Australian Government

Australian Institute of Health and Welfare

Consumers' experience of residential aged care

Australia 2017–19

AIHW

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Australian Institute of Health and Welfare

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Contents

Summary

Consumers themselves have identified their experience with residential aged care as critical to support informed choice (COTA Australia 2018). Since 2017, the former Australian Aged Care Quality Agency (AACQA) and its successor, the Aged Care Quality and Safety Commission (the Commission), have conducted consumer experience surveys of residents in residential aged care services (RACSs), in conjunction with regulatory audits. Survey results for each service are published on the Commission's website (ACQSC 2019d).

This report summarises the combined 2017–18 and 2018–19 survey results and, through analysis, seeks to identify factors associated with positive responses.

The surveys asked aged care residents to describe their experiences across 10 domains that are of relevance to the experience of residential aged care. The domains were identified through research commissioned by the AACQA (Jeon & Forsyth 2016; Wells et al. 2017):

- Firstly, residents were asked whether, from their perspective:

  Q1.   Do staff treat you with respect?

  Q2.   Do you feel safe here?

  Q3.   Do staff meet your healthcare needs?

  Q4.   Do staff follow up when you raise things with them?

  Q5.   Do staff explain things to you?

  Q6.   Do you like the food here?

- Secondly, residents were asked whether they agreed with these statements:

  Q7.   If I'm feeling a bit sad or worried, there are staff here who I can talk to

  Q8.   The staff know what they are doing

  Q9.   This place is well run

  Q10.   I am encouraged to do as much as possible for myself.

Residents were also asked to nominate the 'best thing' about their home and to make a suggestion for improvement. This information is not included in this report.

A range of response categories gave some dimension to the residents' experiences. Residents selected answers offered both in words and in images depicting 'grumpy' through to 'smiley' faces. For Q1 to Q6, no 'neutral' response was offered, reducing the number of possible responses to 4.

In this report, the analysis was simplified to focus on whether or not the experience is positive—responding either 'Most of the time' or 'Always' to the first group of 6 questions listed above, or 'Agree' or 'Strongly agree' to the 4 statements in the second group. These combined response categories are described throughout this report as 'positive responses' (the combination of green and blue smiley face responses).

The results indicate that survey respondents have a generally positive view of their experience in residential aged care. Overall, positive responses were given by the majority of respondents for each of the questions asked—for instance, for question 2 ('Do you feel safe here?'), 98% felt safe either 'All the time' or 'Most of the time'. Similar proportions of positive responses were given for questions that asked if staff treated respondents with respect (Q1), and met their healthcare needs (Q3). Even for those questions drawing the lowest levels of positive responses—having staff to explain things (Q5) and liking the food (Q6)—the proportions of respondents reporting those experiences were 80% and 85%, respectively. Two of the response distributions are illustrated here—the rest can be seen on GEN (https://www.gen-agedcaredata.gov.au/Topics/Quality-in-aged-care).
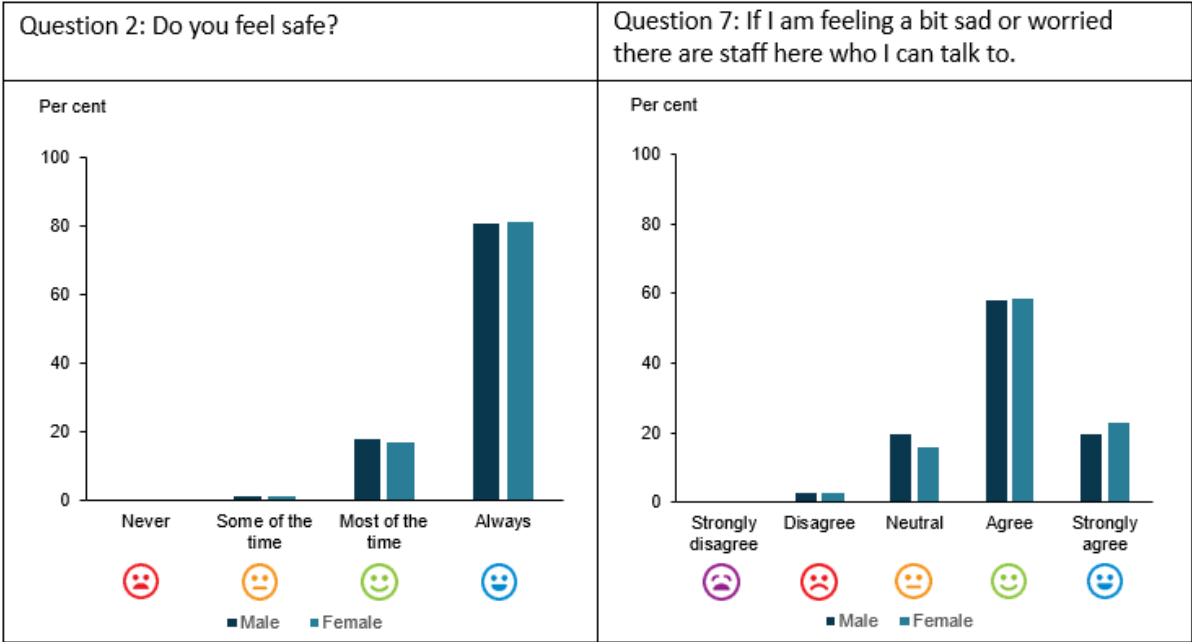
The following graph depicts the percentage of positive responses to all questions, making it easier to compare them. The closer the dark line is to the outer boundary of the 'web', the higher the percentage of positive responses for each question.

Proportion of positive responses to questions 1–10 for all respondents
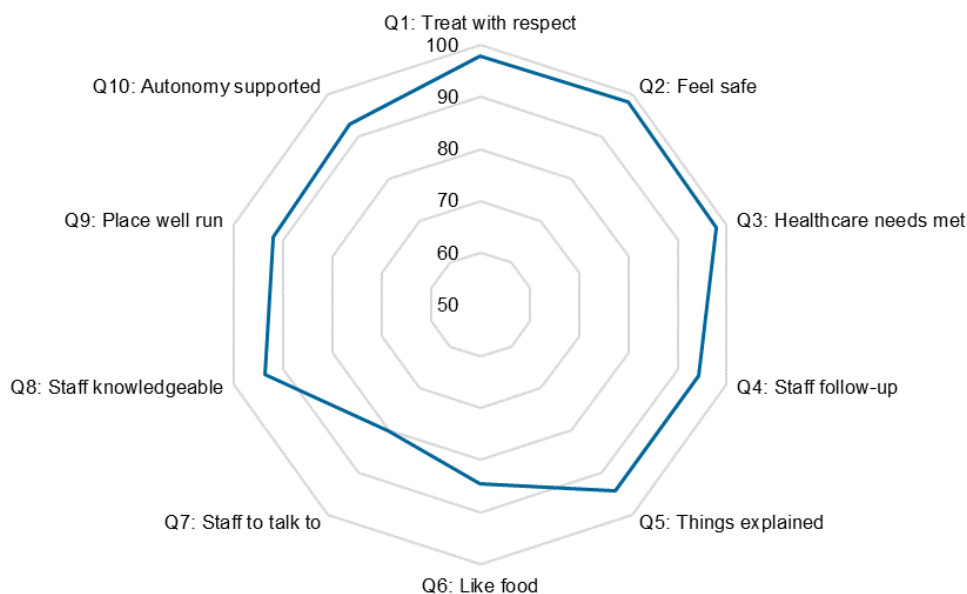
Key findings

Chapter 3 and GEN (https://www.gen-agedcaredata.gov.au/Topics/Quality-in-aged-care) display more charts which compare responses across respondent characteristics (for example, sex and mobility status), characteristics of the RACS resident group (for example, proportion born in English-speaking countries) and RACS characteristics (for example, size and organisation type).

The sex of respondents made little difference to the proportion of positive responses; however, restricted respondent mobility, a lower proportion of RACS residents born in English-speaking countries, larger service size, and private organisation type, were all associated with lower proportions of positive responses to survey questions, as was respondent type, when answers were provided by a proxy.

Chapter 4 presents results from logistic regression modelling that explores associations between the levels of positive response and personal, RACS resident and RACS-level characteristics and allows for the control of the possible confounding effects of these variables. This analysis generally supports results from the descriptive analyses in Chapter 3. For example, after controlling for the effects of other variables, the proportion of residents born in English-speaking countries was the factor most associated with positive reporting of consumer experience across questions: more positive responses were given by respondents in RACSs that had higher proportions of such residents. Service size and organisation type were also associated with positive responses in the models: For these factors respondents in smaller services or those operated by not-for-profit organisations were those more likely to report more positively than those in larger or privately-operated RACSs. The mobility status of respondents, which in the descriptive analysis was associated with the proportion of positive responses, was not included in the regression analysis as reliable data for this were not available for 2018–19.

The methods and sampling arrangements are described in Chapter 2. Note that although a random sample (10%) of respondents was drawn at each RACS during regulatory audits, the

selection of services was not random: inclusion depended on the program of regulatory audits being conducted by the Commission and its predecessor. While this could indicate potential for biased results, some confidence can be drawn from the fact that 2,070 RACSs were audited during the period covered by this report—over 75% of all RACSs—and the profile of the selected RACSs contributing to the data for the consumer experience report aligned well with that of the residential aged care sector more broadly.

1   Introduction

There is increasing focus on the quality of aged care services as the population of older Australians grows. In Australia, on 30 June 2018, around 187,000 people used residential aged care (permanent or respite) (AIHW 2017). Residential aged care supports people who need help with daily tasks or healthcare and can no longer live at home. Care was delivered by nearly 2,700 services, which were operated by just under 890 provider organisations. The government contributed over $12 billion in 2017–18 to provide this care (Department of Health 2018).

Aged Care Quality and Safety Commission

An important dimension to the provision of aged care is its quality. Recognising a need to improve quality regulation, the Australian Government passed key legislation in 2018 to establish the Aged Care Quality and Safety Commission (the Commission), with a mandate to monitor and regulate the Australian aged care sector.

Following this initiative, a new set of 8 Aged Care Quality Standards became effective in July 2019. A consumer-centred approach was taken to emphasise consumers' care and respect for their lives, the need to provide services within safe and comfortable environments, and the quality of providers' service management. The Commission has outlined these standards in more detail (see ACQSC 2019a) and they have been widely publicised for consumers and service providers. However, the results presented in this report relate to 2017 and 2018, when a previous set of Accreditation Standards were in operation (ACQSC 2019b).

One of the Commission's key roles since its inception in January 2019 is 'to protect and enhance the safety, health, wellbeing and quality of life for aged care consumers', which it delivers through its monitoring and regulatory functions, through education and engagement with service providers and consumers and the resolution of complaints (ACQSC 2019c).

To identify where consumer risk may be increased, the Commission uses a range of performance data, including feedback from users of aged care services (information on complaints and consumer experience), compliance histories, and the broader characteristics and performance of providers and services.

Data on aged care consumer experience are routinely collected during service audits, with summary reports for each service being publicly available (ACQSC 2019d). These audits may occur as part of the triennial accreditation process, or at other times when increased risks may be indicated.

Consumer experience

Previous research commissioned by one of the Commission's predecessors (the Australian Aged Care Quality Agency, or AACQA) identified 3 dimensions of quality in residential aged care of most importance for consumers: aspects of the care environment (social, physical, functional), organisational aspects of care provision, and respect and autonomy (Jeon & Forsyth 2016).

Based on this information, the consumer experience report (CER) was designed as a standardised set of 10 questions to obtain consumer feedback on the quality of the care respondents were receiving in residential aged care services (RACSs) (Wells & Solly 2018).

Since its inception, the Commission has continued to use the CER questionnaire as part of its service audit procedures.

The CER results obtained by the AACQA for 2017–18 were reported in late 2018 (Wells & Solly 2018). That report identified the general pattern of responses for each question as well as how the results across the questions varied together; and the effects of respondent sex, mobility and the presence of dementia. Some modelling was also used to identify the effect of these variables and service size (small, medium, large) together.

For this new report, the CER analysis has been extended in 2 directions. First, CER data obtained for the financial year 2018–19 have been added to the original 2017–18 data set to provide 2 years of data. Second, the RACSs identified in the data set have been further characterised by the type of organisation providing the service, by service size (number of residents) and remoteness level, and by characteristics of their resident populations. These characteristics have been derived from data obtained from the National Aged Care Data Clearinghouse (NACDC) and provide new insight into the factors that affect consumer experiences.

Report structure

The report has 3 parts:

1. context and background (this chapter), and a summary of the methods and measures used (Chapter 2)

2. results obtained from the analysis. Raw descriptive results are presented in Chapter 3, and results from a regression model, where the confounding effect of variables is taken into account, are presented in Chapter 4

3. interpretation and implications of the new results (Chapters 5 and 6).

Appendixes provide further information about the CER questions (Appendix A), detailed methods (Appendix B) and detailed results (Appendixes C and D).

The complete set of CER results are available in the supplementary material.

2 Methods and measures

Data sources

CER data set

The need for a standard report on consumer experience in RACSs led the former AACQA to commission research into the quality of aged care and services in 2016 (Jeon & Forsyth 2016; Wells et al. 2017). Three dimensions of quality in residential aged care were identified by Jeon and Forsyth as being of most importance for consumers: aspects of the care environment (social, physical, functional), organisational aspects of care provision, and respect for and autonomy of the consumer.

Based on these initial findings, a standard set of 10 questions was derived, designed to obtain consumer feedback on the quality of care and the service provider. Testing and validation of this set of questions led to acceptance of the CER (Wells & Solly 2018) and its subsequent use in RACS audits—by the AACQA initially, and then the Commission. The questions included in the CER are shown in Box 2.1. Further details on the CER questions and the method of sampling residents and selecting services for audit are provided in appendixes A and B.

Box 2.1: CER questions

The following are the 10 questions included in the CER, with each followed by a short form in brackets. For brevity, these short forms are used when referencing these questions throughout this report.

Q1. Do staff treat you with respect? (Treat with respect)

Q2. Do you feel safe here? (Feel safe)

Q3. Do staff meet your healthcare needs? (Healthcare needs met)

Q4. Do staff follow up when you raise things with them? (Staff follow up)

Q5. Do staff explain things to you? (Things explained)

Q6. Do you like the food here? (Like food)

Q7. If I'm feeling a bit sad or worried, there are staff here who I can talk to. (Staff to talk to)

Q8. The staff know what they are doing. (Staff knowledgeable)

Q9. This place is well run. (Place well run)

Q10. I am encouraged to do as much as possible for myself. (Autonomy supported)

Response categories for the CER questions listed in Box 2.1 are on a 4- or 5-point scale. Survey respondents selected answers offered both in words and in illustrations depicting 'grumpy' through to 'smiley' faces.

To facilitate the analysis and presentation of results, and following previous work (Wells & Solly 2018), the CER questionnaire data are generally presented as binary outcomes (Box 2.2).

Box 2.2: Analysis and presentation of questionnaire response data

Most analyses in this report summarise reported consumer experience as either positive or other (comprising 'Neutral', where offered, and negative) responses. The analysis focused on the proportion of 'positive responses' by respondents.

For questions 1–6, for which a 5-point scale applied, positive responses were defined as 'Most of the time' or 'Always' responses.

For questions 7–10, for which a 4-point scale applied, positive responses were defined as 'Agree' or 'Strongly agree' responses.

For pictorial representations, 'positive responses' were defined as a combination of green and blue 'smiley face' responses.

NACDC data

The NACDC, established at the Australian Institute of Health and Welfare (AIHW) in 2013, is the central, independent repository of national aged care data in Australia. It houses person-level activity data from 1997 onwards, largely relating to government-funded aged care programs operating under the *Aged Care Act 1997* (Cwlth).

In March 2019, the AIHW Ethics Committee approved the linkage of NACDC data to the RACSs identified in the CER data set.

Group data relating to the 2,070 RACSs as at 30 June 2018 and representing over 142,000 aged care residents in these services, were extracted from the NACDC. (No particular CER respondent can be linked to any of these unidentified residents, with the extracted data being used only to characterise the RACS itself or the mix of its resident group.)

Most residents occupied permanent places within a RACS, but about 3% of residents in aged care receive respite care (Department of Health 2018). The Commission's assessment procedures do not distinguish between permanent and respite care residents. Therefore, the extracted NACDC data for each RACS were based on the total resident group, without reference to their permanent/respite status.

From these data, 6 characteristics of the RACS resident groups were defined for use in the CER analysis:

- the proportion of men who were residents in each service (RACS male proportion). Previous work identified an effect of respondent sex on CER responses (Wells & Solly 2018)

- the proportion of residents born in an English-speaking country (RACS English-speaking country proportion). This statistic provides a first-level indicator of possible communication difficulties
- the proportion of residents with high scores on the Aged Care Funding Instrument (ACFI) (RACS ACFI high care proportion), which indicates the care level requirements of each RACS
- the presence of Alzheimer disease (RACS Alzheimer prevalence), restricted mobility (RACS mobility proportion) or pain (RACS pain prevalence), with each of these characteristics derived from ACFI data, as a proportion of the resident group. Mobility was identified as a statistically significant factor associated with positive response in previous work (Wells & Solly 2018).

For each of these 6 characteristics, the calculated values were sorted into 3 equally sized groups (or tertiles) for analysing the CER results. These groups are referred to as the lower, medium and higher proportion groups for each characteristic. Further detail on the definition of these groups is provided in Appendix B.

Two further measures were derived from the NACDC data for use in the CER analysis:

- RACS Indigenous status: where the proportion of Aboriginal and Torres Strait Islander residents was more than 50% (*Note:* This definition is also used elsewhere to identify RACSs for this population—see AIHW 2018b.)
- RACS remoteness: defined by the Australian Bureau of Statistics as a 5-level variable to measure relative access to services (ABS 2018). The scale encompasses *Major cities*, through *Inner regional* and *Outer regional* areas, to *Remote* and *Very remote* areas. To accommodate the small number of services in remote areas, the scale was reduced to *Major cities*, and for regional and remote areas.

Methods

Between 1 July 2017 and 30 June 2019, as part of the regulatory work of the former AACQA and the Commission, CER data were collected from a random sample of residents in each of the 2,070 RACSs being audited. This represented over 75% of the 2,700 RACSs operating nationally as at 30 June 2018.

During these 2 years, nearly 31,500 residents (hereafter referred to as respondents) were interviewed (in 12% of cases, a respondent's representative, or proxy, was interviewed); of these, 65% were women. Other personal information was collected on the presence of dementia (29% of respondents) and restricted mobility (22%); however only 2017–18 data were used in the analysis of these characteristics due to data quality issues.

Chapter 3 presents descriptive statistics using CER data (with the addition of NACDC-derived variables) to examine the extent to which positive responses vary for each of the personal and organisational variables in isolation.

Descriptive statistics are presented for each of the analysis variables, which include:

- CER respondent characteristics—respondent sex, respondent type (respondent answered themselves, or a proxy did so on their behalf), dementia prevalence (2017–18 only) and mobility status (2017–18 only)
- RACS resident group characteristics—the proportion of residents who: are men, were born in English-speaking countries, have high ACFI ratings across all 3 domains, have Alzheimer disease or restricted mobility, or are Indigenous

- RACS characteristics—service size (number of residents), organisational type and remoteness.

Chapter 4 extends this descriptive analysis by using logistic regression models to identify and describe the associations between the proportions of positive response for each of the CER questions and the personal, RACS resident and organisational characteristics, after controlling for the influence of other variables.

Unless otherwise specified, all analysis covers the full data from 2017–18 and 2018–19 (referred to as 2017–19). Those variables (respondent dementia and mobility status) that were available only for 2017–18 are excluded from the regression analysis in Chapter 4.

Profile of CER sample

In 2017–19, 31,000 respondents in a total of 2,070 RACSs completed the CER questionnaire. Just over half (56%) of the services had between 41–100 residents. These RACSs accounted for half of the survey respondents (53%), while larger RACSs (those with 100 residents or more) accounted for 37% of respondents in the data set. Of the 2,070 RACSs, 26 could not be linked to the NACDC; hence, analysis data were available for only 2,044 RACSs (Appendix Table B1).

The RACSs in the CER data set for 2017–19 are operated by several types of organisation: not-for-profit (charitable, religious, or community-based—58%), privately operated (33%) and government (state or local) operated (8%) (Figure 2.1). The largest proportion of RACSs were located in New South Wales (35%), followed by Victoria (27%) and Queensland (17%).

Two in 3 services (63%) were located in *Major cities*, and only 1% were in remote areas.

The distribution of RACSs at which survey data were collected closely matches that for all RACSs—in respect of organisation type, state and territory and remoteness of service location, as well as to service size. More information about their representativeness is set out in Appendix B.

Figure 2.1: Basic characteristics of RACSs in the CER data set, 2017–19
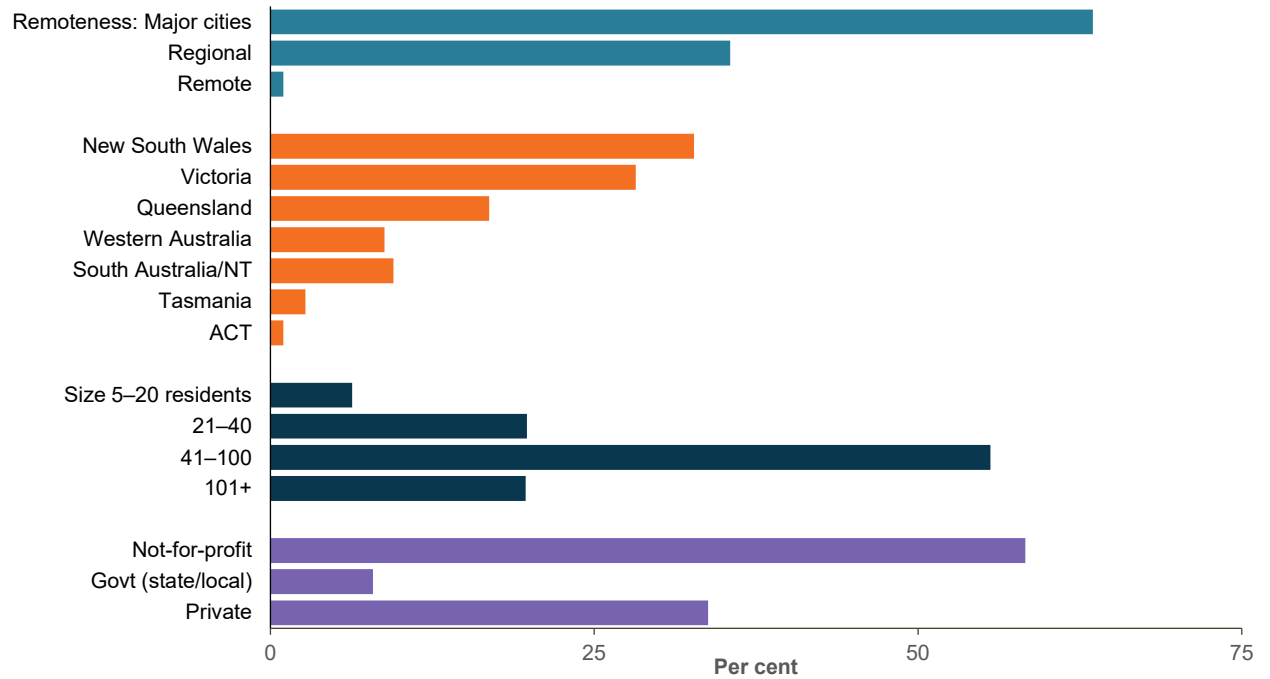
Source: AIHW analysis of NACDC and ACQSC CER data.

3   Results

This chapter presents CER results in 2 ways: firstly, by examining the responses to the 10 questions asked of people surveyed and, secondly, by analysing the proportions of positive responses for each question against 3 variable characteristics (the respondent, the RACS resident group, and the RACS itself).

CER question responses

Overall, CER results were largely positive, with between 80–98% of people surveyed responding positively to the different questions (Appendix Table C1).

The results presented in this section have been selected to illustrate the 2 different question response structures—the 4- and 5-point scales—and the variation by respondent sex. The skewing of responses towards the positive end of the scales is also clear in figures 3.1 and 3.2. A complete set of results for the 10 questions are available in the supplementary material.

In 2017–19, the majority (98%) of respondents gave a positive response to Q2: 'Feel safe', with answers being 'Most of the time' (17%) or 'Always' (81%).The effect of respondent sex on the distribution of responses was minor (Figure 3.1).

Figure 3.1: Proportion of responses to question 2: 'Do you feel safe here?', by sex, 2017–19

Source: AIHW analysis of ACQSC CER data.
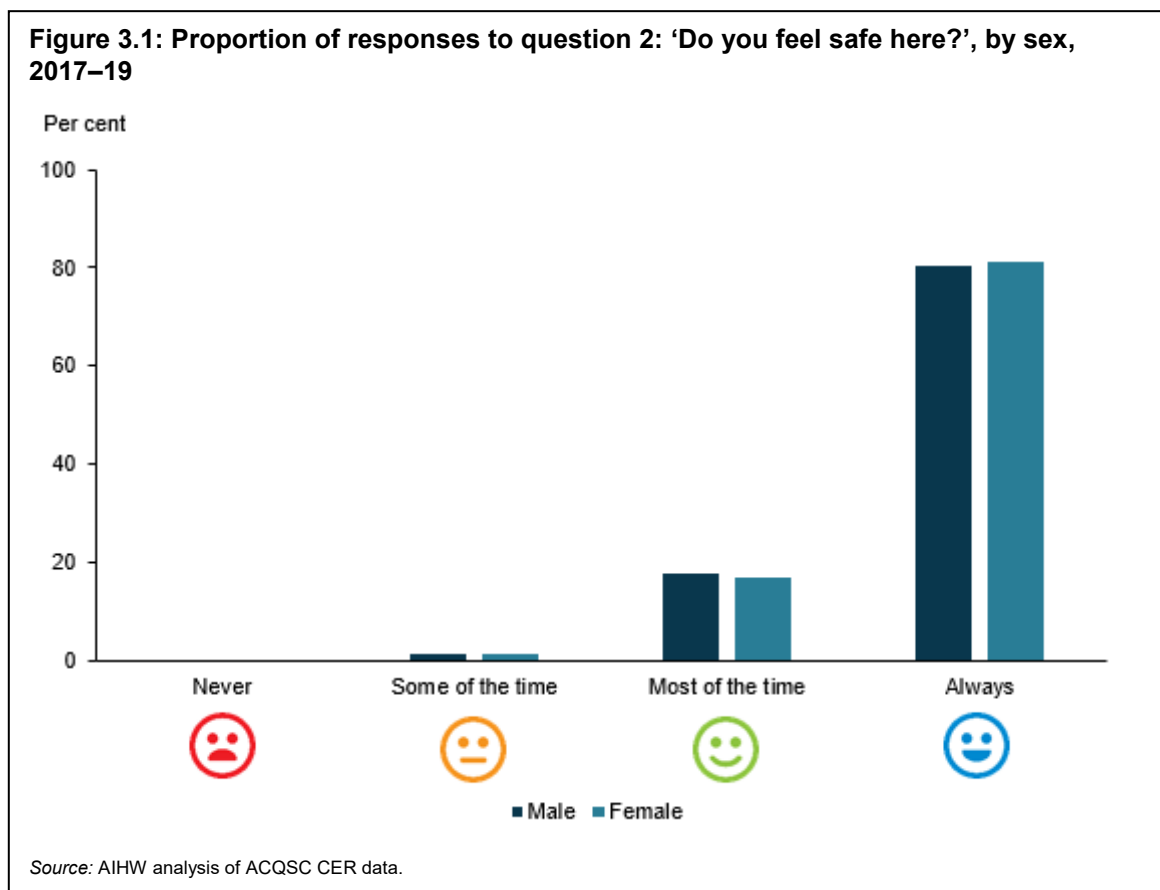
The proportion of positive responses to the statement in Q7: 'Staff to talk to' varied by sex— 77% for men and 81% for women (Figure 3.2). This difference was partly driven by the higher proportion of men giving a 'Neutral' response and women giving a 'Strongly agree' response.

Figure 3.2: Proportion of responses to question 7 statement: 'If I'm feeling a bit sad or worried, there are staff here who I can talk to', by sex, 2017–19

Source: AIHW analysis of ACQSC CER data.
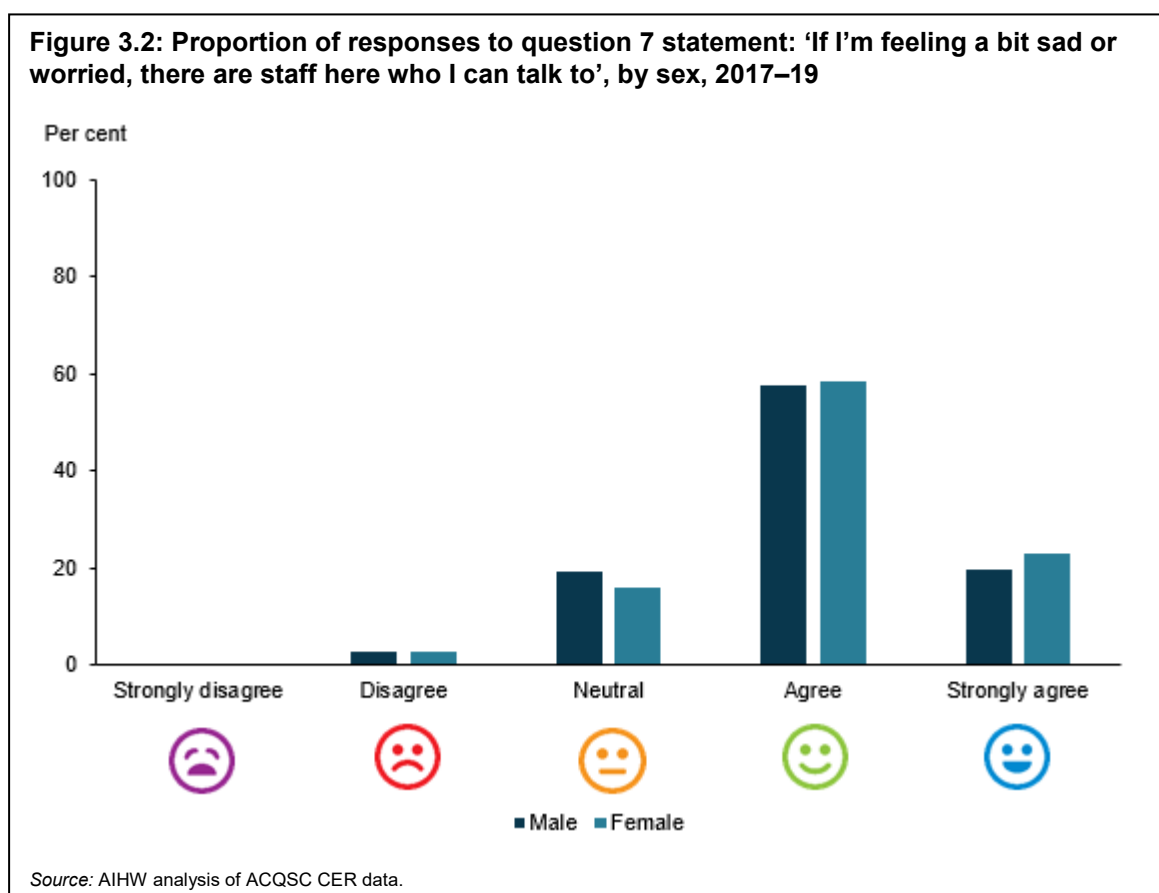
As noted earlier, the proportions of positive responses across the 10 CER questions ranged from 80–98%. Figure 3.3 presents these data diagrammatically; it shows that the questions with the highest levels of positive responses (where the points on the spider graph are outermost) were Q1: 'Treat with respect', Q2: 'Feel safe' and Q3: 'Healthcare needs met', with values for all 3 above 97%.

The questions with the lowest proportions of positive responses were Q6: 'Like food' (85%) and the statement in Q7: 'Staff to talk to' (80%). These questions also had the largest variation in the proportions of positive responses across the analysis variables, along with the statements in Q9: 'Place well run' and Q10: 'Autonomy supported', with differences across response categories ranging from 5 to more than 8 percentage points. For the complete set of results for each analysis variable see Appendix C.

Figure 3.3: Proportion of positive responses to questions 1–10 for all respondents, 2017–19

Source: AIHW analysis of ACQSC CER data.
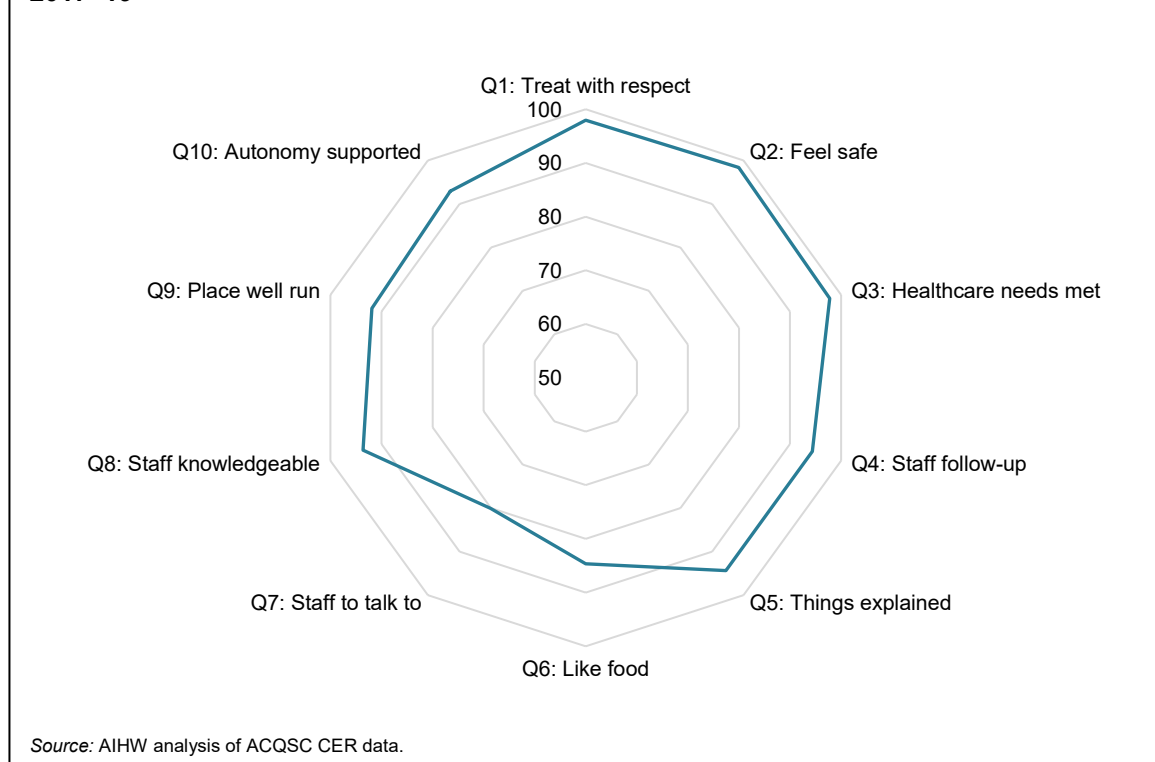
Effects of personal and service characteristics on positive responses

The CER results—the proportions of positive responses for each question—were analysed against 3 groups of variables representing different sources of possible effects:

- the characteristics of the person completing the CER (respondent characteristics)
- the characteristics of the resident group within each RACS (RACS resident group characteristics)
- the properties of the RACS itself, such as size, location, organisation type (RACS characteristics).

Results for these 3 sets of variables are presented in turn in this chapter, focusing on those identified as most important among the modelling results (Chapter 4), those in which the effect of the variable was particularly large or those of more general interest.

Respondent characteristics

Across the CER questions, the largest differences in the proportions of positive responses were with respect to the respondent type and respondent's mobility status.

Respondent type

Respondent type (whether the resident or their proxy answered) had one of the largest effects on positive responses among the analysis variables (Appendix Table C1). Proxies responded less positively to the statements in Q10: 'Autonomy supported' (82% versus

94% for residents) and Q7: 'Staff to talk to' (76% versus 81% for residents). Conversely, proxies responded more positively to Q6: 'Like food' (89% versus 84% for residents).

As is noted in the discussion that follows, there is an apparent relationship between a respondent's dementia status and the use of a proxy.

Respondent sex

There was little difference in results between men and women across questions, except, as noted earlier, for the response to the statement in Q7: 'Staff to talk to': men responded less positively than women (77% and 81%, respectively) (Figure 3.2).

Respondent dementia status

There was a difference of over 8 percentage points for Q6: 'Like food' in the proportions of positive responses by respondents who had, and did not have, dementia (90% and 81%, respectively). Q10: 'Autonomy supported' attracted a lesser difference of 4 percentage points, with 94% of respondents without dementia giving positive responses as against 90% for those with dementia. This result is consistent with a similar previously reported finding (Wells & Solly 2018).

However, a correlation between the presence of dementia and responder type was also identified. For residents without dementia, proxy responders were used in only 6% of interviews, but for residents with dementia proxies were used in 37% of interviews (Table 3.1). This result suggests that the observed effects may be attributed more to the presence of proxy responders than to the dementia itself. (*Note:* Respondent dementia data were available only for 2017–18.)

Table 3.1: Dementia status of resident type in regard to responder type, 2017–18 (percent)

Dementia status[a]	Type of responder		Total
	Resident	Proxy	
Yes	63.5	36.5	**100.0**
No	94.4	5.6	**100.0**
Missing	93.9	6.1	**100.0**

(a)   Data available only for 2017–18.

(b)   Dementia status was not reported for 41% of respondents.

Source: AIHW analysis of ACQSC CER data.

Respondent mobility status

The mobility status (restricted or not) of respondents displayed relatively large differences in the proportions of positive responses across all 10 CER questions, as shown in Figure 3.4. The largest difference was for Q10: 'Autonomy supported', with proportions of 85% for those with restricted mobility, and 95% for those not so restricted. (*Note:* Respondent mobility data were available only for 2017–18.)

Figure 3.4: Proportion of positive responses to questions 1–10, by mobility status, 2017–18

Source: AIHW analysis of ACQSC CER data.
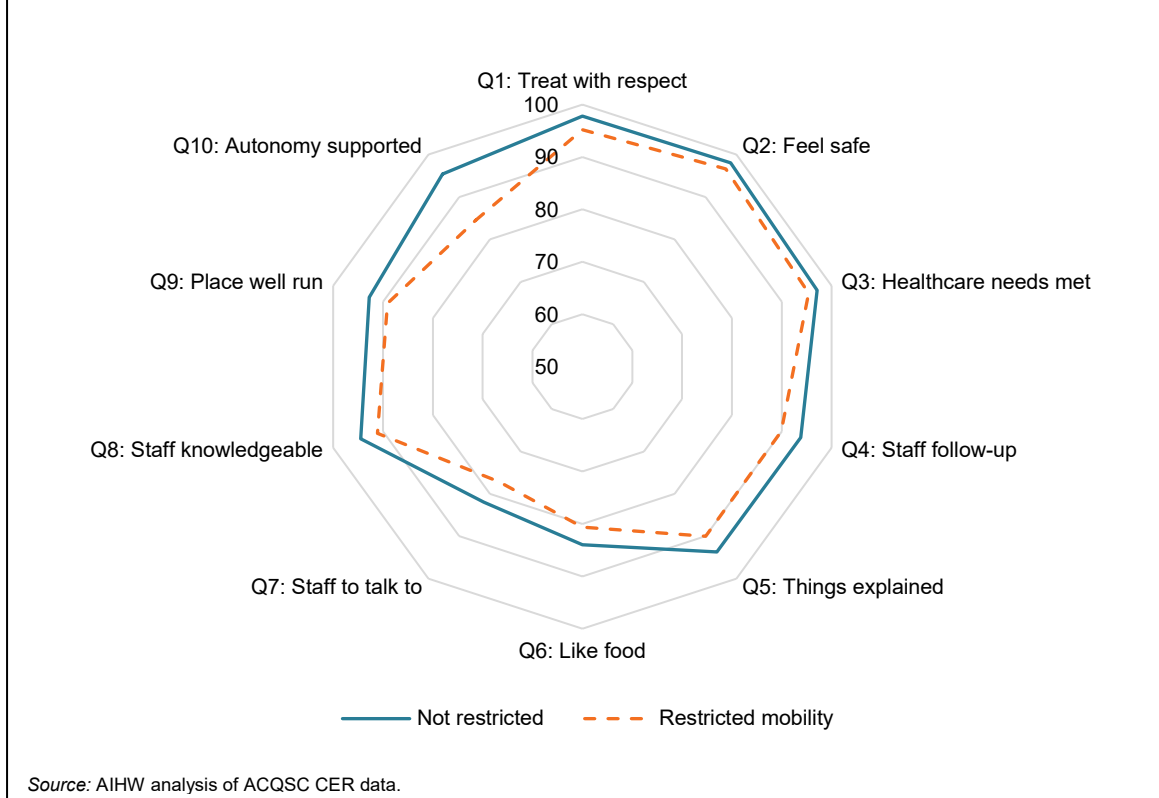
RACS resident group characteristics

Several characteristics of RACS resident groups formed the second set of variables for analysing variation in CER responses. These measures do not relate to individual CER respondents, but instead characterise the RACS resident populations from which respondents were selected.

Across the CER questions, the largest differences in the proportions of positive responses were with respect to the proportion of residents born in English-speaking countries, ACFI high care proportion, mobility status, and Alzheimer disease prevalence.

RACS male proportion

The proportion of men in each service (lower, medium, higher) showed relatively minor effects on the proportions of respondent positive responses. However, a larger effect was observed for the statement in Q7: 'Staff to talk to', for which RACSs with higher proportions of male residents had a lower proportion of positive responses (79%) than RACSs with lower proportions of men (81%) (Appendix Table C1). This result is consistent with the effect observed for the respondent sex described earlier in this chapter.

RACS Indigenous status

The Indigenous status of a RACS (with an Indigenous RACS being one in which 50% or more of residents were Aboriginal and/or Torres Strait Islander) showed marked effects on the proportions of positive respondent responses. The differences were largest for Q5: 'Things explained': the proportion of positive responses for Indigenous RACSs (86%) was 9 percentage points lower than that for non-Indigenous RACSs (94%). For Q6:

'Like food', the effect was reversed: the proportion of positive responses for Indigenous RACSs was 9 percentage points higher, at 94%, than that for non-Indigenous RACSs (84%).

RACS proportion born in English-speaking countries

The variable associated with most variation in the proportions of positive responses across the CER questions was the proportion of residents (lower, medium, higher) in a RACS who were born in English-speaking countries (Figure 3.5). The proportions for the statement in Q7: 'Staff to talk to' ranged from 76% for the group with the lower proportion of people born in English-speaking countries to 84% for the group with the higher proportion—a difference of 8 percentage points (Appendix Table C1).

Figure 3.5: Proportions of positive responses to questions 1–10, by proportion (lower, medium, higher) born in English-speaking countries, 2017–19

Source: AIHW analysis of ACQSC CER data.
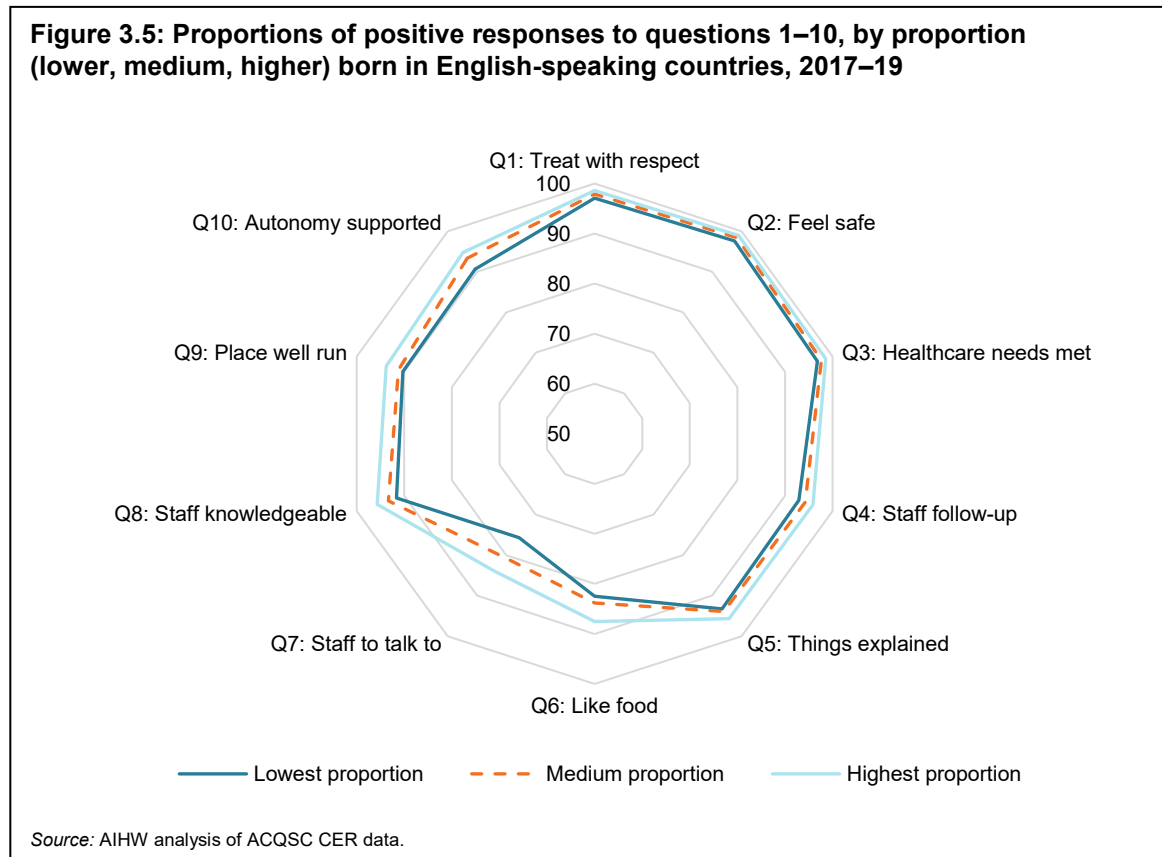
Differences of more than 4 percentage points were also observed for Q6: 'Like food' and the statements in Q8: 'Staff knowledgeable' and Q10: 'Autonomy supported', with the higher proportions of positive responses being for services with the higher proportion of residents born in English-speaking countries.

RACS ACFI higher care proportion

The effect of the proportion of the resident population in a RACS with high-care needs (as measured by ACFI data, see Appendix B) was similar to that for the proportion of residents born in English-speaking countries (see earlier discussion), but with somewhat reduced values. Thus, the largest difference in proportions (5 percentage points) was observed for the statement in Q7: 'Staff to talk to', with the proportion of positive responses for the lower care group being 83%, and that for the higher care group, 78%. For Q6: 'Like food' and Q10: 'Autonomy supported', the proportions of positive responses were reduced—from 87% to 83%, and from 95% to 91%, respectively.

RACS mobility proportion

RACSs with higher resident mobility needs, as measured by the proportion of residents needing help, showed consistently lower levels of positive responses across the 10 CER questions. The largest differences were for the statement in Q7: 'Staff to talk to' and Q10: 'Autonomy supported': the proportions of positive responses to these 2 questions for the group with lower needs for help with mobility were 83% and 95%, respectively, and 78% and 91%, respectively, for the group with higher needs for help. These differences, though, were smaller than those reported for the effect of the respondent-based mobility data described earlier.

RACS Alzheimer disease prevalence

The effect of RACS-specific prevalence of Alzheimer disease among the resident population was a general reduction of the levels of positive responses across the CER questions with increasing levels of Alzheimer disease. The largest effect, a reduction of 94% to 92%, was seen for Q10: 'Autonomy supported', which is consistent with the result reported before for respondent-level dementia. However, this pattern did not apply for Q6: 'Like food', where the proportion of positive responses for the higher-level Alzheimer group, 85.4%, was higher than that for both the lower- and the medium-level groups, with values of 84.8% and 83.5%, respectively.

RACS pain prevalence

The prevalence of pain among the different RACS resident groups (divided into lower, medium and higher proportions) showed minimal variation across the 3 groups for the 10 questions. The greatest difference between positive responses occurred for Q10: 'Autonomy supported', where the proportions were 93.4% for the higher pain group and 92.1% for the medium pain group. Because of this minimal variation, this variable was dropped from further analysis.

Service characteristics

Service (RACS) size, organisation type and remoteness make up the third group of analysis variables against which the CER results were compared. Effects sizes of more than 5 percentage points were seen for service size and remoteness, but differences of more than 3 percentage points were also seen for 4 of the CER questions for organisation type.

Service size

The size of a RACS, in terms of resident numbers, had the most obvious effect of all 3 variables on the proportions of positive responses, with the largest services having consistently lower proportions of positive responses than the smaller services (Figure 3.6). The largest differences were for:

- Q6: 'Like food', with the smallest services (89% of responses being positive) having values that were 7 percentage points higher than those for the largest services (82%)

- Q7: 'Staff to talk to', the corresponding values were 85% and 78%, respectively (7 percentage points higher)

- Q9: 'Place well run', the corresponding values were 95% and 90%, respectively.

These results are also shown in Figure 3.6. They are also consistent with those previously reported, despite the use of different size scales (Wells & Solly 2018).

Figure 3.6: Proportion of positive responses to questions 1–10, by size of service, 2017–19
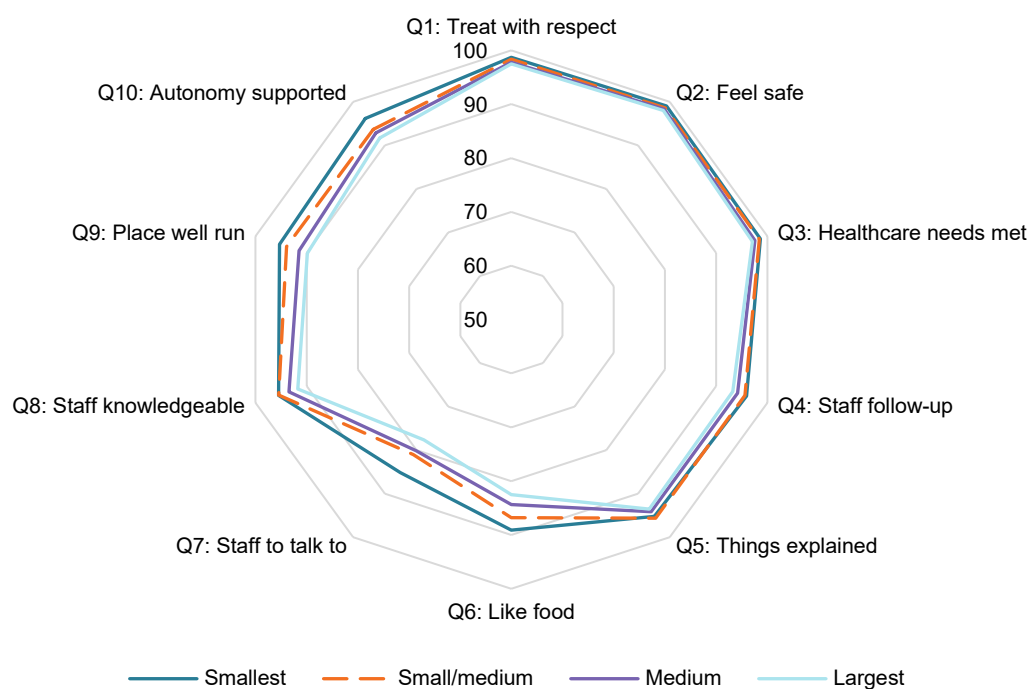
Source: AIHW analysis of ACQSC CER data.

Organisation type

Organisation type also showed consistent differences between not-for-profit or government operated RACSs and private RACSs. Not-for-profit or government operated RACSs had similar proportions of positive responses for all 10 questions, exceeding the values for private RACSs by up to 5 percentage points (Figure 3.7). The proportion of positive responses for the statement in Q7: 'Staff to talk to' was 81% for not-for-profit RACSs and 5 percentage points less (at 77%) for private RACSs. A similar contrast was seen between government operated and private RACSs for the statement in Q9: 'Place well run', where the proportions of positive responses were 95% and 90%, respectively.

Figure 3.7: Proportion of positive responses to questions 1–10, by organisation type, 2017–19

Q1: Treat with respect
Q2: Feel safe
Q3: Healthcare needs met
Q4: Staff follow-up
Q5: Things explained
Q6: Like food
Q7: Staff to talk to
Q8: Staff knowledgeable
Q9: Place well run
Q10: Autonomy supported

Not-for-profit — Government — Private
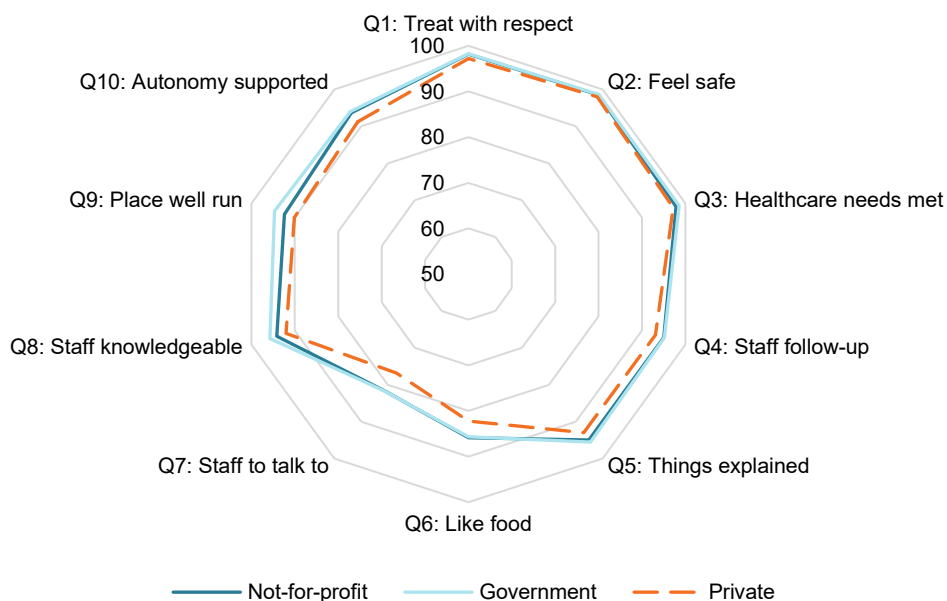
Source: AIHW analysis of ACQSC CER data.

RACS remoteness

The remoteness of RACSs showed a mixed effect on questionnaire responses. For respondents in RACSs located in *Major cities*, lower proportions of positive responses for most questions were seen, compared with those in regional areas—78% in *Major cities* compared with 84% in regional areas for the statement in Q7: 'Staff to talk to'. For services in remote areas, the proportion of positive responses across questions varied more, and no consistent pattern in relation to RACSs in *Major cities* or regional areas was seen. This may in part be due to the smaller numbers of RACS in remote areas and their smaller resident counts.

4 Factors associated with positive responses

In Chapter 3, it was shown that, across the 10 CER questions, the following variables are independently associated with the proportions of positive responses: the proportion of residents born in English-speaking countries, respondent type, service size, organisation type, and respondent mobility.

In this chapter, the logistic modelling method was used to explore the association between positive responses for each of the CER questions and the personal and service-level characteristics. The modelling approach allows for controlling the confounding effect among these variables. Coefficients (odds ratios) of the final model for each of the 10 CER questions are shown in Appendix Table D1.

Associations for each factor across CER questions

Associations between positive responses to each of the CER survey questions and the factors included in logistic regression models are first summarised with a focus on the overall contribution of the factors. Respondent mobility status was not available for both years, and hence was not considered for the regression model; however, the other variables listed here were found to contribute significantly to the regression models, explaining the variation in the proportion of positive responses.

RACS English-speaking country proportion

The proportion of residents within a RACS born in English-speaking countries was a service-level variable used in the regression models. With 3 levels of proportions (lower, medium, higher) constructed to summarise this variable (see Appendix B), there are 2 effects to be estimated: first, contrasting the groups with the lower and higher proportions of residents born in English-speaking countries, and second, contrasting the medium and higher levels.

The descriptive analysis in Appendix Table C1 show higher proportions of positive responses at each step from lower to higher proportions born in English-speaking countries. This effect (shown in Figure 3.5) was confirmed in the regression modelling, which showed this factor was a statistically significant contributor to explaining the variation in response levels for all 10 survey questions. Positive responses were less likely from respondents in a service with the lower proportion of residents born in English-speaking countries than for respondents in services with the higher proportion, with odds ratios from 0.5 to 0.8. For the second contrast—between the medium and higher proportions born in English-speaking countries—odds ratios ranged from 0.7 to 0.8 for 9 of the CER questions.

Service size

As shown in Appendix Table C1 there was a clear pattern of declining positive response across the 10 questions as service size increases; with residents from smaller services reporting the highest proportions of positive responses and those from the largest service size the least (evident also in Figure 3.6).

In line with these observations, the results of regression modelling analysis show service size was a statistically significant contributor to positive responses for 8 of the 10 CER questions.

Consistently across the questions, all 3 contrasts (the proportions of positive responses for sizes 1, 2 and 3 compared with that for size 4—see Appendix Table B3 for explanation of group sizes) showed a tendency towards greater proportions of positive responses from respondents in smaller services. Odds ratios for the effect when contrasting the smallest and largest service sizes ranged from 1.3 to 2.3 across the 8 questions. The 2 questions where service size did not contribute to explaining response variation in regression modelling were Q1: 'Treat with respect' and Q5: 'Things explained'.

It is worth noting that service size displaced remoteness from the regression model for most CER questions. Remoteness appeared as a likely explanatory of variation in raw analysis but an association between these variables—meaning that they are correlated—is explored in Appendix B.

Organisation type

Organisation type contributed to explaining variation in positive responses in regression models for 7 of the 10 survey questions, but its contribution was not as strong as for the proportion born in English-speaking countries or RACS service size.

As shown in Appendix Table C1 there were similar proportions of positive responses across most questions for government and not-for-profit providers. Both these organisation types, though, showed higher proportions of positive responses across all questions than were seen for RACSs operated by private organisations.

The odds ratios calculated from regression models were not significantly different from 1.0 for the comparisons between private and government organisation types. When comparing the regression results for the contrast between the more numerous not-for-profit RACSs and the privately operated RACSs, a statistically significant greater proportion of positive responses for the not-for-profit RACSs was observed across 7 of the 10 CER question models, with odds ratios of 1.1 or 1.2.

The 3 questions for which organisation type was not associated with positive response were Q2: 'Feel safe', Q3: 'Healthcare needs met' and the statement in Q8: 'Staff knowledgeable'.

Respondent type

Respondent type (whether resident or another person on their behalf—or proxy) generally had odds ratios with values significantly greater than 1.0, indicating that positive responses were less likely to occur when proxies answered on behalf of a respondent. This was most pronounced for the statement in Q10: 'Autonomy supported', with an odds ratio of 3.6. For Q6: 'Like the food', respondents themselves were less likely (odds ratio 0.7) to provide a positive response than proxies.

RACS ACFI high care proportion

The ACFI score, grouped into 3 levels (tertiles—see Appendix B), is a RACS-specific (proxy) measure of care needs (the proportion of residents at the respondent's RACS with higher needs across all 3 dimensions of the ACFI). Despite a discernible gradient in the descriptive analysis—from more positive responses where care needs are lower to less positive where care needs are higher—effects recorded in regression models for 7 questions were small and in most cases not statistically significant.

Respondent sex

The sex of individual respondents was recorded in the CER surveys, while the RACS-level variable—the proportion of male residents (constructed as tertiles—see Appendix B)—was also included in the regression analysis.

The sex of individual respondents was a statistically significant variable, with an odds ratio of 1.2, in the regression model for the statement in Q7: 'Staff to talk to', with men being less likely to give positive responses. Models for Q4: 'Staff follow up' and Q10: 'Autonomy supported' calculated odds ratios of 1.2 and 1.1 respectively. These 3 questions for which sex of respondent entered the regression models were also the only ones for which raw data showed more than 1 percentage point difference in the proportions of positive responses between men and women.

The proportion of male residents variable had significant effects in regression models for 5 of the 10 questions—Q1: 'Treat with respect', Q2: 'Feel safe' and the statements in Q8: 'Staff knowledgeable', Q9: 'Place well run' and Q10: 'Autonomy supported'. Consistently for these questions, positive responses were less likely from respondents in services with higher proportions of men, with statistically significant odds ratios of between 1.2 and 1.5 for contrasts between the first and third groups.

Interestingly, these 2 variables (sex, and proportion of male residents) occurred together only in the model for the statement for Q10: 'Autonomy supported', and otherwise appeared separately in the different models.

RACS Indigenous status

For respondents living in RACSs with more than 50% Aboriginal and/or Torres Strait Island residents, the positive response rates were affected for only 2 questions—Q2: 'Feel safe' and Q6: 'Like food'. The strength of the difference in positive response rate for Q2: 'Feel safe', with an odds ratio of 3.9, was notable for its size—respondents in RACSs with more than 50% Aboriginal and/or Torres Strait Island were less likely to feel safe than were respondents in other services—but a broad 95% confidence interval ranging from 1.2 to 12.7 shows that this estimate lacks precision. On the other hand, there appeared to be a marked opposite effect for Q6: 'Like food', with respondents in such RACSs being more likely (odds ratio of 0.3) to give a positive response, but again the confidence interval was broad.

So, despite the size of these effects (as measured through their odds ratios), the smaller number of respondents in these RACSs, together with some inconsistencies between the simple (raw) and the modelled results, suggest these findings may not be conclusive.

Factors associated with positive responses for each CER question

Not all of the factors examined in logistic regression models were associated with positive responses to every CER question, and nor were the patterns of association common across the different models. This is illustrated in the following analysis of model results for selected CER questions. For the complete set of modelled results for each question see Table D.1 in Appendix D.

Question 1: Treat with respect

For question 1, being a respondent in a service with a lower *proportion of residents born in English-speaking countries* was associated with lower levels of positive response (odds ratio 0.5) than for the higher category. In relation to *organisation type*, an association was found for the contrast between not-for-profit and privately operated services, where positive responses were more likely to be given by respondents in not-for-profit services (odds ratio 1.3). Respondents in services with lower proportions of residents with mobility restriction also responded more positively than those from services with higher levels of mobility restriction (odds ratio 1.4)

Question 3: Healthcare needs met

For question 3, associations were found with 3 variables—*respondent type (proxy)*, *RACS English-speaking country proportion* and *service size*. The *respondent type* variable showed a doubling of the odds (odds ratio 2.1) of a positive response to this question by the respondent themselves.

RACSs with the lower proportions of residents born in English-speaking countries were less likely to report positively (that 'healthcare needs were met') than RACSs with higher proportions of such residents (odds ratio 0.5).

While the contrast between respondents from the largest and smallest services was inconclusive, that between the largest (100 or more residents) and second smallest categories (21 to 40 residents) showed a greater tendency towards positive responses from the latter (odds ratio 1.9).

Question 7: Staff to talk to

The pattern of results for the statement for question 7 are similar to those for question 1, except that the respondent *sex* (specifically, being female) and *respondent type* (respondents themselves rather than by proxy) were associated with positive responses (odds ratios of 1.2 and 1.3, respectively). *Service size* was associated inversely with positive response—respondents in the smallest services reported more positively than those in the largest group (odds ratio 1.5).

Question 10: Autonomy supported

For question 10, an association with *respondent type* was evident, with a positive response more likely to be reported when a resident answered rather than a proxy (odds ratio 3.6).

Other variables for which the model showed associations with positive responses to this question were the proportion of RACS residents with mobility restriction and service size. Respondents in services with lower, contrasted with higher, proportions of residents with mobility restriction (odds ratio 1.5) and in the smallest services contrasted with the largest (odds ratio 1.7) were more likely to report positively.

Interpretation of results from regression analyses

The size of the effects of these variables on the proportions of positive responses identified in the modelling are small, of the order of a few percentage points. These effect sizes, though, need to be put in context.

The reduction of the response data to binary (positive or negative) response values, as a simplification to support a basic regression analysis raises 2 issues. The first is that the

presence of high proportions of positive responses (most generally lying between 85–95%), means that the amount of possible variation that can be modelled by this simplified approach is limited; the second is that variations in the proportions of negative responses were not analysed in this first CER report and nor was the effect of having a neutral option for answering some questions. These may be covered in future reports by using more advanced modelling methods, such as ordinal logistic regression.

Notwithstanding, a number of significant associations between positive responses and the analysis variables were identified for the CER data. These have been described in this chapter, and are summarised in more detail in Appendix Table D1.

5   Discussion

This report on consumer experiences used a conservative analytical approach that combined categories of 'positive response' to the CER questionnaire to investigate how these were affected by a set of respondent and RACS-related characteristics. The results obtained provide new insights and understanding of consumers' RACS experiences, which are of interest for consumers, service providers, government and the general community.

A number of associations in the CER data set have been identified. These include the effects of service size, organisation type (not-for-profit, government or privately operated) and proportions of residents born in English-speaking countries on the likelihood of positive responses to the 10 CER questions. An important artefact in the data set was also identified: the effect of representatives' (proxies) responding on behalf of residents. Its relationship with a respondent's dementia status could be further explored. The effect of service remoteness, while appearing to have an effect on positive response rates in descriptive analysis, did not add further to variation that was explained in regression models by service size.

Regression models were developed for each CER question. As well as confirming the results reported in Chapter 3, these models identified other outcomes of interest, including that, while organisation type (not-for-profit, government or private) affected the outcome for some questions, service size affected the outcome for a different set of questions, with larger effects.

The overall representativeness of the CER data needs to be considered when interpreting the results presented in this report. The RACSs where surveys were conducted were not selected randomly but comprised those included in the Commission's (and former AACQA's) reaccreditation audits during 2017–18 and 2018–19. Nevertheless, a large proportion of RACSs in Australia (over 75%) were still represented in the data set and their distributions by organisation type, service size and state/territory of location were very similar to those of all RACSs.

6   Next steps

In this report, the patterns of responses to the CER questionnaire have been explored and presented. Further development of the analysis and continuation of the reporting of CER data will be valuable for monitoring future changes in residents' experiences. This will also allow the results reported here to be confirmed and validated.

Future work could aim to use the full set of questionnaire response data (that is, 'Strongly disagree' through to 'Strongly agree', or 'Never' through to 'Always'), with an appropriate (ordinal) regression method. More refined characterisations of individual RACSs and their resident populations could also be developed to better understand the factors that affect residents' responses—their consumer experience. The variation of care needs within and across RACSs (for example, additional analysis of the ACFI instrument) is of particular interest. The cultural and linguistic diversity of residents, especially in light of the results relating to the proportion of residents born in English-speaking countries, would also be of value. Information on the balance of permanent versus respite care residents in a service, or of other indicators of residents' time and experience of being in RACSs and their wellbeing could add further insight.

Beyond using the full set of questionnaire response data in modelling efforts, new insights are also likely to be gained by investigating the personal and service characteristics for people who respond negatively or in a neutral way to questions in the CER questionnaire. Although fewer people respond this way than those who respond positively, their increasing numbers (as data accumulate over time), together with the varying patterns of results for the different CER questions that have been identified in this report, suggest a number of ways in which these explorations could be developed.

Appendix A: Consumer experience questionnaire

Table A1: CER questionnaire

Question	Abbreviated form	Response options
Q1. Do staff treat you with respect?	Treat with respect	Never, Some of the time, Most of the time, Always
Q2. Do you feel safe here?	Feel safe	Never, Some of the time, Most of the time, Always
Q3. Do staff meet your healthcare needs?	Healthcare needs met	Never, Some of the time, Most of the time, Always
Q4. Do staff follow up when you raise things with them?	Staff follow-up	Never, Some of the time, Most of the time, Always
Q5. Do staff explain things to you?	Things explained	Never, Some of the time, Most of the time, Always
Q6. Do you like the food here?	Like food	Never, Some of the time, Most of the time, Always
For the following questions, to what extent do you agree with these statements?		
Q7. If I'm feeling a bit sad or worried, there are staff here who I can talk to.	Staff to talk to	Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
Q8. The staff know what they are doing.	Staff knowledgeable	Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
Q9. This place is well run.	Place well run	Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
Q10. I am encouraged to do as much as possible for myself.	Autonomy supported	Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
Q11. What would you say was the best thing about this home?	—	Open response
Q12. What is one thing you would suggest as an improvement at this home?	—	Open response

Source: Aged Care Quality and Safety Commission 2019d.

To assess each RACS, a random sample of residents was chosen according to explicit rules from a named list of residents. The sample size was determined according to the number of residents in each RACS; if a selected resident declined or was unable to be interviewed, a replacement ('next-on-list' person) was interviewed. This occurred in about 33% of interviews. A representative (proxy) may also have answered on behalf of a resident, and this is analysed with the main body of results. The last 2 items in the questionnaire are open-ended questions. Responses to these are not included in the Commission's analysis data set used in this report.

For brevity, an abbreviated form of each question is used in this report in both the text and figures. These short forms are shown in the middle column of Table A1.

All services are assessed on a rolling basis, as part of their triennial (3-yearly) governmental accreditation process. The services represented in the data set were those chosen 'pseudo-randomly' (in that the timing of their 3-yearly accreditation fell within the collection period for the 2017–19 data set). The number of services represented in this 2-year 'sample'—2,070—needs also to be set against the total number of services, which on 1 July 2018 numbered 2,695. The CER data set thus contains data for about 77% of Australian RACSs.

Appendix B: Methods in detail

Data quality

The original data set contained 31,468 records. Of these 274 (<0.9%) contained incomplete questionnaire data, which were excluded from further analysis. A number of services also had interview counts (CER records) of fewer than 5. The data for these services were excluded from the analysis.

The final data set of CER questionnaire data therefore included data for 31,194 respondents and 2,070 RACSs.

The data on respondent mobility and dementia were irregularly collected in 2018–19 and were considered to be of insufficient quality for analysis. The data for 2017–18, however, were of adequate quality, and so descriptive results based only on the single year of data are reported. These variables, though, were not included in the regression analysis, which was based on the full data set for the 2 years.

The use of substitute interviewees (sample replacement) occurred when the randomly selected resident was not available to be interviewed. This was recorded for about 35% of records, but was not further explored.

The use of proxy informants, responding on behalf of a recipient, was recorded for 11% of records. The effect of this factor on responses has previously been identified, so these data were also included in the descriptive and the regression analyses.

Of the 2,070 RACSs in the CER data set, 26 could not be linked to the NACDC data set. Data on RACS characteristics and resident characteristics were therefore obtained for 2,044 RACS (Table B.1).

Nonetheless, the properties of the CER RACSs closely matched those RACSs in the full NACDC data set (Table B1), with the percentage values for the proportions of CER RACSs across each of various parameters generally being less than 1 percentage point different from those for the RACSs in the full data set.

Some minor differences related to the reduced presence of RACSs in South Australia/Northern Territory in the CER data set (8%) compared with the value of 10% for all RACSs. The proportion of the smallest RACSs (with 20 or fewer residents) in the CER data set (4.8%) was less than the 6.3% observed for all the NACDC RACSs.

Table B1: Distribution of CER RACS characteristics, 30 June 2018

Characteristics	Number in CER (%)	Number in NACDC (%)
Organisation type[a]		
Not-for-profit	1,192 (58.3)	1,546 (57.4)
Government (state/local)	162 (7.9)	239 (8.9)
Private	690 (33.8)	907 (33.7)
Size of service		
5–20 residents	99 (4.8)	171 (6.3)
21–40	405 (19.8)	524 (19.5)
41–100	1,137 (55.6)	1,457 (54.1)
101+	403 (19.7)	540 (20.1)
State/territory		
NSW	718 (35.1)	881 (32.7)
Vic	563 (27.5)	760 (28.2)
QLD	351 (17.2)	456 (16.9)
WA	181 (8.9)	238 (8.8)
SA/NT	161 (7.9)	258 (9.6)
Tas	52 (2.5)	73 (2.7)
ACT	18 (0.9)	26 (1.0)
Remoteness		
Major cities	1,298 (63.5)	1,678 (62.3)
Regional	725 (35.5)	968 (35.9)
Remote	21 (1.0)	46 (1.6)
Total	**2,044 (100.0)**	**2,692 (100.0)**

(a) Organisation type was not known for 26 RACS.

Source: AIHW analysis of NACDC and ACQSC CER data.

RACS resident group and RACS service characteristics

RACSs were characterised according to the number and mix of residents in each service, using linked episode data (an episode being the occupation of an allocated place by a person) as at 30 June 2018 and as extracted from the NACDC database. Several statistics were defined: the proportion of men; those born in English-speaking countries; those with 'high' ratings across the 3 axes of the ACFI; and, from the same instrument, those with a 'high' rating for needing help with mobility, pain or with Alzheimer disease.

For each of these statistics, the RACS-specific data were then sorted and grouped into 3 equally sized groups (tertiles), according to the cut-off values identified in Table B2. Thus, level 1 of the 'proportion of men' variate represented the RACSs for which proportion of men among the RACS resident groups was less than 0.29. Level 2 of the variate represented the RACSs for which the proportion of men ranged from 0.29 or more, up to 0.37.

Table B2: Cut-offs used to define service characteristic groups (tertiles)

RACS resident characteristics variable	Lower cut-off	Upper cut-off	Number of observations
Male proportion	0.29	0.37	2,037
English-speaking country proportion	0.67	0.81	2,030
ACFI high care proportion	0.15 (lower rate of high need)	0.34 (higher rate of high need)	2,043
Mobility proportion	0.49 (lower rate of need for assistance)	0.66 (higher rate of need for assistance	2,026
Pain prevalence	0.11	0.20	1,945
Alzheimer prevalence	0.32	0.43	2,035

Across the RACS resident groups, the proportions of men ranged from 0% to 82%. This statistic is separate from the 'sex' variable, which instead relates to the sex of each respondent.

The proportion of residents born in English-speaking countries was identified to provide some indication of possible language communication difficulties. It is noted, however, that some services may accommodate more residents from particular cultural backgrounds, which may limit the utility of this variable for this purpose. This is consistent with the wide range of values observed for this statistic, which ranged from 1–100%, with a median value of 74%.

The ACFI is a tool to determine the level and complexity of care that each aged care resident requires. It assesses need levels across 3 dimensions of care—activities of daily living, cognition and behaviour, and complex healthcare (AIHW 2018a). About 30% of all aged care residents are rated 'high' for all 3 dimensions. The proportion of RACS residents with this rating is therefore a useful statistic to describe each RACS overall care load. Across all RACSs, the range in values of the ACFI statistic ranged from 0–95%, with a median value of 24%.

Two further indicators of service-specific care loads are the proportions of residents with Alzheimer disease or who require assistance with mobility. These measures are both also derived from ACFI data. The proportion of residents with Alzheimer disease ranged from 3% up to 93% (median value 37%), while the need for assistance with mobility ranged between 1% and 100% of residents in a service (median value 59%).

Again, these 2 variables are characteristics of a service's resident group and are distinct from the 'dementia' and 'mobility' variables that relate to individual respondents. Valid data for these latter variables were present only for the first year of data collection, 2017–18, and therefore were excluded from the regression analysis.

The ACFI data used in this report are from a person's most recent assessment. Commonly, these assessments are repeated after admission to an aged care service. It is possible, however, that, in some cases, assessment data were from pre-admission and may not reflect the status of a respondent at the time they completed a CER report.

The Indigenous status of a RACS was determined on the basis of more than 50% of residents identifying as Aboriginal and/or Torres Strait Islander. This definition is the same as that used to report Indigenous status in other Department of Health publications (AIHW 2018b). Nine such RACSs were identified in the CER data set.

Possible collinearity (that is, some independent variables are highly correlated) between these variables and others used in the analysis was also tested for, as part of the regression analysis, but not found.

Statistical methods

Descriptive analyses were conducted to characterise the survey sample and patterns of response to the CER questions. Logistic regression was used to assess associations between positive responses for each of the CER questions and the person and service-level characteristics. Response to each question was recoded as a binary outcome variable (positive or negative response) for logistic regression analysis. Based on the significance of individual predictors ($p < 0.05$) and the goodness of fit of the model, a stepwise regression method was used for selecting variables for inclusion in the final multiple regression model. All statistical analyses were conducted using SAS 9.3 (SAS Institute, Cary, NC).

Treatment of covariance

It is possible for 2 variables that relate to an outcome variable (such as the proportion of positive responses in this report) to be correlated. In such cases, it is difficult to distinguish between the individual effects of the explanatory variables on the outcome variable. For instance, this could be true for the variables service size and remoteness. Table B3 shows how the distribution of RACS size varies across remoteness categories.

Table B3: Counts and proportions of service size, by remoteness

Remoteness	Number of residents (%)				
	5–20	21–40	41–100	101+	Total
Major cities	19 (1.5)	209 (16.1)	750 (57.8)	320 (24.6)	1,298 (63.5)
Regional	69 (9.5)	200 (27.6)	373 (51.4)	83 (11.4)	725 (35.5)
Remote	9 (42.9)	6 (28.6)	6 (28.6)	0 (0.0)	21 (1.0)
Total	97 (4.7)	415 (20.3)	1,129 (55.2)	403 (19.7)	2,044 (100.0)

Source: AIHW analysis of NACDC data.

In *Major cities*, over 25% of RACSs had 101 or more residents, while in remote *areas* there were none of these. In remote areas, most RACSs (43%) were small, with fewer than 20 residents in each, but in *Major cities* these small RACSs accounted for less than 2% of the services. Between these levels of remoteness, in regional areas, a broader spread of RACSs across all sizes was observed.

Associations of positive responses with the analysis variables used in this report are shown for each of the 10 CER questions in Appendix Table C1. However, due to the correlation among some factors (such as service size and remoteness), the relative importance of each factor may not be captured well.

The regression analysis carried out in this report (see Chapter 4 and Appendix Table D1) is therefore important for its support of the descriptive results presented in Chapter 3 (Appendix Table C1) and for identifying and quantifying (with odds ratios) the most important and statistically significant variable effects.

Odds ratios

In interpreting the modelling results presented in Chapter 4 and Appendix Table D1, the value of the odds ratios is of interest. The value of these statistics depends on both the proportion of positive responses and the size of the effect (the increase in proportion, from where the variable effect is absent, up to the value of the proportion where the variable effect

is present). Thus, an increase in a proportion from 0.90 up to 0.95 would correspond to an odds ratio of 2. For a decrease in proportions, from 0.90 down to 0.85, the odds ratio would be 0.63.

Appendix C: Positive response proportions

Table C.1: Residential aged care Consumer Experience Report summary data, respondent characteristics, 2017–19[a]

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Sex										
Male	97.7	98.3	97.7	93.6	93.8	84.7	77.5	93.1	91.4	92.2
Female	98.0	98.3	97.6	94.6	94.5	84.5	81.2	93.7	91.9	93.2
Respondent type										
Resident	97.9	98.5	97.9	94.5	94.2	84.0	80.5	93.6	91.9	94.4
Proxy	97.7	97.2	95.5	92.6	94.7	88.8	75.8	92.8	90.7	82.0
Dementia status[b]										
No	98.0	98.6	97.8	94.1	94.1	81.4	81.9	93.7	91.9	94.5
Yes	97.6	97.9	97.5	94.6	94.4	89.7	79.8	93.9	92.4	90.2
Mobility status[b]										
Restricted	95.8	97.5	96.3	91.0	91.1	81.5	77.0	90.8	90.0	84.6
Mobile	98.3	98.5	97.9	94.9	94.6	84.5	82.1	94.3	93.0	95.1

(a) Consumer Experience Survey questions are: Q1 'Treat with respect'', Q2 'Feel safe', Q3 'Healthcare needs met', Q4 'Staff follow-up', Q5 'Things explained', Q6 'Like food', Q7 'Staff to talk to', Q8 'Staff knowledgeable', Q9 'Place well run', Q10 'Autonomy supported'. Refer to Appendix A for the list of complete questions.

(b) 2017–18 data only

Source: AIHW analysis of NACDC and ACQSC CER data 2017–19.

Table C.2: Residential aged care Consumer Experience Report summary data, RACS resident characteristics, 2017–19[a]

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Proportion male										
Lower	98.3	98.6	97.9	94.9	94.7	84.9	81.0	94.2	92.9	93.7
Medium	97.8	98.4	97.6	94.1	94.3	84.4	79.7	93.4	91.1	92.9
Higher	97.5	97.9	97.6	94.0	93.9	84.3	78.9	93.0	91.2	91.9
Indigenous status										
Yes[b]	97.3	97.3	97.3	90.5	85.9	93.7	79.8	90.7	94.5	95.2
No	97.9	98.3	97.7	94.3	94.3	84.5	79.9	93.5	91.7	92.8
Proportion born in English speaking countries										
Lower	97.1	97.6	96.8	93.0	93.3	82.5	75.7	91.6	90.3	90.7
Medium	97.9	98.4	97.7	94.2	93.9	83.8	80.6	93.3	91.3	93.3
Higher	98.6	99.0	98.6	95.9	95.7	87.5	84.0	95.7	93.8	94.8
ACFI high care proportion										
Lower	98.4	98.7	98.2	95.4	95.5	86.7	83.1	95.0	93.3	94.6
Medium	97.5	98.2	97.4	94.0	93.9	83.7	79.1	93.0	91.0	93.0
Higher	97.7	98.1	97.5	93.6	93.5	83.3	77.8	92.6	91.0	91.1
Mobility proportion										
Lower	98.4	98.7	98.2	95.3	95.2	86.6	82.7	94.4	93.3	94.8
Medium	97.6	98.2	97.3	93.8	94.3	83.9	78.8	93.4	91.0	92.5
Higher	97.6	98.1	97.5	93.9	93.4	83.1	78.3	92.7	90.8	91.2
Alzheimer prevalence										
Lower	98.0	98.7	97.8	95.1	95.1	84.8	81.9	94.3	92.8	94.4
Medium	97.6	98.2	97.7	93.8	93.6	83.5	78.8	93.3	91.1	92.4
Higher	97.9	98.1	97.5	94.1	94.2	85.4	79.2	93.0	91.3	91.8
Pain prevalence										
Lower	97.9	98.2	97.6	94.6	94.6	84.7	79.8	93.9	91.6	93.0
Medium	97.7	98.4	97.6	94.1	94.1	84.2	79.8	93.2	91.7	92.1
Higher	97.9	98.4	97.7	94.2	94.0	84.2	80.1	93.3	91.7	93.4

(a)   Consumer Experience Survey questions are: Q1 'Treat with respect', Q2 'Feel safe', Q3 'Healthcare needs met', Q4 'Staff follow-up', Q5 'Things explained', Q6 'Like food', Q7 'Staff to talk to', Q8 'Staff knowledgeable', Q9 'Place well run', Q10 'Autonomy supported'.

(b)   Services RACS with more than 50% Indigenous residents are classified as Indigenous.

Source: AIHW analysis of NACDC and ACQSC CER data 2017–19.

Table C.3: Residential aged care Consumer Experience Report summary data, RACS service characteristics, 2017–19[a]

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Service size (residents)										
1 (5–20)	98.7	99.1	98.6	96.0	95.3	89.4	84.6	95.3	95.3	96.2
2 (21–40)	98.3	98.6	98.6	95.8	95.6	86.9	81.6	95.6	94.2	93.8
3 (41–100)	97.8	98.3	97.6	94.2	94.1	84.4	80.0	93.5	91.5	92.8
4 (101+)	97.5	98.0	97.1	93.3	93.5	82.5	77.6	91.7	89.9	91.7
Organisation type										
Not-for-profit	98.2	98.5	97.9	95.0	95.0	85.8	81.5	94.2	92.4	93.7
Government	98.3	98.6	98.6	95.1	95.5	85.7	81.6	95.7	94.7	94.0
Private	97.2	98.0	97.2	93.1	93.0	82.3	76.8	92.0	90.1	91.3
Remoteness										
Major cities	97.5	98.0	97.3	93.7	93.6	83.3	77.9	92.4	90.9	91.7
Regional	98.5	98.9	98.4	95.6	95.6	86.9	83.6	95.7	93.4	94.8
Remote	97.8	98.1	98.5	93.6	91.4	88.1	80.9	91.8	92.5	97.7

(a)   Consumer Experience Survey questions are: Q1 'Treat with respect', Q2 'Feel safe', Q3 'Healthcare needs met', Q4 'Staff follow-up', Q5 'Things explained', Q6 'Like food', Q7 'Staff to talk to', Q8 'Staff knowledgeable', Q9 'Place well run', Q10 'Autonomy supported'.

Source: AIHW analysis of NACDC and ACQSC CER data 2017–19.

Appendix D: Results of regression analysis

Table D.1: Regression analysis results for residential aged care Consumer Experience Survey summary data, odds ratios (OR) and confidence intervals (CI), 2017–19[a]

Service characteristic	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
					OR (95% CI)					
Respondent variables										
Sex	—	—	—	1.2	—	—	1.2	—	—	1.1
(female vs male)				(1.0–1.3)			(1.2–1.3)			(1.0–1.3)
Respondent type	—	1.8	2.1	1.4	—	0.7	1.3	—	1.2	3.6
(self vs representative)		(1.5–2.3)	(1.8–2.6)	(1.2–1.6)		(0.6–0.7)	(1.2–1.4)		(1.1–1.4)	(3.3–4.0)
Service characteristics by resident profile										
Male proportion	1.3	1.5	—	—	—	—	—	1.2	1.2	1.2
(1 vs 3)	(1.1–1.7)	(1.2–1.9)						(1.1–1.3)	(1.1–1.4)	(1.1–1.3)
Male proportion	1.1	1.4	—	—	—	—	—	1.1	1.0	1.1
(2 vs 3)	(0.9–1.4)	(1.1–1.7)						(1.0–1.2)	(0.9–1.1)	(1.0–1.2)
Indigenous proportion	—	3.9	—	—	—	0.3	—	—	—	—
		(1.2–12.7)				(0.1–0.9)				
English sp. proportion	0.5	0.5	0.5	0.6	0.7	0.7	0.6	0.7	0.7	0.8
(1 vs 3)	(0.4–0.7)	(0.4–0.7)	(0.4–0.6)	(0.6–0.7)	(0.6–0.8)	(0.7–0.8)	(0.6–0.7)	(0.6–0.8)	(0.6–0.8)	(0.7–0.9)
English sp. proportion	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	1.0
(2 vs 3)	(0.6–0.9)	(0.5–0.9)	(0.6–0.9)	(0.7–0.9)	(0.7–0.9)	(0.7–0.9)	(0.8–0.9)	(0.7–0.9)	(0.7–0.9)	(0.9–1.1)
High care proportion	0.9	—	—	1.2	1.2	1.1	1.1	1.2	1.0	—
(1 vs 3)	(0.7–1.2)			(1.0–1.3)	(1.1–1.4)	(1.0–1.2)	(1.0–1.2)	(1.1–1.4)	(0.8–1.1)	
High care proportion	0.7	—	—	1.0	1.0	0.9	0.9	1.0	0.8	—
(2 vs 3)	(0.6–0.9)			(0.9–1.1)	(0.9–1.1)	(0.9–1.0)	(0.9–1.0)	(0.9–1.1)	(0.8–0.9)	

(continued)

Table D.1 (continued): Regression analysis results for residential aged care Consumer Experience Survey summary data, odds ratios (OR) and confidence intervals (CI), 2017–19[a]

Service characteristic	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
					OR (95% CI)					
Mobility proportion (1 vs 3)	1.4 (1.1–1.8)	—	—	—	—	1.2 (1.0–1.3)	1.1 (1.0–1.2)	—	1.3 (1.1–1.5)	1.5 (1.3–1.7)
Mobility proportion (2 vs 3)	1.0 (0.9–1.3)	—	—	—	—	1.1 (1.0–1.1)	1.0 (0.9–1.1)	—	1.0 (0.9–1.2)	1.2 (1.0–1.3)
Alzheimer prevalence (1 vs 3)	—	1.4 (1.1–1.8)	—	—	1.0 (0.9–1.2)	0.8 (0.8–0.9)	1.0 (0.9–1.1)	—	—	1.1 (1.0–1.3)
Alzheimer prevalence (2 vs 3)	—	1.0 (0.8–1.2)	—	—	0.9 (0.8–1.0)	0.8 (0.8–0.9)	0.9 (0.9–1.0)	—	—	0.9 (0.8–1.1)
Service characteristics by service information										
Service size (1 vs 4)	—	1.9 (0.8–4.6)	2.0 (0.9–4.3)	1.6 (1.0–2.5)	—	1.3 (1.0–1.7)	1.5 (1.2–2.0)	2.3 (1.4–3.8)	1.8 (1.2–2.7)	1.7 (1.1–2.7)
Service size (2 vs 4)	—	1.6 (1.1–2.2)	1.9 (1.4–2.5)	1.5 (1.2–1.8)	—	1.3 (1.1–1.4)	1.1 (1.0–1.2)	1.6 (1.4–1.9)	1.5 (1.3–1.8)	1.2 (1.0–1.4)
Service size (3 vs 4)	—	1.2 (1.0–1.5)	1.2 (1.0–1.4)	1.1 (1.0–1.3)	—	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.0–1.2)
Organisation type (govt. vs private)	1.4 (0.9–2.1)	—	—	1.0 (0.7–1.3)	1.2 (1.0–1.6)	0.9 (0.7–1.0)	1.0 (0.8–1.1)	—	1.2 (1.0–1.6)	0.9 (0.7–1.2)
Organisation type (not-for-profit vs private)	1.3 (1.1–1.5)	—	—	1.2 (1.1–1.3)	1.3 (1.1–1.4)	1.1 (1.0–1.2)	1.2 (1.1–1.2)	—	1.1 (1.0–1.3)	1.2 (1.0–1.3)
Remoteness (major cities vs remote)	—	—	—	—	—	—	—	0.9 (0.4–2.0)	—	0.3 (0.1–0.9)
Remoteness (regional vs remote)	—	—	—	—	—	—	—	1.3 (0.6–2.7)	—	0.4 (0.1–1.1)

(a)   All variables in the table, across their full range, made statistically significant contributions to the respective model. However, regression coefficients that relate to individual contrasts may not show significance.

Source: AIHW analysis of NACDC and ACQSC CER 2017–19 data.

Acknowledgments

Abbreviations

AACQA	Australian Aged Care Quality Agency
ACFI	Aged Care Funding Instrument
AIHW	Australian Institute of Health and Welfare
CER	consumer experience report
NACDC	National Aged Care Data Clearinghouse
RACS	residential aged care service
the Commission	Aged Care Quality and Safety Commission

Symbols

—	nil or rounded to zero

Glossary

ACFI care level: The rating of a person's need for support in an **Aged Care Funding Instrument (ACFI)** assessment. The ratings are high, medium, low and nil. A rating is produced for each of the 3 care domains, namely: Activities of Daily Living, Cognition and Behaviour, and Complex Health Care.

Aged Care Funding Instrument (ACFI): A tool used to assess the care needs of people in permanent residential aged care and to allocate subsidies to residential aged care services. As a resource allocation tool, it focuses on those care needs that contribute most to the cost of care.

government: Describes an organisation type that manages aged care services (includes state and territory government and local government organisations).

not-for-profit: Describes an organisation type that manages aged care services (includes charities, religious organisations and community-based organisations).

permanent admission: People who enter a **residential aged care service** for long-term care, making it their ongoing place of residence.

private: Describes an organisation type that manages aged care services (includes publicly listed companies, and organisations registered as private companies).

resident: Any person who receives care and support in a **residential aged care service**.

residential aged care service (facility): A facility that provides **residential care**. The service must meet specified standards in the quality of the built environment, care, and staffing levels in accordance with the *Aged Care Act 1997* (Cwlth); sometimes referred to as 'nursing homes'.

residential care: A program that provides personal and/or nursing care to people in a **residential aged care facility**. As part of the service, people are also provided with meals and accommodation, including cleaning services, furniture and equipment.

respite: An alternative arrangement care arrangement for dependent people living in the community, giving people—or their carers—a short break from their usual care arrangements. Formal respite services are provided by **residential aged care services.**

service size: The count of approved places or 'beds' in aged care services funded by the Australian Government. These services include permanent or respite residential aged care. When these places are counted, they can be either occupied by an approved care recipient, or available to be occupied.

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Related publications

The AIHW hosts a dedicated aged care data website. Data and visualisations related to Quality in Aged Care, including Consumer Experience Reports, are available from the GEN website: https://www.gen-agedcaredata.gov.au/Topics/

Other GEN topics that might also be of interest are:

- people using aged care
- people's care needs in aged care
- services and places in aged care.

Consumer experience of residential aged care is assessed in a 10-question survey administered by the Aged Care Quality and Safety Commission. Consumer (resident) responses during 2017–19 were predominantly positive, especially regarding feeling safe, being treated with respect, and having healthcare needs met. Analysis indicates that personal mobility, resident group birthplace characteristics, facility size and organisation type (not-for-profit, government or private) are factors that affect consumers' responses.

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