quality Health Care*.

National Mandatory Quality Indicators

Weight loss

The rate of unplanned weight loss for an individual facility was derived by dividing the number of residents who had unplanned weight loss over three consecutive months by the number of residents whose weight was monitored.

The rate of significant unplanned weight loss for an individual facility was derived by dividing the number of residents who had total unplanned weight loss equal to or greater than 3kg by the number of residents whose weight was monitored.

Facilities where the number of residents whose weight was monitored was less than five were removed to avoid unreliable variations in data caused by small denominators. In addition the weight loss data was cleaned to remove probable data entry errors by removing facilities where the number of weight loss instances was equal to or greater than the number of residents monitored or where the difference between the number of residents whose weight was monitored for significant weight loss and unplanned weight loss was greater than ten. Theoretically the number of residents monitored for unplanned and significant weight loss should be similar.

Pressure injuries

The proportions of each pressure injury category for an individual facility was derived by dividing the count of pressure injuries for that category divided by the number of residents assessed.

Facilities where the number of residents who were assessed for pressure injuries was less than five were removed to avoid unreliable variations in data caused by small denominators.

Physical restraint

The proportions of intent to restrain for an individual facility was derived by dividing the average of the three observation day's intent to restrain incidence count by the number of occupied beds for the facility. An occupied bed is 365 days of residential care for which an Australian government subsidy was claimed, using the 90 day facility claim days supplied with the data. The term occupied bed is used rather than 'residents' as a way of acknowledging that people enter and leave residential care over the course of a year.

The proportions of physical restraint use for an individual facility was derived by dividing the average of the three observation day's physical restraint device count by the number of occupied beds for the facility. An occupied bed is 365 days of residential care for which an Australia

government subsidy was claimed, using the 90 day facility claim days supplied with the data. The term occupied bed is used rather than 'residents' as a way of acknowledging that people enter and leave residential care over the course of a year.

Facilities where use of physical restraint data was not provided were excluded.

Complaints/issues

The rate of complaints or issues for an individual facility was derived by dividing the number of complaints/issues reported to the ACQSC about a facility by the occupied beds for the facility. An occupied bed is 365 days of residential care for which an Australia government subsidy was claimed. The term occupied bed is used rather than 'residents' as a way of acknowledging that people enter and leave residential care over the course of a year.

No additional exclusions were applied to this dataset.

Consumer experience interview

The rate of ‘some of the time’ or ‘never’ responses to the consumer experience questions for an individual facility was derived by dividing the sum of the ‘some of the time’ or ‘never’ responses by the sum of total responses less the number of non-responses.

Compliance indicators

The rate of individual facilities who had a not met outcome against an aged care standard was derived by dividing the number of not met outcomes against aged care standards in facilities who were audited in an unannounced visit by the number of facilities who were audited in an unannounced visit.

The rate of individual facilities who did not meet an aged care standard that placed or may place residents at serious risk was derived by dividing the number of not met outcomes against the aged care standards that placed or may place residents at serious risk in facilities who were audited in an unannounced visit by the number of facilities who were audited in an unannounced visit.

Compliance activity conducted as part of announced visits were excluded from this dataset.

Workforce indicators

The staff minutes per resident per day for individual facilities was derived by dividing the total number of paid staff minutes worked in that facility for the year by the number of resident bed days for the facility in the year. In this case the bed days for the 2018/19 financial year reported by the aged care facility was used.

Paid work included normal hours, overtime hours, contract hours and agency hours. Training and all forms of leave were excluded.

Outliers were identified using the Interquartile Rule and validated using the following three checks:

1. Bed days reported by the aged care facility in the workforce data were checked against the bed days recorded by the Department of Health. A difference of more than 10% resulted in removal of the data;

2. Occupancy rates were calculated using the bed days reported by the aged care facility in the workforce data. Any occupancy rates below 10% or above 100% resulted in removal of the data;

3. Variation in reported hours worked of more than 20% with the prior year resulted in removal of the data. Hours worked not reported in the previous year resulted in removal of the data.

The remaining outliers were from a mix of providers and sourced from both the StewartBrown Aged Care Financial Performance Survey (approximately 33%) and the data compelled from providers by the Royal Commission (approximately 66%). As such the remaining outliers were considered to be acceptable and were included.

The interquartile rule to find outliers was to multiply the interquartile range (IQR) by 1.5 and add to the third quartile (any number greater than this was a suspected upper outlier) and subtract 1.5 x (IQR) from the first quartile (any number less than this was a suspected lower outlier).

Compulsory reporting indicators

The rate of assaults and missing persons for an individual facility was derived by dividing the total number of assaults/missing persons reported by a facility to the Department of Health by the occupied beds for the facility. An occupied bed is 365 days of residential care for which an Australia government subsidy was claimed. The term occupied bed is used rather than 'residents' as a way of acknowledging that people enter and leave residential care over the course of a year.

Appendix 3—Results of the statistical significance tests

The tables below shows results of the statistical significance test of the difference between the groups of facilities and post-hoc analyses outcomes.

Quality and Safety Indicator	Mean Score					Kruskal-Wallis Test		Dwass, Steel, Critchlow-Fligner Method (DSCF)							
								metropolitan areas vs. regional centres		metropolitan areas vs. large rural towns		metropolitan areas vs. medium rural towns		metropolitan areas vs. small rural towns	
	Metro politan areas	regional centres	large rural towns	medium rural towns	small rural towns	Chi-Square	Pr > ChiSq	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF
Complaints	1383.1	1356.1	1387.0	1264.5	1054.2	59.01	<.0001	0.75	0.9846	0.07	1.0000	2.86	0.2541	10.52	<.0001
Issues	1390.3	1358.3	1393.9	1238.3	1028.0	72.62	<.0001	0.89	0.9709	0.06	1.0000	3.70	0.0675	11.55	<.0001
Issues – Health Care	1380.9	1400.4	1389.1	1238.9	1050.2	71.48	<.0001	0.56	0.9949	0.26	0.9997	3.61	0.0799	11.42	<.0001
Issues – Personal Care	1373.6	1308.2	1348.3	1254.5	1157.0	40.20	<.0001	2.01	0.6161	0.77	0.9827	3.41	0.1114	8.53	<.0001
Issues - Consultation and Communication	1371.6	1332.4	1380.1	1246.8	1135.7	47.23	<.0001	1.19	0.9184	0.23	0.9999	3.56	0.0872	9.18	<.0001
Issues – Personnel	1360.0	1363.9	1399.5	1295.2	1135.3	41.54	<.0001	0.14	1.0000	1.29	0.8926	1.80	0.7070	8.76	<.0001
Issues – Physical Environment	1366.4	1324.2	1356.9	1259.5	1173.5	35.86	<.0001	1.35	0.8760	0.32	0.9994	3.23	0.1504	8.05	<.0001
Issues –Abuse	1344.4	1320.9	1348.9	1354.7	1235.8	17.17	0.0018	0.95	0.9631	0.23	0.9999	0.42	0.9983	5.75	0.0005
Issues – Choice and Dignity	1354.0	1339.3	1333.6	1292.3	1220.6	18.05	0.0012	0.50	0.9966	0.70	0.9877	1.96	0.6390	5.85	0.0003
Issues – Client Assessment and Service Implementation	1358.7	1324.1	1364.0	1252.7	1208.5	27.39	<.0001	1.22	0.9102	0.22	0.9999	3.45	0.1050	6.71	<.0001
Issues – Financial matters	1359.9	1285.9	1340.4	1319.3	1206.7	31.17	<.0001	2.85	0.2597	0.74	0.9848	1.42	0.8539	7.57	<.0001
Issues – Food and Catering	1362.2	1362.9	1336.5	1211.1	1207.4	33.30	<.0001	0.02	1.0000	0.87	0.9730	4.89	0.0050	6.83	<.0001
Issues – Goods and Equipment	1345.8	1304.8	1368.5	1300.8	1253.6	21.71	0.0002	2.01	0.6129	1.16	0.9254	2.05	0.5967	5.91	0.0003
Issues – Personal Property	1340.7	1310.1	1356.0	1351.9	1256.4	15.12	0.0045	1.46	0.8415	0.74	0.9853	0.50	0.9965	5.15	0.0025
Unplanned weight loss	1074.6	1118.5	1032.3	1080.1	885.8	23.78	<.0001	1.32	0.8828	1.29	0.8922	0.20	0.9999	6.55	<.0001
Significant weight loss	1067.4	1142.3	1107.5	1034.8	887.0	25.42	<.0001	2.24	0.5096	1.22	0.9094	0.85	0.9750	6.30	<.0001
Stage 1 pressure injuries	1234.0	1218.8	1279.0	1235.4	1189.4	2.12	0.7132	0.40	0.9986	1.29	0.8935	0.05	1.0000	1.47	0.8375
Stage 2 pressure injuries	1250.5	1215.5	1267.1	1175.6	1149.2	6.91	0.1405	0.95	0.9627	0.45	0.9978	1.92	0.6552	3.15	0.1705
Stage 3 pressure injuries	1253.1	1203.3	1225.5	1216.7	1145.2	11.10	0.0254	1.72	0.7438	0.98	0.9575	1.15	0.9266	4.50	0.0128
Stage 4 pressure injuries	1236.3	1238.1	1262.2	1237.1	1171.0	10.85	0.0283	0.10	1.0000	1.40	0.8589	0.04	1.0000	4.27	0.0214
Suspected deep tissue injury	1234.2	1200.2	1274.3	1267.5	1173.0	13.57	0.0088	1.74	0.7336	2.08	0.583	1.57	0.8009	3.83	0.0530
Unstageable pressure injuries	1268.6	1214.1	1196.6	1173.2	1095.1	39.59	<.0001	2.09	0.5747	2.86	0.2553	3.39	0.1164	8.12	<.0001
Total pressure injuries	1225.6	1203.2	1295.7	1247.8	1230.6	2.24	0.6926	0.58	0.9941	1.94	0.6473	0.55	0.9953	0.13	1.0000
Intent to restrain	1256.3	1357.7	1221.9	1251.3	1151.8	13.06	0.0110	2.96	0.2226	1.06	0.9445	0.12	1.0000	3.69	0.0692

Quality and Safety Indicator	Mean Score					Kruskal-Wallis Test		Dwass, Steel, Critchlow-Fligner Method (DSCF)							
								metropolitan areas vs. regional centres		metropolitan areas vs. large rural towns		metropolitan areas vs. medium rural towns		metropolitan areas vs. small rural towns	
	Metro politan areas	regional centres	large rural towns	medium rural towns	small rural towns	Chi-Square	Pr > ChiSq	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF
Physical restraint	1244.2	1309.2	1255.2	1313.8	1190.1	5.08	0.2787	1.76	0.7236	0.31	0.9995	1.78	0.7178	1.79	0.7107
Number of reported assaults	1405.4	1300.5	1259.6	1266.3	1060.9	67.11	<.0001	2.82	0.2699	3.97	0.0403	3.32	0.1296	11.00	<.0001
Number of residents reported missing	1405.2	1322.5	1253.6	1188.8	1091.9	87.40	<.0001	2.45	0.4134	4.54	0.0115	5.91	0.0003	11.89	<.0001
Antipsychotic use	1318.2	1222.8	1401.5	1259.9	1205.1	13.39	0.0095	2.47	0.4047	2.26	0.4964	1.42	0.8544	3.68	0.0701
Chronic opioid use*	27.54	29.54	33.90	33.57	32.50	42.95	<.0001	-	0.0417	-	<.0001	-	<.0001	-	<.0001
High sedative load	1313.6	1248.7	1432.2	1333.5	1154.5	22.13	0.0002	1.68	0.7604	2.97	0.2189	0.49	0.9969	5.03	0.0034
Delirium and/or dementia	1015.1	876.0	846.3	734.2	635.8	145.60	<.0001	3.36	0.1226	6.03	0.0002	8.73	<.0001	14.96	<.0001
Emergency Department readmission – long-term residents	903.1	758.0	845.0	729.9	711.5	37.49	<.0001	3.45	0.1056	2.16	0.5439	5.37	0.0014	6.73	<.0001
Emergency Department readmission –short-term residents	659.6	525.0	545.6	499.0	557.4	33.02	<.0001	3.86	0.0498	4.82	0.0058	5.76	0.0004	3.45	0.1049
Falls	1025.3	776.9	849.5	744.3	684.8	123.22	<.0001	5.77	0.0004	6.23	0.0001	8.55	<.0001	12.99	<.0001
Fractures	975.4	899.1	913.7	905.1	736.1	45.48	<.0001	1.71	0.7452	2.15	0.5479	2.10	0.5728	9.40	<.0001
Medication-related events	949.1	938.2	939.8	849.0	849.1	17.10	0.0018	0.30	0.9995	0.35	0.9992	3.68	0.0705	4.88	0.0051
Pressure injuries	1032.2	713.4	811.3	773.8	682.6	137.24	<.0001	7.48	<.0001	7.71	<.0001	7.99	<.0001	13.30	<.0001
Weight loss or malnutrition	1051.8	747.1	788.3	694.2	646.9	204.14	<.0001	7.24	<.0001	9.01	<.0001	11.20	<.0001	16.11	<.0001
Premature death	1302.9	1376.2	1424.8	1262.5	1178.1	24.12	<.0001	2.23	0.5124	3.79	0.0572	1.13	0.9300	4.89	0.0049
Respect	573.8	561.1	540.9	507.0	510.4	13.74	0.0082	0.62	0.9921	1.69	0.7536	3.34	0.1263	4.16	0.0271
Food	586.4	559.9	500.3	508.7	470.2	21.13	0.0003	1.02	0.9511	3.30	0.1349	2.92	0.2341	5.58	0.0008
Safety	581.8	499.7	541.9	518.4	498.0	28.32	<.0001	4.32	0.0190	2.14	0.5548	3.23	0.1507	5.69	0.0005
Well run	577.4	569.0	514.6	535.2	487.8	19.28	0.0007	0.46	0.9975	3.00	0.2095	1.93	0.6497	5.48	0.0010
Healthcare	581.4	533.5	557.3	508.9	477.0	27.10	<.0001	2.28	0.4883	1.21	0.9124	3.46	0.1037	6.55	<.0001
Independence	576.1	556.3	530.3	522.8	499.0	21.99	0.0002	1.14	0.9296	2.62	0.3447	2.93	0.2333	5.74	0.0005
Staff Competent	581.2	523.6	555.5	498.2	490.5	30.72	<.0001	3.07	0.1916	1.38	0.8664	4.34	0.0184	6.28	<.0001
Staff Explain	576.7	575.2	530.2	480.3	508.1	14.10	0.0070	0.11	1.0000	1.96	0.6384	3.91	0.0448	3.65	0.0741
Staff Care	578.4	582.0	519.5	491.0	496.2	22.76	0.0001	0.19	0.9999	2.86	0.2551	4.13	0.0290	5.07	0.0031
Staff Follow-up	582.3	530.5	538.2	480.7	500.5	17.18	0.0018	2.11	0.5681	1.87	0.6778	4.10	0.0304	4.25	0.0223
Nursing minutes	741.7	932.2	707.1	748.9	961.5	47.81	<.0001	6.99	<.0001	1.33	0.8824	0.02	1.0000	7.28	<.0001
Personal Care workers	756.4	683.7	815.2	777.7	798.0	7.33	0.1196	2.60	0.3525	2.07	0.5845	0.58	0.9943	1.34	0.8782
Direct care staffing minutes	776.7	814.1	739.2	667.2	899.7	16.19	0.0028	1.29	0.8921	1.31	0.8878	3.13	0.1735	4.25	0.0223
Total staff minutes	750.5	852.7	762.5	763.0	946.6	26.29	<.0001	3.59	0.0826	0.41	0.9985	0.28	0.9996	6.65	<.0001

Table continued…

Quality and Safety Indicator	Dwass, Steel, Critchlow-Fligner Method (DSCF)											
	regional centres vs. large rural towns		regional centres vs. medium rural towns		regional centres vs. small rural towns		large rural towns vs. medium rural towns		large rural towns vs. small rural towns		medium rural towns vs. small rural towns	
	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF
Complaints	0.69	0.9888	1.74	0.7348	7.04	<.0001	2.29	0.4851	7.63	<.0001	4.74	0.0071
Issues	0.79	0.9811	2.31	0.4761	7.72	<.0001	3.01	0.2074	8.34	<.0001	5.03	0.0034
Issues – Health Care	0.20	0.9999	3.21	0.1537	8.75	<.0001	2.98	0.2179	8.58	<.0001	4.93	0.0045
Issues – Personal Care	0.99	0.9563	1.27	0.8982	4.72	0.0075	2.21	0.5197	5.79	0.0004	3.03	0.2028
Issues - Consultation and Communication	1.08	0.9405	1.97	0.6304	5.98	0.0002	3.11	0.1803	7.45	<.0001	3.57	0.0859
Issues – Personnel	0.85	0.9746	1.49	0.8309	6.62	<.0001	2.25	0.5050	7.37	<.0001	4.55	0.0114
Issues – Physical Environment	0.85	0.9749	1.61	0.7869	4.96	0.0042	2.39	0.4383	6.00	0.0002	2.81	0.2713
Issues –Abuse	0.88	0.9716	1.04	0.9484	3.59	0.0819	0.21	0.9999	4.51	0.0126	4.47	0.0137
Issues – Choice and Dignity	0.12	1.0000	1.17	0.9226	3.98	0.0393	1.07	0.9425	3.78	0.0580	2.29	0.4871
Issues – Client Assessment and Service Implementation	1.12	0.9330	2.00	0.6206	4.18	0.0261	2.94	0.2278	5.23	0.0020	1.62	0.7806
Issues – Financial matters	1.70	0.7507	1.02	0.9514	3.57	0.0848	0.60	0.9932	5.47	0.0010	4.47	0.0136
Issues – Food and Catering	0.66	0.9900	4.12	0.0295	5.25	0.0019	3.46	0.1037	4.41	0.0158	0.18	0.9999
Issues – Goods and Equipment	2.38	0.4439	0.18	0.9999	3.01	0.2068	2.39	0.4400	5.68	0.0006	2.67	0.3227
Issues – Personal Property	1.68	0.7588	1.44	0.8484	2.84	0.2619	0.11	1.0000	4.67	0.0086	4.27	0.0214
Unplanned weight loss	1.86	0.6797	0.76	0.9831	5.25	0.0019	0.99	0.9566	3.63	0.0766	4.21	0.0243
Significant weight loss	0.84	0.9760	2.10	0.5712	5.62	0.0007	1.54	0.8111	5.36	0.0014	3.15	0.1705
Stage 1 pressure injuries	1.18	0.9209	0.32	0.9994	0.62	0.9923	0.79	0.9813	1.89	0.6696	0.86	0.9736
Stage 2 pressure injuries	1.09	0.9397	0.80	0.9796	1.58	0.7969	1.70	0.752	2.73	0.3011	0.79	0.9807
Stage 3 pressure injuries	0.62	0.9926	0.33	0.9993	1.92	0.6551	0.22	0.9999	2.62	0.3439	2.12	0.5653
Stage 4 pressure injuries	0.89	0.9707	0.01	1.0000	3.48	0.1002	0.85	0.9746	4.53	0.0119	3.27	0.1410
Suspected deep tissue injury	2.80	0.2773	2.45	0.4148	1.47	0.8370	0.19	0.9999	4.58	0.0105	4.11	0.0299
Unstageable pressure injuries	0.58	0.9942	1.35	0.8754	5.13	0.0026	0.81	0.9789	4.54	0.0115	3.38	0.1189
Total pressure injuries	1.91	0.6611	0.87	0.9729	0.57	0.9945	0.91	0.9685	1.27	0.8972	0.33	0.9994
Intent to restrain	3.01	0.2079	2.17	0.5392	4.86	0.0054	0.61	0.9929	1.91	0.6614	2.31	0.4765
Physical restraint	1.09	0.9396	0.03	1.0000	2.48	0.4026	1.19	0.9180	1.49	0.8306	2.41	0.4297
Number of reported assaults	0.82	0.9784	0.68	0.9894	5.97	0.0002	0.14	1.0000	5.22	0.0021	4.52	0.0123
Number of residents reported missing	1.68	0.7595	3.22	0.1514	7.22	<.0001	1.63	0.7792	5.19	0.0022	2.96	0.2220
Antipsychotic use	3.52	0.0923	0.74	0.9854	0.58	0.9940	2.59	0.3535	4.01	0.0367	1.10	0.9369

Quality and Safety Indicator	Dwass, Steel, Critchlow-Fligner Method (DSCF)											
	regional centres vs. large rural towns		regional centres vs. medium rural towns		regional centres vs. small rural towns		large rural towns vs. medium rural towns		large rural towns vs. small rural towns		medium rural towns vs. small rural towns	
	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF	DSCF Value	Pr > DSCF
Chronic opioid use*	-	<.0001	-	0.0005	-	0.0045	-	0.9971	-	0.4476	-	0.7489
High sedative load	3.96	0.0412	1.51	0.8218	2.33	0.4676	2.12	0.5632	6.21	0.0001	3.87	0.0487
Delirium and/or dementia	0.70	0.9878	3.05	0.1966	6.58	<.0001	3.07	0.1916	7.80	<.0001	3.78	0.0575
Emergency Department readmission – long-term residents	1.87	0.6789	0.64	0.9911	1.65	0.7698	2.93	0.2310	4.00	0.0380	0.97	0.9599
Emergency Department readmission –short-term residents	0.43	0.9981	0.81	0.9789	0.43	0.9981	1.56	0.8035	0.11	1.0000	0.99	0.9562
Falls	1.58	0.7973	0.81	0.9794	2.60	0.3493	3.03	0.2015	5.60	0.0007	2.45	0.4121
Fractures	0.37	0.9989	0.09	1.0000	3.40	0.1140	0.23	0.9998	5.26	0.0019	4.36	0.0173
Medication-related events	0.07	1.0000	2.27	0.4919	2.61	0.3490	2.73	0.2994	3.34	0.1267	0.08	1.0000
Pressure injuries	2.05	0.5948	1.09	0.9399	1.91	0.6589	1.03	0.9505	4.91	0.0047	3.42	0.1113
Weight loss or malnutrition	0.74	0.9853	1.19	0.9169	3.67	0.0716	2.35	0.4589	5.27	0.0018	2.63	0.3405
Premature death	1.06	0.9440	2.28	0.4904	4.92	0.0045	3.20	0.1573	5.97	0.0002	2.05	0.5958
Respect	0.81	0.9794	2.25	0.5018	2.48	0.4029	1.52	0.8206	1.64	0.7748	0.09	1.0000
Food	1.70	0.7510	1.42	0.8533	2.97	0.2214	0.33	0.9993	1.03	0.9497	1.36	0.8728
Safety	2.14	0.5540	0.96	0.9604	0.23	0.9999	1.15	0.9262	2.77	0.2882	1.30	0.8889
Well run	2.19	0.5309	1.26	0.9002	3.98	0.0392	0.79	0.9808	1.48	0.8330	2.35	0.4600
Healthcare	0.97	0.9602	0.93	0.9656	3.00	0.2104	2.00	0.6193	4.24	0.0229	2.01	0.6116
Independence	1.27	0.8984	1.69	0.7547	3.83	0.0531	0.43	0.9982	2.30	0.4819	1.71	0.7453
Staff Competent	1.48	0.8339	1.37	0.8685	2.39	0.4387	2.77	0.2880	4.04	0.0349	0.75	0.9846
Staff Explain	1.48	0.8345	3.19	0.1586	2.48	0.4029	1.62	0.7809	0.89	0.9702	1.02	0.9518
Staff Care	2.34	0.4629	3.51	0.0945	3.86	0.0495	1.23	0.9069	1.31	0.8870	0.01	1.0000
Staff Follow-up	0.28	0.9997	1.56	0.8041	1.12	0.9320	1.91	0.6589	1.55	0.8078	0.57	0.9945
Nursing minutes	5.77	0.0004	3.34	0.1251	1.73	0.7358	0.67	0.9900	5.91	0.0003	3.74	0.0631
Personal Care workers	3.55	0.0887	2.10	0.5715	2.80	0.2756	0.88	0.9712	0.26	0.9997	0.43	0.9982
Direct care staffing minutes	1.99	0.6219	3.42	0.1105	2.23	0.5133	1.55	0.8094	3.90	0.0464	4.33	0.0189
Total staff minutes	2.40	0.4341	1.92	0.6532	2.62	0.3417	0.07	1.0000	4.67	0.0085	3.72	0.0647

Note: *Based on Shapiro-Wilk test, the distribution of this indicator is normal; the group differences were analysed by one-way ANOVA method; the results are correspondingly presented as least squared means instead of mean scores, F value and Pr>F value based on ANOVA test instead of Kruskal-Wallis Chi-square and Pr>ChiSq; and Tukey's post-hoc test p-value adjustment instead of DSCF results.

Appendix 4—Additional complaint issues

The following is a list of additional complaint issues that were not included in the main report as they are less frequent.

Issues – abuse

Abuse was one area raised in complaints about residential aged care. Issues relating to abuse include discrimination, financial, neglect, physical, psychological/emotional and verbal.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Figure 47. Number of abuse related issues reported per 100 occupied beds per facility by remoteness

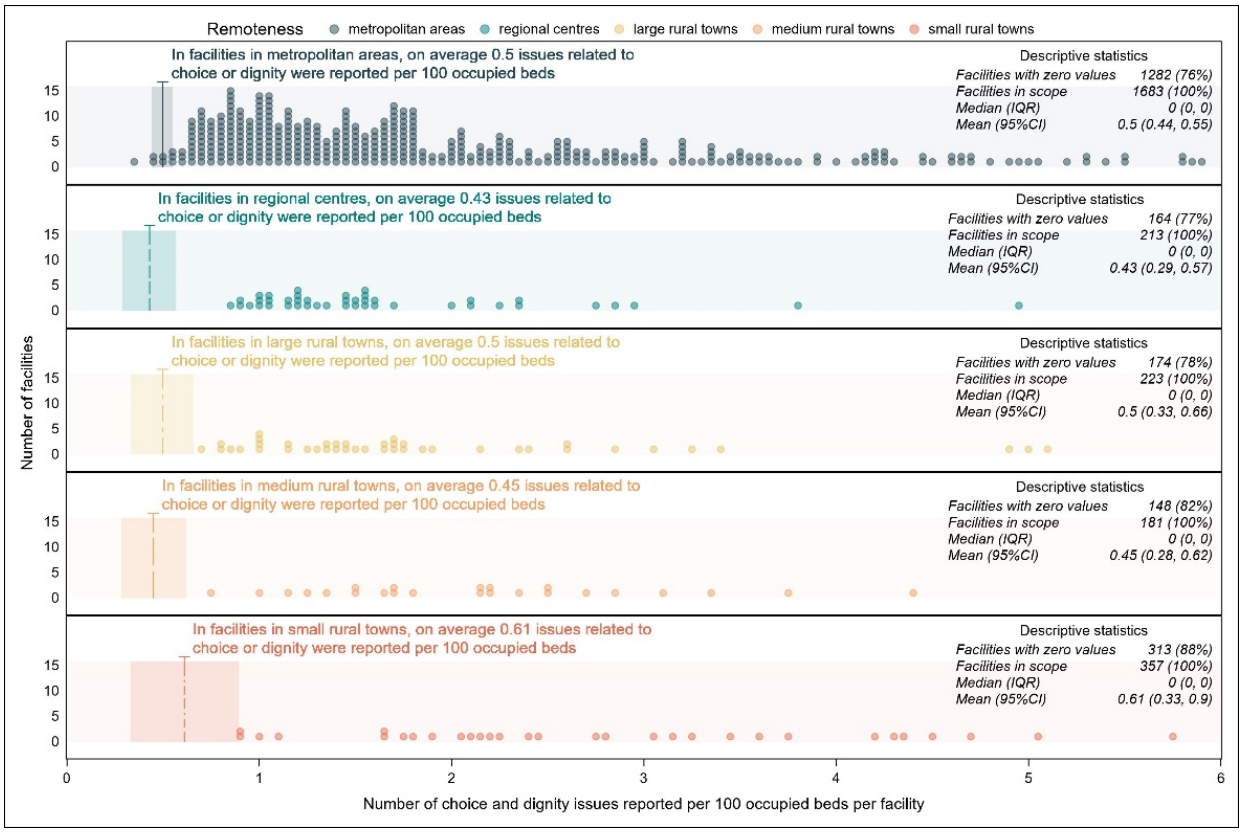
Issues – choice and dignity

Issues relating to choice and dignity include activities, consumer directed care, cultural and spiritual issues (other than food/diet), independence, privacy, right to refuse medication, routine and treatment/health care preferences.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 48. Number of choice and dignity issues reported per 100 occupied beds per facility by remoteness



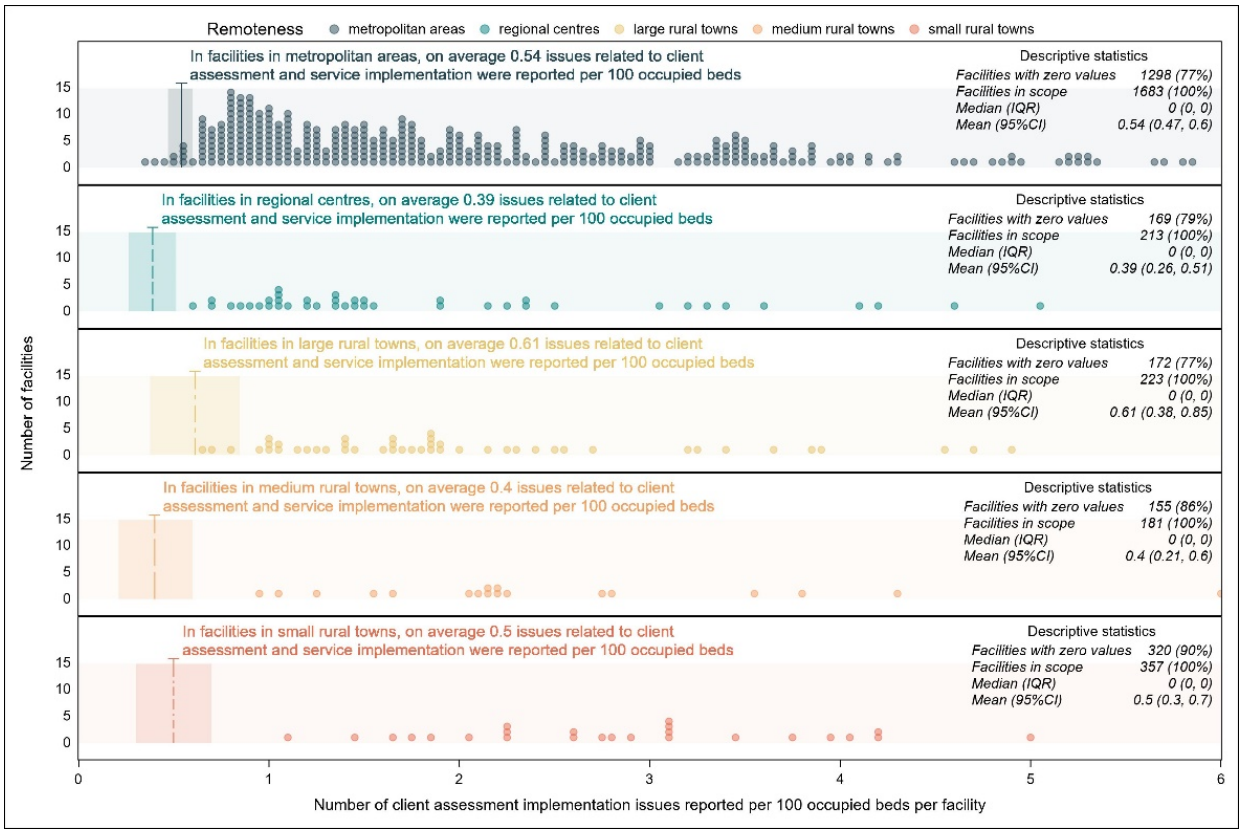
Issues – client assessment and service implementation

Issues raised in complaints relating to client assessment and service implementation include care planning, case management, change of clinical status/deterioration, consistent client care and coordination, obtaining medical assistance (acute/emergency episode), and polypharmacy review.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at $p<0.05$ level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 49. Number of client assessment and service implementation related issues reported per 100 occupied beds per facility by remoteness

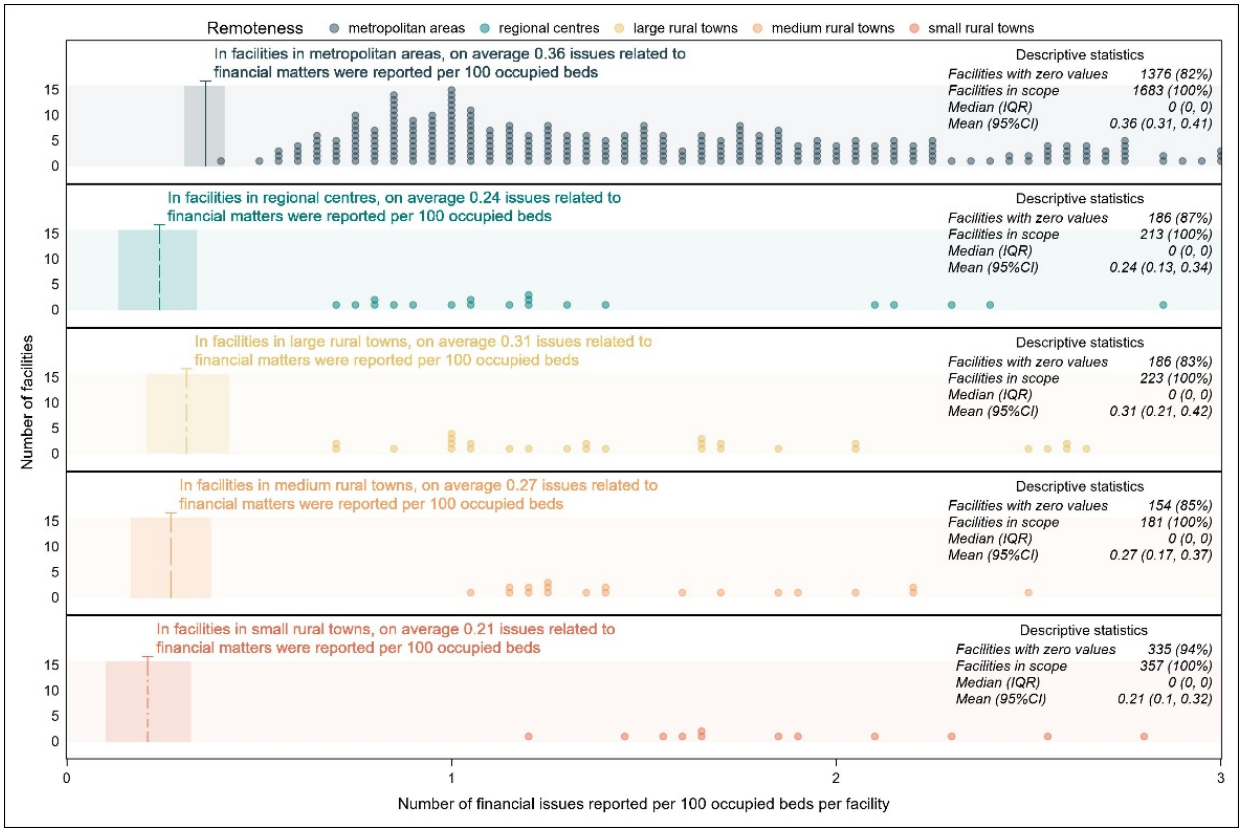


Issues – financial matters

Issues raised in complaints relating to financial matters include accommodation agreements, accommodation bonds, accommodation payments, communication about fees and charges, fees and charges, management of finances, reimbursements and statements.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 430. Number of financial related issues reported per 100 occupied beds per facility by remoteness



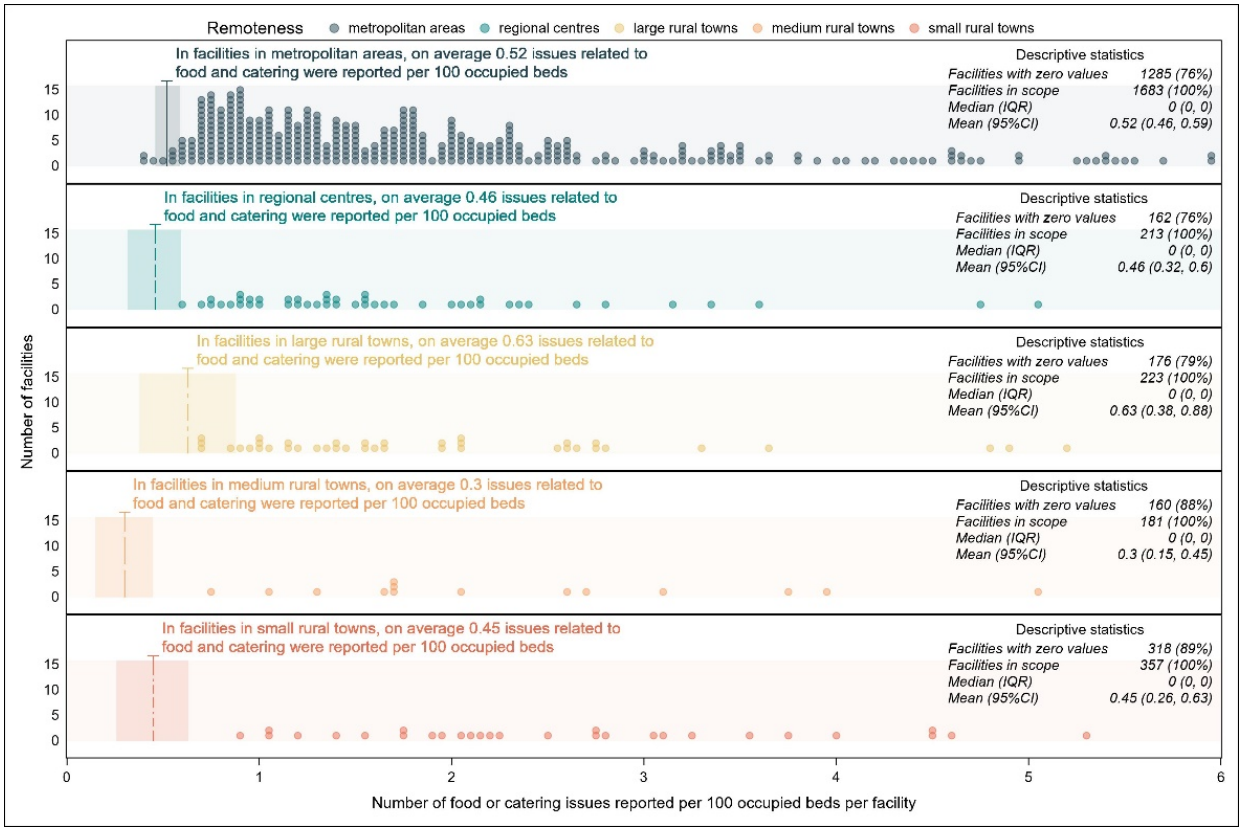
Issues – food and catering

Issues raised in complaints relating to food and catering include choice, quality and variety, quantity, specific diet (religion/culture/medical) and timing.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 441. Number of food and catering related issues reported per 100 occupied beds per facility by remoteness

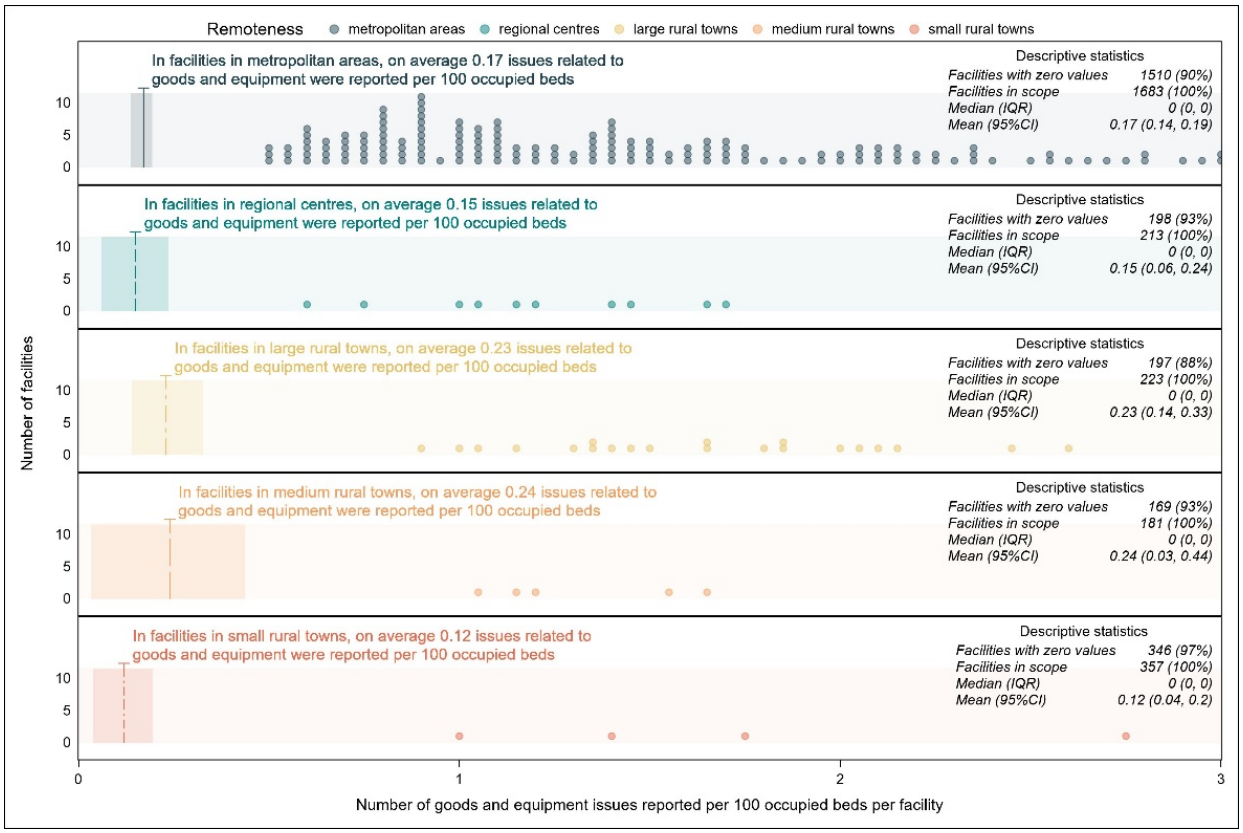


Issues – goods and equipment

Issues raised in complaints relating to goods and equipment include bedding and linen, furnishings, medical and pharmaceutical supplies and equipment, mobility aids, oxygen and oxygen equipment, self-care aids and toiletry goods.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Figure 452. Number of goods and equipment related issues reported per 100 occupied beds per facility by remoteness



Issues – personal property

Issues raised in complaints relating to personal property include access to personal property, home maintenance, home modifications, laundry, loss damage and theft and maintenance of personal items.

During the 2018/19 financial year, facilities in small rural towns on average showed the best result for this indicator, based on the Kruskal-Wallis test and post-hoc analysis of pairwise differences between the groups. However, the differences between facilities in small rural towns and facilities in other remoteness categories were not all significant at p<0.05 level (see Appendix 3 for more details).

Due to high skewness of the data, in particular the large proportion of facilities with 0 values, the mean is not a good measure of central tendency for this indicator.

Figure 463. Number of personal property related issues reported per 100 occupied beds per facility by remoteness