Received: 23 May 2019 | Revised: 21 October 2019 | Accepted: 22 October 2019

DOI: 10.1111/ajag.12752

RESEARCH ARTICLE

Australasian Journal on Ageing WILEY

Prevalence and nature of resident-to-resident abuse incidents in Australian residential aged care

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Funding information
None.

Abstract

Objectives: To determine the prevalence of resident-to-resident abuse (RRA) in aged care facilities and to explore the nature, contributing factors and outcomes of abuse incidents.

Methods: Retrospective cohort study of residents in 13 aged care facilities between 1 January and 31 December 2017, using data extracted from organisational incident reports.

Results: A total of 169 RRA incidents were recorded, representing 0.56 incidents per 1000 bed days. 7.6% of residents were targets, and 6.9% exhibited aggression, in one or more RRA incidents over one year. In the majority of incidents (152, 89.9%), the aggressor had a cognitive impairment. Impacts on targets were mostly minor. The most common aggressor intervention was behaviour management (142; 84.0%).

Conclusions: Resident-to-resident abuse was found to be lower than in other reports. Typically, it involves residents with cognitive impairment and does not result in serious harm. Managing behavioural symptoms associated with cognitive impairment is critical in preventing and managing RRA.

KEYWORDS

aged care, aggression, elder abuse, nursing home

1 | INTRODUCTION

Resident-to-resident abuse or aggression (RRA) has been defined as "negative and aggressive physical, sexual or verbal interactions between long-term care residents that in a community setting would likely be construed as unwelcome and have high potential to cause physical or psychological distress in the recipient".[1 p. 78] RRA can result in harm for the target ranging from distress through to injury and death. RRA can also have an adverse impact on staff and other residents, by creating an unsafe living and working environment.

Existing research on RRA is relatively limited, particularly in Australian settings. The prevalence of RRA is difficult to estimate due to the lack of consistent, quality data[2,3] and inconsistent definitions and methods.[4] In a study of incidents reported to a US state ombudsman, RRA was estimated to occur at a rate of 3.4 incidents per 1000 bed days per year.[5] A Canadian study found that almost one quarter (23%) of residents perpetrated aggressive incidents within three months of admission, using a chart review methodology.[6] An analysis of national US survey data based on staff reports reported that, in "assisted living" residences, 7.6% of residents perpetrated physical aggression, 9.5% verbal aggression and 2.0% sexual aggression in the previous month.[7] Another US study reported that 20.2% of residents were targets of RRA one or more times during a 4-week period, using a combination of

six different methods of case finding.[8] A systematic review of sexual assaults in aged care facilities found that this form of abuse was under-researched and that there were no reliable estimates of prevalence.[9]

Given the paucity of research, there is limited evidence regarding the causes and predisposing factors for RRA.[3] This makes it challenging to develop and implement effective measures for prevention and response. Previous studies have reported that perpetrators of physical assaults are more likely to be male, more cognitively aware and have higher levels of physical functioning, as well as a history of aggression.[2] Similarly, perpetrators of sexual assaults in nursing homes are more likely to be male.[9] In an investigation of RRA incidents resulting in deaths in Australia between 2000 and 2013 (n = 28), a very high prevalence (nine out of ten) of dementia was found among both aggressors and targets.[10] Targets have been reported as more likely to be female and to have a cognitive impairment.[4]

Triggers to RRA incidents are not well understood, with communication misunderstandings and no apparent provocation reported as common in the literature.[2] A small qualitative study of perceptions of RRA aligns with this, with participants reporting a view of RRA either as expected in residential aged care environments, or conversely, as dangerous and unpredictable.[11] The literature emphasises the importance of managing residents with cognitive impairment as part of RRA prevention and response,[7] preferably using a person-centred approach, and notes that other potential contributing factors include medical conditions (pain, infection, constipation, etc), psychiatric illness, and personality disorders.[7,12,13]

For residential care providers, effective prevention and response strategies for RRA are a minimum requirement of ensuring that residents are safe.[14] Public concern about the safety of age care residents has been heightened by recent media attention to failures of care and the Royal Commission into Aged Care Quality and Safety.[15] Proactive approaches to monitoring and managing the risk of RRA are an important aspect of continuous improvement. These approaches include effective incident reporting systems, and policies and procedures for appropriate behavioural, clinical and environmental interventions to ensure resident safety and well-being when incidents occur. These approaches can mitigate and minimise the risk and the harms of RRA.

The aims of this project were to determine the prevalence of RRA in Australian residential aged care facilities and to explore the nature, contributing factors and outcomes of abuse incidents.

Policy Impact

Inclusion in mandatory reporting of resident-to-resident abuse incidents where the aggressor has a cognitive impairment will not necessarily improve safety and well-being outcomes for residents given that the key intervention is effective management of behavioural symptoms associated with cognitive impairment.

Practice Impact

A key strategy for minimising the risk to residents in aged care facilities of experiencing aggression from fellow residents is effective behaviour management for residents who are experiencing behavioural symptoms associated with cognitive impairment.

2 | METHODS

This was a retrospective cohort study of permanent residents in 13 residential aged care facilities between 1 January and 31 December 2017. The facilities were all operated by a single, not-for-profit provider; included metropolitan (n = 9) and regional (n = 4) locations in the state of Victoria, Australia; and ranged in size from 20 to 150 beds (median 54; mean 69.5), with a total bed capacity of 903.

Data on RRA incidents were extracted from the organisational incident reporting system (Riskman). This is an electronic system which is used to record all types of risk-related incidents, including those involving clients, staff and environmental hazards. Incident reports are entered into the system by staff who were directly involved with the incident, and organisational policy is that incidents are entered within 24 hours.

Resident-to-resident abuse incidents were defined as reported incidents which met the following criteria:

- Incident date between 1 January 2017 and 31 December 2017 inclusive
- Incident type "Residential client" (as opposed to incidents relating to home care clients, staff, visitors or non-individual incidents such as environmental hazards)
- Primary classification was elder abuse (physical, sexual or verbal) OR behaviour of concern (physical aggression, verbal aggression, intrusiveness, sexually inappropriate)
- Incident involved a resident as aggressor, a resident as target, and abusive behaviour.

A total of 402 records were extracted, and 89 subsequently excluded due to failing to meet the criteria above, leaving 313 records. Incidents commonly had multiple records in the system, in line with organisational reporting policies. For example, an incident may have one record with a primary classification of *Elder Abuse—Physical* which provided details of the target, and one record with a classification of *Behaviour of Concern—Physical aggression to other client* which provided details of the aggressor. Records relating

TABLE 1 Incident characteristics (n = 169)

	Number	% of category	% of all incidents (n = 169)
Abuse type			
Physical abuse	106		62.7%
Punch or strike	30	28.3	17.8
Grab/pull/poke/scratch	22	20.8	13.0
Push	17	16.0	10.1
Strike or push with object/ throw object	15	14.2	8.9
Slap	15	14.2	8.9
Threaten	2	1.9	1.2
Multiple bidirectional	4	3.8	2.4
Missing	1	0.9	0.6
Sexual abuse	29		17.2
Kissing on face or mouth	14	48.3	8.3
Touching under clothes	5	17.2	3.0
Touching through clothes	4	13.8	2.4
Sexual advance/harassment	4	13.8	2.4
Exposing	2	6.9	1.2
Verbal abuse	34		20.1
Location			
Dining room	52		30.8
Other communal area	77		45.6
Bedroom—target	25		14.8
Bedroom—aggressor	13		7.7
Bedroom—unknown	2		1.2
Time			
Early morning (6.00 AM-8.59 AM)	13		7.7
Late morning (9.00 AM-11.59 AM)	28		16.6
Early afternoon (12.00 PM-2.59 PM)	41		24.3
Late afternoon (3.00 PM-5.59 PM)	43		25.4
Early evening (6.00 PM-8.59 PM)	33		19.5
Late evening (9.00 PM-11.59 PM)	5		3.0
Overnight (12.00 AM-5.59 AM)	6		3.6

to the same incident were identified by matching the facility, date and time of the incidents. Matching records were merged to create a single record for each incident.

Variables for the study were derived from findings of existing literature, as reviewed above, and included characteristics of the incident (time, location, etc), the target and aggressor (sex, age, cognitive impairment), and the outcomes (actions taken, notifications). Data on cognitive impairment are routinely collected for aggressors but not for targets. Target cognitive impairment was able to be determined in some cases through information in text fields (eg, statement that "both residents have dementia"), or through recording of information about the same resident as an aggressor in a different incident.

Relevant data were extracted for the identified incidents and imported to Excel for analysis. Open-text data were coded manually into common themes. Data were summarised using descriptive statistics, with 95% confidence intervals for prevalence rates. Comparisons between subgroups of participants were analysed using chi-square or Fisher's exact test, depending on cell sizes.

Data on the number of occupied bed days by site and on the number residents at each site were extracted from a separate organisational database (Epicor) which is designed to support claims for government funding subsidies. The rate of RRA incidents was calculated by dividing the number of incidents by the number of occupied bed days, by site. The proportions of residents who had been targets and aggressors were calculated by dividing the number of unique targets and aggressors (respectively) by the number of unique residents across the one-year study period, by site.

Approval for this study by a Human Research Ethics Committee was not necessary, in line with the National Health and Medical Research Council (NHMRC) guidelines for quality assurance activities.[16] Specifically, the project met the stated conditions for quality assurance activities that are appropriately managed by alternative oversight processes. These include the following: that analysis was coincidental to standard operating procedures; and that analysis was primarily for the purpose of maintaining standards and identifying areas for improvement in the environment from which the data were obtained. This project was overseen by the organisation's Quality and Compliance Management Committee.

3 | RESULTS

During the 2017 calendar year, the number of unique permanent residents was 1178 and 169 RRA incidents were recorded. Almost two thirds of incidents were classified as physical abuse (62.7%), and three out of four (76.3%) incidents took place in communal areas (Table 1). A punch or strike was the single most common form of physical abuse and represented around one in six of all incidents (Table 1). Around half of the incidents took place between midday and 6.00 PM and a further 20% occurred in the evening (6-9 PM).

The 169 incidents represent 0.56 incidents per 1000 resident bed days (95% CI: 0.49-0.61). Rates varied between sites, from zero to 1.44 (median 0.32, interquartile range 0.17, 0.56).

The proportion of residents who had been a target of a RRA incident over the year was 7.6% (95% CI: 6.2%-9.3%), or approximately one in 13 residents. Proportions varied between sites, from zero to 16.6% (median 5.6%, interquartile range [IQR] 3.3%, 8.0%). The proportion of residents who were an aggressor in one or more RRA incidents during the year was 6.9% (95% CI: 5.5%-8.5%), or approximately one in 14 residents. Proportions varied between sites, from zero to 15.5% (median 6.5%, IQR 3.3%, 8.0%).

TABLE 2 Participant characteristics[a]

	Target	Aggressor	Both target and aggressor	*P*-value
Sex				
Male	21 (28.8%)	36 (56.3%)	9 (52.9%)	.003
Female	52 (71.2%)	28 (43.8%)	8 (47.1%)	
Total	73	64	17	
Age				
Min, Max	58, 105	59, 98	69, 94	.656
<65	5 (6.8%)	2 (3.1%)	—	
65-74	6 (8.2%)	7 (10.9%)	4 (23.5%)	
75-84	17 (23.3%)	17 (26.6%)	5 (29.4%)	
85-94	32 (43.8%)	27 (42.2%)	8 (47.1%)	
≥95	11 (15.1%)	8 (12.5%)	—	
Missing	2 (2.7%)	3 (4.7%)		
Total	73	64	17	
Cognitive impairment				
Yes	21 (28.8%)	51 (79.7%)	17 (100%)	n/a
No		2 (3.1%)		
Missing	52 (71.2%)	11 (17.2%)		
Total	73	64	17	

[a]Data missing on target for 17 incidents.

3.1 | Participants

Of 154 identifiable participants, 73 (47.4%) were targets only, 64 (41.6%) were aggressors only, and 17 (11.0%) were involved in incidents as both aggressors and targets (Table 2). The proportion of women was significantly higher among targets compared to the other two groups. Four out of five aggressors, including three quarters of those who were aggressors only, and all of those who were involved as both aggressors and targets, were reported to have a cognitive impairment. Nine out of ten incidents (152; 89.9%) involved an aggressor with a cognitive impairment. More than one in four targets (28.8%) were also reported to have a cognitive impairment, noting significant missing data on this variable. Half of all incidents (88; 52.1%) involved a target with a reported cognitive impairment.

Almost two thirds of aggressors (50/81; 61.7%) were recorded as an aggressor in only one incident during the year, accounting for almost one third of the incidents (50/167; 29.9%—see Table 3). At the other end of the scale, a small number of aggressors (8) were responsible for more than one third of all incidents.

In comparison of single-incident aggressors with multiple-incident aggressors, the only significant difference was reported cognitive impairment, and this was due to a higher rate of missing data among single-incident aggressors (Table 4).

3.2 | Outcomes

The impact of incidents on targets was mostly minor. In almost two thirds of cases, the target was unharmed (no distress, injury or other harm—see Table 5). Incidents where no harm was noted included the majority of sexual and verbal abuse incidents (24/27 sexual abuse incidents [88.9%—data missing for two incidents] and 23/27 verbal abuse incidents [85.2%—data missing for seven incidents]).

TABLE 3 Number of incidents per aggressor[a]

	Aggressor	Both aggressor and target	Total
Incidents per aggressor			
1	43 (43-36.8%)	7 (7-14%)	50 (50-29.9%)
2	8 (16-13.7%)	4 (8%-16%)	12 (24-14.4%)
3	6 (18-15.4%)	2 (6%-12%)	8 (24-14.4%)
4	3 (12-10.3%)	—	3 (12-7.2%)
5 or more	4 (28-23.9%)	4 (29%-58%)	8 (57-34.1%)
Total	64 (117)	17 (50)	81 (167)

[a]Columns show number of aggressors and in brackets the number of incidents and per cent of incidents. Aggressor information missing for two incidents. Comparison of groups is not significant ($P = .95$)

There is a significant amount of missing data regarding actions taken with the target, with only two thirds of incident records containing information about this (Table 5). Reassurance was the single most common action recorded, along with checking for injuries. Behavioural intervention was recorded for targets in one in four incidents, mostly involving monitoring (visual observations, behaviour charting), but also keeping target and aggressor separated (13 incidents; 7.7%). Medical interventions were recorded for 14 incidents (8.3%), and mostly involved simple local actions such as skin dressings and analgesia. There was one case of an ambulance being called; treatment was provided by paramedics without transfer. In another case, the target resident was sent for an X-ray to check for injuries.

Almost 90% of incidents had some action towards the aggressor described (Table 5). Behavioural interventions were recorded for four out of five incidents (84.0%). Medical interventions were recorded for half the incidents (51.4%) and included screening for urinary tract infections, administering medication, reviewing care plans and referring for GP or specialist review. Transfer out of the facility occurred in four cases and was considered in another four. Other interventions noted for both targets and aggressors included environmental actions designed to manage behavioural issues, particularly wandering and intrusiveness, such as sensor mats and changes to access (closing or opening doors). In four cases, an aggressor was moved to a different room within the same facility. There were two incidents reported externally (police and relevant government department), both of which were subsequently not followed up due to aggressor cognitive impairment,

Further analyses of the 57 incidents perpetrated by the eight high-volume exhibitors of aggression revealed that five of these eight were at one site, contributing to the high rate at this site. These eight aggressors were responsible for over half the sexual abuse incidents—in fact two aggressors were responsible for 14 out of the total 29 sexual abuse incidents. The eight were also responsible for the majority of the more serious harms to targets, including four out of the six falls, and five out of the ten skin injuries.

4 | DISCUSSION

This analysis indicates that around one in every 13 residents is reported to be the target of one or more instance of resident-initiated abusive behaviour in a 12-month period. The typical scenario involves one or more residents with cognitive impairment and does not result in serious harm.

The rate of incidents found in this study is lower than has been reported in the published literature previously, although there are notable methodological and other differences. A US study reported an average of 3.4 RRA incidents per 1000 bed

TABLE 4 Aggressor characteristics for single- vs multiple-incident aggressors

	Single-incident aggressor (n = 50)	Multiple-incident aggressor (n = 31)	*P*-value
Sex			
Male	22	18	.381
Female	21	11	
Missing	7	2	
Age			
<65 years	1	1	.331
65-74 years	6	3	
75-84 years	9	11	
85-94 years	18	12	
≥95 years	6	2	
Missing	10	2	
Cognitive impairment			
Yes	39	29	.043
No	1	1	
Missing	10	1	

days per year (as reported to the Ombudsman),[5] considerably higher than the rate of 0.56 found in this study. The data for this US study were highly skewed, with the median value (0.90 RRA incidents per 1000 bed days per year) much lower than the mean value, due to some large outliers. Also of note is the study was based on reports by volunteers who may have a lower threshold for reporting than staff, particularly in relation to verbal abuse, and on data from 1997 to 2002.

A Canadian study reported that 23% of residents displayed aggression in a 3-month period following admission,[6] also much higher than the rate found in this study, of 6.9% in one year. The Canadian study used a chart review method and reported twice as many verbal abuse incidents as physical abuse.[6] Chart review of the residents included in our study would be likely to identify additional instances of verbal aggression that were not reported as incidents. A recent study reported aggressor rates of 7.6% physical aggression, 9.5% verbal aggression and 2.0% sexual aggression per month in assisted living facilities.[7] These included incidents targeted to both staff and residents.

A US study reported that 20% of residents were targets of aggression in a 4-week period, including 5.2% for physical, 9.1% for verbal and 0.6% for sexual aggression.[8] While this is higher than the overall figure of 7.6% annually found in this study, the main difference would appear to be in relation to verbal abuse. This study used a combination of six data sources, and most incidents were identified through resident interviews. Of note, no incidents in the study were reported in the organisational incident reporting system.

The relatively low prevalence found in the present study may indicate good clinical management and high quality of care, resulting in fewer incidents in these facilities than other places. In support of this, interpretation is the fact that the reported interventions provided by staff align with recommended best practice care.[12,13] This includes the following: person-centred approaches that were not limited to reactive responses but included proactive strategies designed to prevent incidents (eg, active monitoring of behaviour); and a demonstrated understanding of the potential for medical issues such as infection to contribute to aggressive behaviour. Staffing profiles may also be important, with higher caseloads found to be positively correlated with RRA.[8] It may be that the settings for studies in other countries, and for earlier years, have fewer staff than in our study.

Furthermore, this study is based on organisational incident reports. The very existence of these incident reports indicates that the organisation has a culture of actively monitoring RRA, in contrast to other research which has reported low to non-existent reporting of RRA.[4,8]

Time since admission was not collected in the present study, and it is possible that the period immediately following admission is a particularly high-risk period. This is consistent with the fact that staff's ability to deliver individualised, person-centred care at this point is more limited, and residents are experiencing the stress of the transition. As residents adjust to their changed living arrangements, and staff develop their knowledge of individual needs, preferences and communication patterns, the risk of aggressive behaviour may decrease.

It is also possible that the low reported prevalence in this study reflects under-reporting. Under-reporting is a recognised problem with RRA,[4] and as illustrated above, data sources and collection methods have a significant impact on observed prevalence rates. No single method or source has been agreed as optimal.[8]

TABLE 5 Incident outcomes (n = 169)

	Number	%
Target outcomes		
Harms		
Notes indicate unharmed	110	65.1
Distress	22	13.0
Minor skin injury (scratch, tear bruise)	10	5.9
Fall	6	3.6
Missing	20	11.8
Actions taken		
No information recorded about actions taken	63	37.3
Reassurance	42	24.9
Checked for injury	40	23.7
Behavioural interventions—total one or more	45	26.6
Medical interventions—total one or more	14	8.3
Other intervention	22	13.0
Notify next of kin	128	75.7
Notify GP	112	66.3
Aggressor outcomes		
No information recorded about actions taken	19	11.2
Behavioural interventions—one or more	142	84.0
Medical interventions—one or more	87	51.5
Other intervention	29	17.2
Notify next of kin	142	84.0
Notify GP	50	29.6

4.1 | Study limitations

One limitation of this study is the nature and quality of the data from the Riskman system. For example, the systems relies on staff reports, with no link to confirmed diagnosis of dementia from a clinician. There is a limited range of data, with no information about variables such as level of cognitive impairment, other health conditions (eg, depression, diabetes) or length of stay. The quality of the data is variable with high rates of missing data for some variables, and some lack of clarity in descriptive text.

A second limitation is that the study was based on data from a single provider and region of Australia. Therefore, these findings may not necessarily be generalisable to other regions or providers. In Victoria, there are 760 residential aged care facilities in total, with 36% operated by not-for-profit providers; 43% by private providers; and 21% by the state government.[17] Facilities with different ownership, size or location may have different models of care, staffing profiles or resident profiles to those in the present study.

The exclusions for this study should also be noted. It did not include incidents involving respite clients (only permanent residents), nor incidents where someone other than a resident was the target or the aggressor. As such, there are additional incidents involving staff and visitors, as well as respite clients, which are not captured by this study.

The findings indicate that deliberately malevolent behaviour is extremely rare. In the vast majority of cases, due to cognitive impairment, the aggressor lacked insight into the impacts of their behaviour on others, and/or lacked the capacity to control aggressive impulses. This is in line with previous research which has identified cognitive impairment as a key factor in aggressive behaviours, particularly in combination with other identified contributors such as acute medical conditions, or long-term psychiatric or personality factors.[7,12,13]

The very high degree of cognitive impairment noted among aggressors, and to a lesser extent targets (although the latter is likely to be significantly under-reported), confirms that effective management of the behavioural symptoms associated with dementia and related conditions are a key strategy in preventing RRA. This includes a person-centred approach, which has been defined as incorporating treating people with dementia as individuals and looking at the world from their perspective.[18] In the context of aggressive behaviours, this approach includes using knowledge of, and paying attention to, individual ways of communicating and individual indicators of possible discomfort or distress,[13] and using of a range of situational and environmental strategies such as diversion, engagement, routines and separation of particular residents.[12] The finding that many of the most serious harms arose from a small number of high-frequency exhibitors of aggression confirms that intensive management and support in these cases is warranted.

The study has highlighted the influence of reporting cultures and practices on the observed rates of RRA. The participating organisation in this study has used the results in a number of ways to support continuous quality improvement, including reviewing reporting practices across all sites to ensure consistency, and revising incident reporting templates to support more complete and consistent reporting.

Future research exploring the prevalence of RRA across a larger number and type of providers would be valuable, as would inclusion of multiple data sources, and consideration of additional variables such as time since admission.

Aged care providers currently have mandatory requirements to report "reportable assaults" to the Australian Government Department of Health and the police. However, there is a specific exemption for incidents where the aggressor is a resident with a cognitive impairment.[19] The present study indicates that this approach is likely to significantly

underestimate the prevalence of abusive incidents experienced by residents. Proposals for a new Serious Incident Response Scheme are currently under consideration, with one option that removes this exemption.[20] This option would increase the burden of reporting and would need to be based on firm evidence that it would lead to improvements in residents' health and safety. A clinical governance approach may be more effective in supporting the safety and well-being of residents.

5 | CONCLUSIONS

This study has provided new insights into the prevalence and nature of RRA incidents in residential aged care facilities. It has found lower prevalence than in other reports and has identified that the typical scenario of RRA involves one or more residents with cognitive impairment and does not result in serious harm. It has highlighted the importance of management of behavioural symptoms of dementia and related conditions in preventing and managing RRA.

CONFLICTS OF INTEREST

The author is an employee of the organisation in which the study was carried out.

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How to cite this article: Joyce CM. Prevalence and nature of resident-to-resident abuse incidents in Australian residential aged care. *Australas J Ageing*. 2020;39:269–276. https://doi.org/10.1111/ajag.12752