

# Learning from complaints to the Health and Disability Commission Office: A case study into indicators of deterioration in aged residential care organisations in New Zealand

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## Abstract

**Objective:** To identify trends in complaints received by the Health and Disability Commissioner (HDC) about aged residential care (ARC) facilities in order to learn from and implement positive changes in care.

**Methods:** A case study of 24 deidentified publicly available HDC cases across three large New Zealand ARC organisations was completed. Cross-case analysis first involved analysis of each case individually and then compared all cases using inductive thematic analysis with the intention of drawing a single set of conclusions.

**Results:** The speed at which the events occurred was contributory to the complaint, with 58% of the cases being rapid in nature and with sepsis being the predominant contributing factor to rapid decline and death. Six main diagnoses were indicators of deterioration: nutrition/hydration was indicated in 22% of the cases, followed by sepsis 17%, wounds 17%, UTI/renal issues 15%, falls 15% and respiratory issues 15%.

**Conclusions:** Trends in Health and Disability complaints across multiple organisations can become a powerful tool for widespread quality improvement. This review highlights that the speed of deterioration triggered many complaints, especially in cases of sepsis which is possibly overlooked as a contributing problem. Also, that nutrition/hydration was indicated in many complaints and is an important condition-indicator. Trends in complaints are not generalisable to all large organisations; however, they can be applied to individual facilities.

## KEYWORDS

clinical deterioration, errors, long term care, mapping, quality improvement

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## 1 | INTRODUCTION

The fastest growing population in New Zealand is that of older adults. Approximately 790,000 older adults currently live in New Zealand, and this figure is expected to double by 2056. The average age of the 'older old' adult is also predicted to increase. For example, currently 10% of the population is over 71 years of age; however, by 2040, this will increase by 6 years and 10% of the population will be over the age of 77.<sup>1</sup> With advancing age, there is an increased risk that older adults will present with more complex healthcare needs, including non-communicable diseases and disability.<sup>2</sup> Because of an increased life span, it is likely that by 2040, 53% of older adults will require aged residential care (ARC) in the later years of their life.<sup>3</sup> Consequently, facilities now provide hospital-level models of care that are in line with these increased acuity levels.<sup>4,5</sup>

The decision for providers to invest in new long-term care facilities will depend on profitability and return on investment. However, care providers must ensure that meeting an increasing demand will not be at the expense of the quality of care.<sup>6</sup> All residential rest homes and hospitals in New Zealand are mandated under national health standards and are required to meet certification and surveillance audits.<sup>7</sup>

In New Zealand, the Health and Disability Commission (HDC) monitors healthcare and confers 10 legally enforceable rights on all consumers of health and disability services. The Commissioner's role is to decide if a formal complaint is deemed significant enough to investigate, and if so, the complaint file will be assigned to an investigator who will then identify the facts to be proven, such as what happened, when, where and why.<sup>8</sup> Health and Disability complaints involve an in-depth review by an HDC expert who interviews the complainant, the staff involved, and the organisation's management. The investigation triangulates information by assessing clinical records, nursing and medical notes and any incident forms available before deciding on the outcome for the facility being investigated.

Residential aged care complaints were the third highest 'location for complaints' of all grievances coming through to the Commissioner in 2020/21, behind District Health Boards and General Practitioner (GP) clinics, respectively. Furthermore, nurses—all nurses, not just those working in aged care—were the fourth most complained-about professional group following closely behind dentistry. Midwives were the second most professional discipline likely to be complained about, with GPs having the most complaints.<sup>9</sup> This is concerning for the aged care sector, as trying to attract more nurses and managers into ARC means that this environment is placed statistically at the apex of complaints.

### Policy Impact

In a case study analysis of Health and Disability Commission (HDC) complaints, conditions such as hydration and nutrition status and early detection of sepsis were key findings. We suggest that staff need more training to increase their ability to recognise unexpected early signs of deterioration and then tools to communicate rapidly with the multidisciplinary team and family, to help mitigate HDC complaints and improve quality of care.

When analysing the most common issues complained about in 2021, the HDC identified inadequate or inappropriate treatment as the most prevalent complaint, and missed/incorrect or delayed diagnosis was second. Other factors were inadequate or inappropriate examination or assessment, followed closely by failure to effectively communicate with the consumer.<sup>9</sup> Therefore, understanding how to reduce risk is critical.

Hibbert et al.<sup>10</sup> emphasise that sharing adverse events is vital for learning. The resources, time and detail that go into reports, such as complaints, provide a valuable opportunity to share them with the aged care community and for recommendations to be made.<sup>10</sup> If complaints can be de-identified and analysed, patterns emerge, common themes can be detected, and lessons learnt can be shared.<sup>10,11</sup>

Scant research was found around complaints in ARC, although the idea of analysing complaints seems logical and is highly valued.<sup>10,11</sup> One of the barriers to researching complaints concerns confidentiality, and another involves finding validated tools to use. A systematic review of complaints found that although they provide a unique insight into the problems within organisations, the techniques and methodologies used are inconsistent or do not provide enough depth, so there are variations in the frameworks used to guide the coding of issues underlying patient complaints. This means that data are non-standardised and it is difficult to make robust comparisons.<sup>12</sup>

The overall goal of this research was to identify HDC complaints in New Zealand by mapping our own unique observations and trends that may have been missed if using a standardised tool. This was achieved by reviewing 24 cases over three large organisations to identify themes that could guide initiatives to help improve service delivery. The results may be of value in reducing preventable harm to residents in aged care in general and potentially reducing complaints.

## 2 | METHODS

A case study is an empirical method that investigates a contemporary phenomenon in depth and within its real-world context.<sup>13</sup> Three large New Zealand ARC companies were chosen, as each provider is a large supplier of aged healthcare in New Zealand, and they have a high mix of hospital-level care beds in their portfolios. Each large company owns over 26 facilities, spread throughout New Zealand, and each had similar numbers of publicly reported HDC complaints. Complaints published by the HDC regarding the facilities being examined were found on the HDC website, and keywords were placed into the HDC's search engine 'Rest home/all occupations/all codes.' All 181 cases were screened to identify those pertaining to each of the organisations being examined. Trends in HDC reporting only became noticeable after 2007 as before 2007/2008 no names appeared on any reports. Therefore, results available were pooled from cases that spanned a 14-year period between 2007 and 2021. This yielded 154 potential cases, of which eight relating to each organisation were selected for analysis. Eight cases from each organisation were chosen by listing the case numbers for all agencies of interest, and selecting randomly until eight cases from each organisation were obtained.

The data analysis used an inductive approach. Inductive analysis is a way of condensing large amounts of raw data into a fine point summary and to compare the findings with the objective of the research and then create a new theory.<sup>14</sup> Reports were read through in their entirety to identify categories. A coding frame was developed mapping how and why each of the individual complaints was made to the HDC. Each case was analysed for its patterns: primarily, we assessed whether the complaint resulted in death and if so, whether this occurred rapidly (in less than 2 weeks) or slowly (in 2 weeks or more). We also noted the patient's predominant issues listed in the complaint. These were then grouped for similarity until we reached six main condition categories that underlined the incident or complaint. When there were multiple categories for one patient, these were listed in chronological order (1, 2, 3) as they occurred so that, potentially, a root cause could be identified. We also noted the agencies as A, B and C as we wanted to see if findings between agencies and their associated facilities are generalisable to other agencies (Table 1).

After tentative conclusions were drawn within each case, the analysis proceeded to examine if they were replicated across the 24 case studies. The cross-case comparisons were then checked for literal and theoretical replications.<sup>15</sup> Multiple cases can help understand

the differences and the similarities between them.<sup>16</sup> To strengthen the validity of the findings, a second researcher, JD, rechecked the themes for validity to help reduce bias.

Ethical approval was sought but was not needed as HDC complaints are deidentified and open to the public and accessible to anyone. Each case presented on the public forum contained detailed reports and no extra notes or information were used outside the complaints found online. However, all the providers' names have been removed to give additional anonymity.

## 3 | RESULTS

This analysis involved a random sample of 24 cases across three large organisations. There were 14 females and 10 males. The youngest resident was younger than 60 years and the oldest was in their 90's. Comorbidities were not assessed as they are not always listed accurately in the reports, and it was felt that they could identify residents.

On analysis of each ARC organisation, each had similar incidence in the speed of deterioration; however, the prevalence varied by organisation. ARC agency A had sepsis as the main issue, whereas the majority of ARC agency B's incidents centred around nutrition/hydration and renal/urinary tract infections (UTI). ARC agency C's incidents focused on respiratory/pneumonia or renal/urinary tract infections. The prevalence of rapid versus slow pathways was equivalent across the three agencies, with most cases being incidents where rapid deterioration led to complaints. Therefore, it became apparent that prevalence, in complaints, is not generalisable to all aged residential organisations; however, the findings are generalisable to all facilities (Tables 1 and 2).

Communication was a predominant theme noted in many of the cases in this review; however, assessing the interplay between communication and the events was not within the scope of this project. A word check was carried out on all selected cases, and the total number of times 'communication' was documented was recorded next to the case (Table 2).

All cases investigated in this review centred around the deteriorating patient—this occurred in 100% of the cases investigated (cases 1–24), and of these 75% ( $n = 18/24$ ) resulted in the death of the resident (cases 2–4, 7–12, 14–16, 18, 20, 21–24). Two distinct deterioration pathways were noted, rapid and slow. Most cases (58%,  $n = 14/24$ ) occurred rapidly between one and 14 days (cases 2, 4, 5, 7, 8, 10, 11, 14, 16, 18, 19, 20, 22, 24): also included in this rapid category were ( $n = 2/2$ ) cases that moved from slow to rapid (20, 22). Those cases that showed a slower deterioration (42%,  $n = 10/24$ ) ranged from 14 days to 3 months (1, 3, 6, 9, 12, 13, 15, 17, 21, 23).

TABLE 1 Resident demographics and rest home outcomes

Resident #	Rest home Gender age	Nutrition dehydration	Falls	Urinary tract infection (UTI) renal failure	Pressure injury wound	Sepsis	Pneumonia respiratory	Death	Length S = slow R = rapid
1	A-Fe-89		X					N	5 weeks (S)
2	A-Fe-mid-80s		X2nd	X1st		X3rd		Y	2 weeks/3 days (R)
3	A-Fe-No age cited	X						Y	4 months (S)
4	B-Fe-80s				X	X		Y	4 days (R)
5	C-Male-80	X						N	2 weeks (R)
6	B-Male-82	X					X	N	9 weeks (S)
7	B-Fe-90s						X1st	Y	5 days (R)
8	C-Male-86						X	Y	4 days (R)
9	B-Fe-90s			X1st	X2nd			Y	7 months (S)
10	A-Fe-77				X1st	X2nd		Y	5 days (R)
11	B-Fe-80s	X2nd		X1st		X3rd		Y	12 days (R)
12	C-Fe-80s	X1st		X2nd			X2nd	Y	2.5 months (S)
13	C-Male-86		X					N	9 months (S)
14	B-Male-77	X1st		X2nd				Y	3 days (R)
15	C-Male-90s		X1st	X2nd			X3rd	Y	1.5 months (S)
16	A-Male-90s				X1st	X2nd		Y	2 days (R)
17	C-Male-70				X			N	18 days (S)
18	B-Fe-70		X2nd				X1st	Y	7 days (R)
19	B-Male-<60		X					N	9 days (R)
20	A-Fe-87	X2nd			X1st	X3rd		Y	2-3 months/4 days (S-R)
21	A-Male-84	X1st			X2nd			Y	2 months (S)
22	A-Fe-late-80s	X1st	X2nd			X3rd		Y	2 months/2 days (S-R)
23	C-Fe-80s				X1st	X3rd	X2nd	Y	3.5 months (S)
24	C-Fe-84	X		X				Y	4 days (R)
Total	24	10/45	7/45	7/45	8/45	8/45	7/45	18 Y / 6 N	12 R + 2 S-R/10-S
Percentage	58% Fe, 42% Male	22%	15%	15%	17%	17%	15%	75% Y/25% N	Rapid 58%, Slow 42%

TABLE 2 Communication mentioned, by facility

Residential facility #	Communication mentioned throughout report
1	0
2	66
3	9
4	13
5	6
6	0
7	30
8	17
9	24
10	12
11	8
12	2
13	31
14	1
15	5
16	21
17	21
18	2
19	7
20	7
21	11
22	0
23	27
24	41
Total	Total 361-Average 15/facility

We next tried to isolate the themes that best described what contributed to the death or poor outcome which led to the complaint,<sup>16</sup> with the aim of identifying a diagnosis or condition indicator that could pose the greatest risk of an adverse outcome. Six broad themes were noted and defined as condition indicators that underlined the incident or complaint: (1) nutrition/hydration, (2) falls, (3) UTI/renal failure, (4) pressure injury/wound, (5) sepsis, and (6) pneumonia/respiratory. However, patients were given more than one indicator if that was noted in their reports (Table 1).

Nutrition/hydration were condition indicators found in almost a quarter of the cases (22%,  $n = 10/45$ ). Next, two condition indicators were equally presented: sepsis (17%,  $n = 8/45$ ) and wounds/pressure injury (17%,  $n = 8/45$ ), followed closely by the remainder of the condition indicators that had equal numbers: falls (15%,  $n = 7/45$ ), UTI/renal (15%,  $n = 7/45$ ) and respiratory issues (10%,  $n = 7/45$ ) (Table 1).

To gain an understanding of condition indicators that could alert staff to impending deterioration, we were interested in whether each condition could be used to predict a rapid or slow decline. This was to gain an understanding

TABLE 3 Cases and chronological order of events

Case #	1st	2nd	3rd
2	Renal/UTI	Fall	Sepsis
4	Pressure injury/ Wound		Sepsis
10	Pressure injury/ Wound		Sepsis
14	Renal/UTI	Nutrition <sup>a</sup>	Sepsis
16	Pressure injury/ Wound		Sepsis
20	Pressure injury/ Wound	Nutrition <sup>a</sup>	Sepsis
22	Nutrition	Fall	Sepsis

<sup>a</sup>Nutrition = (Nutrition/Dehydration).

TABLE 4 Cases that began with nutrition indicator, resulting in slower deterioration

Case #	1st	2nd	3rd
12	Nutrition <sup>a</sup>	Renal/UTI	Respiratory/ Pneumonia
21	Nutrition <sup>a</sup>	Pressure injury/ wound	
3	Nutrition <sup>a</sup>		
14	Nutrition <sup>a</sup>	Renal/UTI	

<sup>a</sup>Nutrition = (Nutrition/Dehydration).

TABLE 5 Cases that had pressure injury as a contributing indicator

Case #	1st	2nd	3rd
9	Renal/UTI	Pressure injury	
21	Nutrition <sup>a</sup>	Pressure injury	
23	Pressure injury	Respiratory/ pneumonia	Sepsis
16	Pressure injury		Sepsis

<sup>a</sup>Nutrition = (Nutrition/Dehydration).

of condition indicators that could alert staff to identify those most at risk and in need of a prompt response. There was a mix of rapid and slow deterioration in all the condition categories; however, sepsis contributed consistently to the most rapid deterioration (5 days or less). As mentioned earlier, 58% ( $n = 7/12$ ) of all cases that were reported to the HDC were from a rapid deterioration secondary to an infection/sepsis (2, 4, 10, 11, 16, 20, 22, 23), and all resulted in mortality (Table 1).

To try to find the root causes that led to the sepsis, the condition indicators were ordered as 1st, 2nd and 3rd as they were described in the HDC report, with a pressure injury featuring as the most common root cause of sepsis.



This means that a pressure injury could be an important indicator resulting in a complaint (Table 3).

Nutrition/hydration (cases 12, 21, 3, 14) and pressure injury /wounds (cases 9, 21, 23, 16) were the most prominent condition indicators that ultimately led to a slower deterioration, so we mapped out the order of events to see if any patterns emerged. Nutrition/hydration often preceded other condition indicators (Table 4), and those with a pressure injury/wound as an indicator had mixed results (Table 5). However, regardless of the slow nature of the deterioration, 60% of all cases that were slow in nature resulted in mortality.

All other categories (renal failure/UTI, respiratory/pneumonia) resulted in a 100% mortality rate except for residents who fell ( $n = 3/10$ ) or had nutrition/hydration ( $n = 2/10$ ) noted as a condition. Those with a diagnosis of falls and nutrition/hydration issues experienced a 30% and 20% survival rate, respectively, from this analysis.

## 4 | DISCUSSION

This case analysis of 24 cases has highlighted some additional understanding of which issues lead to complaints and can be useful for aged care agencies to apply to practice to prevent further incidents from occurring. This analysis demonstrated that deterioration was prominent in all cases. Two main themes around deterioration were found from this case analysis: (1) the deteriorating patient—rapid and slow and (2) lack of recognition of the early escalation signs of deterioration—both rapid and slow.

The speed of decline has been identified in previous literature. Murray et al. described three illness trajectories that are archetypal for palliative aged care (acute, intermittent, and gradual).<sup>17</sup> These definitions broadly describe how illness might progress in palliative or aged care. 'Acute' is a short period of decline, typically by patients who have cancer. 'Intermittent' is applied to patients who have long-term limitations with intermittent serious episodes, and 'gradual' is described as a prolonged decline experienced by patients with dementia or frailty. Our result of 58% of cases experiencing rapid decline contrasts with an earlier study by Finucane et al.<sup>18</sup> who identified dominant trajectories of slow decline in 78% of care home residents prior to death. The two studies are different however, as we explored complaints where events are not controlled, whereas the slow decline in Finucane's study is perhaps demonstrative of organised and planned care. The high proportion of residents with rapid decline among complaints to the HDC from this review is significant. It is important for staff and policy makers to understand the principles and trajectories of palliative care pathways in their routine practice; however, team members can meet

the needs of people with deteriorating health more effectively and potentially avoid complaints if they can recognise a deteriorating resident that is out of the context of expected palliative pathways.

Additionally, as reported by O'Neill et al.,<sup>19</sup> recognition of resident deterioration and timely communication with all concerned can be complicated. With unexpected and rapid decline, extra stress is placed on the family as they struggle to understand how their loved one's trajectory to death was so rapid. This shock, combined with grief, triggers unanswered questions and the desire for a family to understand, and so then they complain to the HDC. When changes are not recognised promptly, especially in hospital and dementia care, rapid deterioration can result in untimely hospitalisation or death that could have been prevented or delayed. This means that clinical care staff within facilities must be alert to signs of clinical deterioration among residents. They must take the appropriate steps to escalate concerns, respond appropriately and ensure that communication is clear with a focus on keeping the family updated, to help reduce the shock.

Recognition of the speed at which events occur leading to the death of the resident and any potential complaint needs corresponding skill and speed in identifying the rapidly deteriorating patient. Sepsis does occur rapidly and disproportionately in older adults, with more than 50% of cases affecting those aged 65 and older.<sup>20,21</sup> In addition, the outcomes of sepsis result in higher rates of mortality, organ damage, cognitive impairment, and permanent disability in older adults.<sup>22</sup> Older adults residing in long-term care facilities are at greater risk of infections complicated by sepsis. Furthermore, older patients who have infections often demonstrate atypical or absent clinical manifestations of diseases.<sup>23</sup> Nursing staff may not be adequately trained to identify early indicators of an infection or sepsis, and clinicians may not be immediately available on-site to evaluate the resident to determine if an infection or sepsis is present.<sup>23</sup>

Nutrition/hydration were the most commonly identified indicators of deterioration found in this case study, suggesting that these indicators are potentially important in leading to complaints to the Commissioner. Dehydration and malnourishment are long-standing and prevalent problems in ARC that result in much higher mortality rates compared to those of older adults living at home.<sup>24</sup> Not only is nutrition and dehydration linked to mortality, but these issues also contribute to poor quality of life, comorbidities and increased hospital admissions.<sup>25</sup> There is a lack of universally agreed-upon measurement of dehydration among ARC facilities worldwide, and there is a need to develop a reliable method for detecting dehydration in this population.<sup>26</sup> Eight key initiatives including regulation,

commissioning, dietary guidelines, menu planning and catering issues, residents' eating and drinking experience, screening, and monitoring, implementing and monitoring change, and staff training are recommended to bridge gaps and influence practice.<sup>25</sup>

This study also showed that pressure injury/wounds was linked to slow decline that ultimately led to mortality. Pressure injuries expose patients to severe morbidity and mortality and affect their quality of life.<sup>27</sup> One study assessed the prevalence of dying secondary to a severe pressure injury and found a prevalence of 66% ( $n = 68/103$ ) in adults above the age of 60.<sup>28</sup> A further study identified that those with pressure injuries lived 94 days compared to 414 days for those patients who did not.<sup>29</sup> Coleman et al.'s systematic review of pressure injury risk factors noted that it was difficult to isolate a single predictor of pressure injury risk because it is often caused by layers of complex conditions.<sup>30</sup>

This study identified six main condition indicators that were not dissimilar to four problems (pressure injuries, incontinence, malnutrition, and falls) that have been identified as serious health challenges for an ageing population. A previous study analysed 276 residents across 13 nursing care facilities in New Zealand. The findings revealed that 8% of the sample had pressure injuries, 20% malnutrition and 13% experienced falls.<sup>31</sup> Carryer's study identified incontinence, which ours did not; however, our study showed similar prevalence of nutrition/hydration (22%) and falls (15%), yet double the prevalence of wounds/pressure injury (17%). Carryer's study was a cross-sectional prevalence study, assessed on a single day, whereas ours examined complaints that often lead to death. However, both studies highlight the significance of these issues in ARC.

As the 24 cases were randomly chosen from any of the facilities that each agency owned, these findings can be applied to all residential homes and hospitals in New Zealand. However, our results show that condition indicators are not generalisable to aged care residential organisations. Analysing only one case or even a series of complaints within a single organisation may give some insight into what improvements may be beneficial but may not be a consistently reliable method to safeguard against future events for all facilities. Examining cases such as these, which were selected randomly, provides more insight into key themes or condition indicators. In particular, this emphasises the need for vigilance and speed in identifying sepsis, which, as an indicator, is often overlooked. This aligns with the complaints to the HDC in 2021, which were predominantly around inadequate or inappropriate treatment, missed/incorrect or delayed diagnosis and inadequate or inappropriate examination or assessment.<sup>9</sup>

## 4.1 | Communication

Failure to communicate effectively with the consumer was also highlighted as contributing to complaints from the HDC 2021 overview.<sup>9</sup> The findings from this case study support this, as although mapping indicators helped us to understand the clinical conditions that led to the HDC complaints, the ability to recognise the signs of deterioration and then communicate these was an overarching issue that resulted in the complaints featured in all cases in this review, with several deficiencies noted (Table 5). Poor communication is often identified between staff and between professions—especially ARC nursing staff and GPs—between staff and senior management, and particularly between staff and families. This was a common theme noted from the Health Commissioner's annual report in 2020 (this referred to all locations and professions, not specifically aged care facilities), with the highest number of complaints about care/treatment, at 64%, followed by communication, at 54%. Poor communication continues to appear as a significant issue and indicates that although people may be complaining about a care or treatment issue, they also feel that communication with them about that issue was lacking. This highlights the importance of clear and compassionate communication with people and their families.<sup>8</sup>

The issue of inadequate response to a complaint should be viewed in tandem with a failure to communicate effectively with family.<sup>5</sup> From the review of complaints between 2010 and 2014, specifically about aged care facilities, the most complained-about issues were 'failure to communicate effectively with family,' with this issue being present in 58% of cases and this was present consistently in 57%–60% of cases each year. This finding is not unexpected, given that around 70% of complaints made about aged residential facilities are made by family/friends of the resident.<sup>5</sup>

## 5 | CONCLUSIONS

Although analysis follows harmful incidents, more is needed to understand the underlying factors of events that result in a complaint to the Health and Disability Commissioner. The adoption of mapping, such as this case study, has much to offer and provides rich data and insight into practice reality. These results show that findings from one case or even multiple cases are not generalisable to all organisations. However, the results on speed and sepsis are generalisable to individual facilities. The main themes found in this review were not dissimilar to those found for residential care facilities in general, based on the annual report published by the HDC in 2021. However, deeper

analysis revealed that sepsis is a significant contributing factor to rapid deterioration of residents. Significantly, nutrition/hydration and pressure injuries appear to be early indicators of deterioration. Early recognition of the deteriorating patient and communicating this to the family will potentially prevent complaints as all parties are informed, with the potential to help dissipate the initial shock and subsequent grief. Sharing of these findings enables organisational change to occur and may benefit other aged care facilities.

## 5.1 | Recommendations

It is recommended that ARC facilities:

- Provide comprehensive education and training to staff on recognising signs and symptoms of sepsis and the risks associated with untreated infections.
- Review policies and procedures to enable timely escalation and response by the appropriate health professional.
- Use a sepsis tool such as the systemic organ failure assessment (SOFA) or EWS score to aid early identification, escalation, and treatment of deterioration.
- Enable early identification and escalation of residents with signs of weight loss, dehydration, and malnourishment to ensure treatment and management meets best practice standards.
- Enable prompt referral and following of policies and procedures through system redesign and clear communication pathways.
- Prioritise updating of resident information (including interRAI) as imperative for the accurate measurement and management of each resident's condition, including communication with family carers, and health professionals.

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## CONFLICTS OF INTEREST

No conflicts of interest declared.

## DATA AVAILABILITY STATEMENT

Data openly available in a public repository that does not issue DOIs The data that support the findings of this study are openly available in [Health and Disability Commissioner] at [<https://www.hdc.org.nz/decisions/search-decisions/?keywords=&filterType=1&filter=7B%22Occupations%22%3A%5B%5D%2C%22Rig>

<https://www.hdc.org.nz/decisions/search-decisions/all%20home%22%2C%22Retirement%20Village%22%5D%2C%22Page%22%3A1%2C%22Keywords%22%3A%22%22%7D>], reference number [search decisions/all occupations/rest home/retirement village].

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