www.pwc.com.au

Development of Aged Care Quality Indicators

Summary Report
30 June 2020

pwc

Table of contents

Disclaimer

Acknowledgements

PwC would like to thank the aged care sector, including residential aged care services, peak bodies and consumer representatives, for the time and expertise they provided throughout the consultation process. We would also like acknowledge the immense contribution to the project from residential aged care services that participated in the pilot of the quality indicators. Finally, our appreciation goes to the representatives of organisations on the Clinical Expert Group convened for the project, who provided technical and clinical advice on quality indicator development at multiple stages of the project.

Contact us

If you have questions about this report, please contact the PwC Aged Care Quality Indicators team on AgedCareQI@au.pwc.com or on 02 8266 6060.

The Development of Aged Care Quality Indicators project is part of the evolution of the National Aged Care Mandatory Quality Indicator Program

The National Aged Care Mandatory Quality Indicator Program

The National Aged Care Mandatory Quality Indicator Program (the QI Program) became mandatory from July 2019 for all Commonwealth subsidised residential aged care services (services). The new requirements are contained in law in the *Aged Care Legislation Amendment (Quality Indicator Program) Principles 2019*. The QI Program in its current mandatory format followed several years of development, including an initial pilot of quality indicators in 2015, and the introduction of a voluntary program.

Under the QI Program, services must report against the three current quality indicators (QIs) – pressure injuries, the use of physical restraint, and unplanned weight loss – every three months.

The purpose of the QI Program is to measure key outcomes focussed QIs that contribute to the safety and quality of care provided by residential aged care services.

The objectives of the QI Program are:

1. **For providers to have robust, valid data to measure and monitor their performance and support continuous quality improvement; and**
2. **Over time, to give consumers transparent, comparable information about quality in aged care to aid decision making.**

How does the Australian QI Program compare with what happens in other countries?

There are a number of other aged care quality indicator schemes in comparable countries and in other sectors (e.g. acute health and disability) that have evolved through a similar process to what is being undertaken in Australia. These systems have iterated, expanded and become more sophisticated over time through investment, industry support, change management, research, continuous evaluation and the development of an improved data set. Australia has the opportunity to learn from these systems to accelerate the maturation of the QI Program, learning from what has worked well, having regard to the sequencing of improvements to the scheme and avoiding any difficulties already negotiated by those who have developed similar schemes.

In the 2019-20 Budget, the Australian Government announced it would provide additional funding to introduce mandatory reporting for two new QIs relating to falls and fractures and medication management. The Department of Health (the Department) engaged a consortium of PwC, the Centre for Health Services Research Centre at the University of Queensland, and the Royal Australian College of General Practitioners to assist the Department to develop new QIs relating to falls and fractures and medication management, and to undertake a review of the existing quality indicators (QIs) included in the QI Program (pressure injuries, use of physical restraint, unplanned weight loss).

The objectives of the Development of Aged Care Quality Indicators project (the project) were to:

1 Develop, test, and pilot in the field two new evidence-based QIs within the residential aged care context in Australia – one relating to falls and fractures, and the other to medication management

2 Conduct an evidence-based review of the three current QI measures (use of physical restraint, pressure injuries, and unplanned weight loss) and the current process of reporting these to the Department. Based on the results of this, and as required by the Department, redevelop and pilot QI measures relating to the three existing domains.

The intended outcomes of this project are to inform the Government decision as to which falls and fractures and medication management QIs are included in the QI Program from 1 July 2021 and provide insights that may assist in the further development of the QI Program, including the existing QI domains.

These outcomes are intended to support service-level continuous quality improvement, consequent improved quality of care, as well as health and quality of life outcomes for older Australians receiving residential aged care services. It is also intended that existing and new QI measures will, in time, provide greater information about the quality of aged care service that support ongoing comprehensive and transparent processes within the aged care sector.

The project consisted of a number of steps, starting with a review of evidence in national and international literature

Overview of project stages

The project commenced in September 2019 and concluded in June 2020, and consisted of a number of activities:

Evidence review: A rapid targeted review of national and international literature to identify validated and statistically sound QIs relating to the five domains. Consultation with international and Australian experts in quality and safety indicators.

Aged care sector consultations: Broad consultation with the sector to gather feedback on the potential QIs identified in the evidence review.

Expert committee consultations: A Clinical Expert Group was convened to provide technical and expert feedback on the potential QIs at key points during the project.

Presentation of the potential QIs to the Department and QI selection: Favoured QIs were presented to the Department to inform the selection of the pilot QIs.

Pilot of potential QIs: Two pilot cycles were conducted to trial the relevance, appropriateness and usability of the piloted QIs with a diverse range of services across Australia.

Implementation considerations: Insights from each stage were consolidated to highlight implementation considerations for each of the pilot QIs and opportunities to enhance the overall QI Program.

The domains of quality in aged care included in the project

Pressure injuries	Use of Physical Restraint	Unplanned Weight Loss	Falls and Fractures	Medication Management
• Existing domains under the QI Program • Current QIs reviewed and potential alternatives and QI iterations identified through the evidence review and sector consultations • Revised QIs were piloted			• New domains announced in the 2019-20 Budget • Potential QIs identified by the evidence review and piloted	

Overview of the review of evidence

A review of the published and unpublished national and international literature was performed to identify potential QIs for the QI Program. Consultations were also held with key experts in Australia and internationally to understand similar programs in other aged care sectors, disability sectors and health care sectors. QIs identified through this process were evaluated in relation to the strength of evidence for the use of each QI in relation to its:

- **Definition and level of specification**
- **Scientific properties (e.g. validity and reliability)**
- **Context of current use**
- **Evidence of impact on quality of care outcomes**
- **Feasibility of data collection.**

Based on this assessment, QIs were classified into one of three tiers:

Tier 1: QIs which have a robust evidence and appear to be relevant for use in the QI Program.

Tier 2: QIs with some strong attributes or evidence of use in aged care but where some limitations existed to fully assess the QI.

Tier 3: QI measures that did not have established scientific properties but were relevant quality concepts that could be further considered for the QI Program.

Outcomes of the evidence review

- 64 potential QIs were identified across the five QI domains, with either robust evidence (Tier 1) or strong attributes with only minor limitations (Tier 2). This included:
  - 12 Pressure Injuries QIs
  - 8 Use of Physical Restraint QIs
  - 16 Unplanned Weight Loss Qis
  - 12 Medication Management QIs
  - 16 Falls and Fractures QIs
- 33 QI measures identified without established scientific properties but with relevant quality concepts (Tier 3).

Consultations were held with the aged care sector and a Clinical Expert Group on possible quality indicators

Aged care sector consultations

A consultation process with the aged care sector was undertaken during November and December 2019 to seek feedback on existing and potential new QIs. The consultation included diverse representatives from the sector, including residential aged care services, approved providers, peak bodies, consumer representatives from Council on the Ageing (COTA) and the Older Persons Advocacy Network (OPAN), as well as individual health and medical professionals, and organisations.

Three consultation options were used to gather feedback from the aged care sector:

Five face-to-face consultation workshops in Canberra, Sydney, Melbourne, Brisbane and Perth with a total of 90 participants.

Three video conference consultations to enable 40 stakeholders who could not attend the face-to-face consultations to provide feedback.

An open written consultation for the sector to provide detailed feedback on proposed QIs and implementation. 317 submissions were received.

The consultation process sought feedback from the aged care sector on the potential QIs, including in relation to:

- Which indicator/s in each domain would best meet the QI Program's key objectives?
- What are the strengths and limitations of each of the potential QIs?
- What, if any, modifications would be required for the QIs to meet the QI Program's key purpose and objectives?

Outcomes of the aged care sector consultations

- The consultations considered the advantages and disadvantages of each of the 64 QIs identified through the evidence review; 24 QIs across the five domains received overwhelmingly positive feedback from the aged care sector.

Clinical expert group consultation

A Clinical Expert Group was established by the Department for this project with representatives and key clinical experts from the sector and of particular relevance to QI fields. Key findings from the evidence review and aged care sector consultations were presented to the Clinical Expert Group to seek technical feedback and clinical expertise in relation to the potential QIs.

The Clinical Expert Group consisted of individual clinical experts and representatives of health and medical professional organisations:

- Aged Care Quality and Safety Commission
- Australian College of Rural and Remote Medicine
- Australian Commission of Safety and Quality in Health Care
- Australian Government Department of Health
- Australian Institute of Health and Welfare
- Australian Medical Association
- Dietitians Australia
- Nurse Practitioner (Goodwin Aged Care Services)
- Gerontological Physiotherapist (Australian Physiotherapy Association)
- Pharmaceutical Society of Australia
- Psychiatrist (extensive research experience in Ageing, Gerontology and Geriatrics)
- The Royal Australian College of General Practitioners
- The University of Queensland (Centre for Health Services Research)
- Wounds Australia

Outcomes of the evidence review

- The Clinical Expert Group supported sector feedback that QIs should be reported as a percentage of the total care recipients (people) assessed at each service.
- Of the 64 QIs identified in the evidence review, the Clinical Expert Group indicated a preference for, and centred their discussion on the clinical and technical details of 22 QIs across the five domains.

Based on the consultations, the best QIs were presented so the Department could decide what to pilot

Presentation to the Department and QI selection

A presentation to the Department in January 2020 summarised the findings from the evidence review and consultations, and outlined the QIs with the best evidence and support to include in the pilot.

Outcomes of the Presentation to the Department

- The Department selected 8 QIs for piloting in residential aged care services across the five domains (Table 1).

Table 1: Quality indicators selected for pilot, across five domains

Domain	Piloted QIs
Pressure Injuries	Percentage of care recipients with one or more pressure injuries, reported against each of the six pressure injury stages
Use of Physical Restraint	Percentage of care recipients who were physically restrained
Unplanned Weight Loss	Percentage of care recipients who experienced significant unplanned weight loss (five per cent or more) Percentage of care recipients who experienced consecutive unplanned weight loss
Falls and Fractures	Percentage of care recipients who experienced one or more falls Percentage of care recipients who experienced one or more falls resulting in major injury
Medication Management	Percentage of care recipients who were prescribed nine or more medications Percentage of care recipients who received antipsychotic medications

The pilot of potential QIs

A pilot of QIs was conducted across 192 residential aged care services from 2 March to 22 May 2020 to support decisions about the inclusion of these QIs in the QI Program. The key objectives of the pilot are outlined in Figure 1.

The pilot was divided into two six-week pilot cycles. The timing and key activities of the pilot cycles are described in Figure 2.

Figure 1: Pilot objectives

The pilot objectives were to examine:

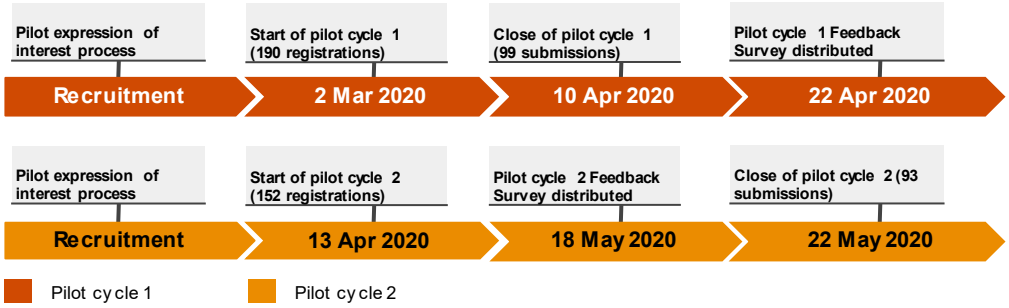
- The relevance, appropriateness and usability of the pilot QIs for the purposes of the QI Program
- The nature of data capture and data collection processes including implications for services
- Accessibility and usefulness of the specifically developed pilot support materials
- Potential format for reports summarising service results
- Enablers for implementation and learnings for consideration in the further development of the QI Program

A pilot of the QIs was undertaken to develop evidence of the use of the QIs in Australian residential aged care services

Pilot of potential QIs (continued)

Figure 2 provides an overview of key pilot dates.

Figure 2: Key pilot dates and activities



Sampling approach

PwC developed a purposive sampling approach to recruit a diverse range of services across urban, rural and remote, and states and territories to be represented in the pilot. The sample was a convenience sample of services that volunteered to participate.

The sampling approach aimed to recruit a representative sample from the population of approximately 2700 services in Australia, in relation to service location, geographical classification, type, size and organisational structure.

Pilot recruitment

An open recruitment process was conducted to encourage broad sector interest and involvement in the pilot. Pilot advertising materials were disseminated sector-wide through the following channels, both mass distribution and targeted:

- Aged and Community Services Australia Conference October 2019
- National Aged Care Alliance meeting November 2019
- The Department's Aged Care Provider Newsletter
- The Department's Bulk Information Distribution System
- Direct email approaches to services as part of targeted recruitment of underrepresented subpopulation groups

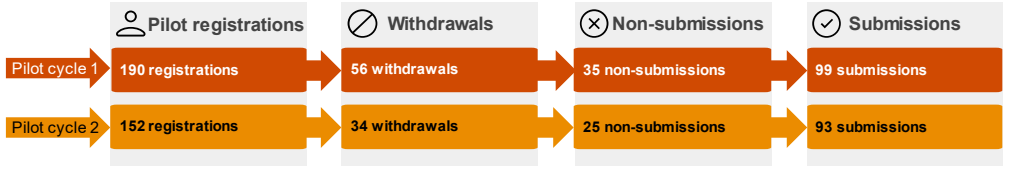
Over 370 services expressed an interest to participate in the pilot.

Pilot participation

There were 192 data submissions from 118 services across the two pilot cycles. 99 services submitted data in pilot cycle 1, while 93 services submitted data in pilot cycle 2. The Pilot Feedback Survey received 71 submissions providing services' feedback on the appropriateness and usability of the pilot QIs, implications of data collection and usefulness of pilot resource materials.

The breakdown of services involved in the pilot is outlined in Figure 4 on page 8. This includes information about services who registered but had to withdraw mid-pilot and services who remained registered but did not submit data.

Figure 3: Overview of pilot participation



Note: 'Withdrawals' represents services that contacted the PwC pilot support team to formally withdraw from the pilot, while 'non-submissions' represents the number of services that remained registered in the pilot but that did not submit pilot data

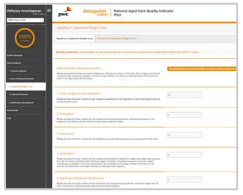
The pilot included a range of different residential aged care services across Australia

Pilot resources

A range of supporting guidance materials were developed to support services' participation in the pilot. In addition, a dedicated telephone hotline and mailbox was established to coach services and provide ongoing clinical and non-clinical support before, during and after the pilot.

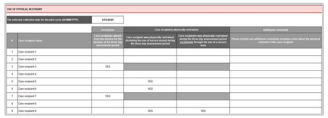
Pilot Handbook

Pilot Data Portal



Service reports

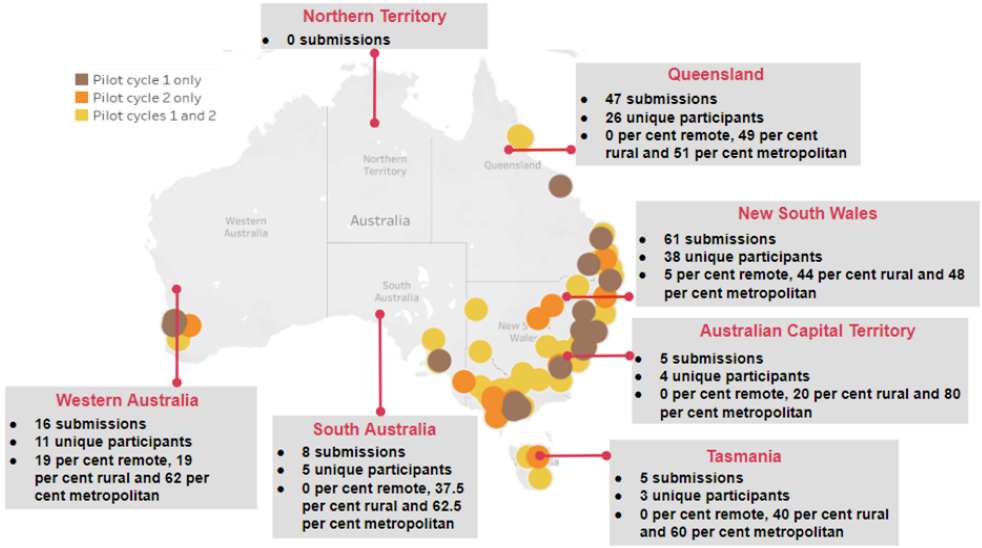
Data recording templates



The services who participated in the pilot:

- All States and Territories, except for the Northern Territory were represented.
- All geographical classifications, with remote, rural and metropolitan services.
- A range of service types participated, including private, religious, charitable, community based and government services.
- Services of different sizes, including services with <10 and up to 50+ employees, and services with <25 places and up to 100+ places.

Figure 4: The location of participating services in the pilot



Note: Two services in WA, and one service in QLD have been excluded from the image to retain the confidentiality of the services.

Pilot limitations and considerations

1. **The sudden and significant emergence of COVID-19 impacted the pilot.** Despite ongoing coaching and support to services in the pilot, 54 services withdrew from pilot cycle 1, and 34 from pilot cycle 2, indicating COVID-19 pressures as the reason for their withdrawal. Social distancing and other measures used by services to respond to COVID-19 did not appear to influence QI results, with limited variation observed between pilot cycles (noting these measures would have been expected to impact pilot cycle 2 more due its timing).
2. **Services volunteered for the pilot.** It is possible that participating services meaningfully differ from the rest of the residential aged care services in Australia.
3. **The cause of variation in performance for each QI between services and within services across both pilot cycles** cannot be independently verified and could be attributable to differences in quality of care, contextual information about the service (e.g. health profile of people in the service) or different interpretations of data collection requirements. The raw data provides an approximation of the range of the results that may be received against each QI; however, it is not suitable for drawing conclusions on the differences in relative performance of different service types, establishing reference ranges as a baseline for continuous improvement, or trend analysis.

This has been considered when generalising the pilot findings to all residential aged care services across Australia and evaluating the relevance, usability and appropriateness of the QI for the QI Program.

Revised Pressure Injuries QIs were developed and piloted

Overview of Pressure Injuries QI

The current Pressure Injuries QI in the QI Program reports the number of pressure injuries at different stages per 1000 bed days in the service (using the National Pressure Injury Advisory Panel pressure injury classification system). Based on the evidence review and sector consultations, a new QI for pressure injuries was piloted that reported a percentage of people in the service with one or more pressure injuries, at different stages (based on the ICD-11-Australian Modified (AM) [2019] classification system). People with pressure injuries that were acquired outside of the service in the past three months were included but also reported separately.

Table 2: QI selected for pilot – Percentage of care recipients with one or more pressure injuries, reported against each of the six pressure injury stages

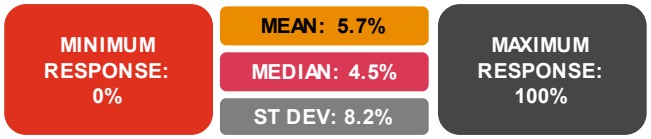
Criteria	Description
Pilot collection	One observation assessment for each person during the six-week pilot cycle.
QI reporting	People with one or more pressure injuries. People with one or more pressure injuries reported against six pressure injury stages: • Stage 1 Pressure Injury • Stage 2 Pressure Injury • Stage 3 Pressure Injury • Stage 4 Pressure Injury • Unstageable Pressure Injury • Suspected Deep-Tissue Injury
Additional reporting	• People who acquired one or more pressure injuries outside of the service in the past three months, reported against each of the six pressure injury stages.
Exclusions	• People who did not agree to undergo an observation assessment for pressure injuries. • People who were absent from the service for the duration of the assessment period.

Table 3: National average – pilot results

Pilot results	Value
QI: Percentage of care recipients with one or more pressure injuries	5.7%
QI: Percentage of care recipients with one or more pressure injuries reported against six pressure stages:	
Stage 1 Pressure Injury	3.0%
Stage 2 Pressure Injury	2.1%
Stage 3 Pressure Injury	0.4%
Stage 4 Pressure Injury	0.2%
Unstageable Pressure injury	0.1%
Suspected Deep-Tissue injury	0.2%
Percentage of care recipients who acquired one or more pressure outside of the service	0.9%
Number of care recipients assessed for this QI	11,408

Summary pilot results (192 pilot data submissions)

QI: Percentage of people with one or more pressure injuries



> ***"I think it was valuable collecting data on pressure injuries which occurred outside the home."***
>
> - aged care service involved in the pilot

Summary of findings

- A revised QI was developed and piloted in response to the evidence review and sector feedback on the current QI, the QI measures the percentage of people with one or more pressure injuries, reported against six pressure injury stages.
- The revised QI performed well when piloted in services and is supported by the sector and clinical experts.
- 67.1 per cent of pilot survey respondents reported that the pilot QI was more appropriate than the existing QI in the QI Program.
- The majority of pilot survey respondents (77.1 per cent) reported the QI provides meaningful and actionable insights about an individual's care.
- In the pilot, a small proportion of people in residential aged care services had one or more pressure injuries (5.7 per cent). Most people who had pressure injuries, had Stages 1 or 2. There were very few services reporting people with pressure injuries from Stage 3 and beyond. This was expected based on advice from clinical experts and comparison with similar data sources.
- The range of service responses for people with one or more pressure injuries should allow services to monitor changes in performance, support quality improvement, and provide consumers with the ability to compare information about quality in aged care services.
- There were very low percentages of pressure injuries acquired outside of the service (0.9 per cent). There is strong support from the sector to reporting externally acquired pressure injuries separately.
- Mixed feedback was received on the ease of data capture for this QI – with services with access to electronic record management systems or other technology generally finding data collection easier.

A revised QI for the Use of Physical Restraint was developed and piloted

Overview of Use of Physical Restraint QI

The current QI Program reports two categories of use of physical restraint: intent to restrain and physical restraint devices, reported per 1000 bed days. The data is collected by carrying out three observation assessments over three days during the data collection period. Based on the evidence review and sector consultations, a new QI for use of physical restraint was piloted that measures the percentage of people in the service who have been physically restrained. The pilot QI required services to perform one audit of their restraint records over a three-day period to collect the data. The use of secure areas within a service is considered as physical restraint under the *Quality of Care Principles 2014.* However, based on sector feedback, the use of physical restraint exclusively by secure area alone was also reported separately.

Table 4: QI selected for pilot – Percentage of care recipients physically restrained

Criteria	Description
Pilot collection	One three-day record review for every person
QI reporting	People who were physically restrained
Additional reporting	People who were physically restrained only by the use of a secure area
Exclusions	People who were absent from the service for the duration of the assessment period

Potential impact of COVID-19

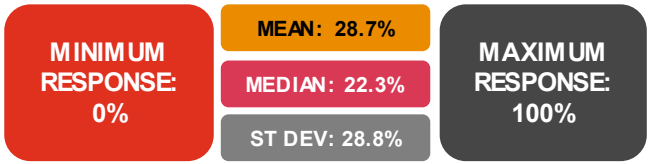
Some services indicated that they anticipated that required responses to COVID-19 could potentially result in an increased use of secure areas to 'lock-down' their service – and impact on their results in the pilot, particularly in pilot cycle 2. While some resulting variation was anticipated, a comparison of the data for this QI from pilot cycle 1 and pilot cycle 2 showed minimal variation. In other words, an increase in the use of physical restraints (including environmental restraints) due to service responses to COVID-19 was not observed in the pilot.

Table 5: National average – pilot results

Pilot results	Value
QI: Percentage of care recipients who were physically restrained	**28.7%**
Percentage of care recipients who were physically restrained by use of a secure area only	18.5%
Number of care recipients assessed for this QI	11,402

Summary pilot results (192 pilot data submissions)

QI: Percentage of people who were physically restrained



> ***"I definitely prefer this method of data collection… it is less time consuming than the current method."***
>
> - aged care service involved in the pilot

Summary of findings

- A revised QI that measures the percentage of people physically restrained was developed and piloted in response to the evidence review and sector feedback on the current QI.
- The revised QI performed well when piloted in services and is well supported by the sector and clinical experts. Over half (55.6 per cent) pilot survey respondents reported that the pilot QI was more appropriate than the existing QI in the QI Program, while an additional 23.8 per cent were unsure.
- About a quarter of people had been physically restrained (28.7 per cent). However, the percentage of people who had been restrained only by the use of a secure area was 18.5 per cent and the percentage of people who were physically restrained by means other than a secure area only was 10.2 per cent. These results were expected based on advice from clinical experts.
- There was a very broad range of responses in relation to the percentage of people physically restrained (between 0 and 100 per cent). This upper range was reported by services who have all people residing within secure areas. This variation should allow services to monitor changes in performance and support improvement and to provide consumers with the ability to compare information about quality in aged care services.
- The national average results show that close to two thirds (64.3 per cent) of people who were physically restrained, were restrained exclusively by the use of a secure area.
- The majority of pilot survey respondents (73.0 per cent) reported that the piloted QI provides meaningful and actionable insights about an individual's care.
- Two thirds (67.2 per cent) of pilot survey respondents reported the data collection and reporting process for this QI process to be more feasible than the current QI in the QI Program. Many services provided commentary in their feedback that a record audit was more feasible than performing nine observations to count the use of physical restraint over the quarter (as currently required under the QI Program).

A revised QI for Significant Unplanned Weight Loss was developed and piloted

Overview of Significant Unplanned Weight Loss QI

The current QI Program reports the number of people in residential aged care services who have experienced three kilograms or more of unplanned weight loss per 1000 bed days over the quarter. The findings from the evidence review and sector consultations highlighted that the three kilogram threshold for the amount of weight loss defined does not provide a relative measure that takes into consideration the initial weight of the person and is not aligned with current evidence-based literature. As a result, the piloted QI measured the percentage of people in the service who had experienced five per cent or more of their body weight in unplanned weight loss over the pilot cycle. As the pilot was held over two, six week time periods, the data collection for the QI was adapted to fit the time period – but is significantly shorter than the three month data collection in the QI Program.

Table 6: QI selected for pilot – Percentage of care recipients who experienced significant unplanned weight loss

Criteria	Description
Pilot collection	The weight of each person is collected in week one (starting weight) and week five (finishing weight), then compared to determine weight loss
QI reporting	People who experienced significant unplanned weight loss (five per cent or more)
Exclusions	• People who did not want to be weighed at the starting and/or finishing weight data collection dates • People who were receiving end-of-life care • People not assessed for significant unplanned weight loss because they did not have a starting and/or finishing weight recorded and comments providing explanation

***Note**: The data collection for this QI was adapted to fit the six-week pilot cycles. As a result, significant unplanned weight loss was measured over a shorter timeframe than the quarterly reporting period of three months in the QI Program. It is expected that the reduced timeframes resulted in lower percentages of people experiencing significant unplanned weight loss. Reporting the QI quarterly, as occurs in the QI Program, would increase the validity and reliability of the results.*

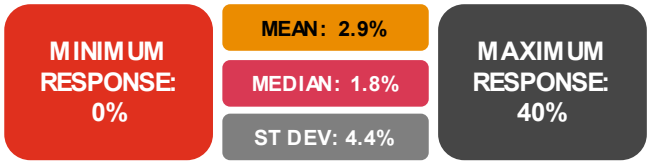
As a result of the timeframe for the pilot for this domain, the quantitative findings are less able to be generalised to all services nationally, and the focus for the analysis is on the qualitative results, in particular the relevance, appropriateness, and usability of the QI and the nature of data collection.

Table 7: National average – pilot results

Pilot results	Value
QI: Percentage of care recipients who experienced significant unplanned weight loss (five per cent or more)	**2.9%**
Number of care recipients assessed for this QI	**10,746**

Summary pilot results (192 pilot data submissions)

QI: Percentage of people who experienced significant unplanned weight loss (five per cent or more)



> ***"An overall percentage dependant upon starting weight is a more informed measure."***
>
> - aged care service involved in the pilot

Summary of findings

- A revised QI was developed and piloted in response to the evidence review and sector feedback; this QI measures the percentage of people who experienced significant unplanned weight loss of five per cent or more.
- The revised QI performed well when piloted in services and is supported by the sector and clinical experts.
- The inclusion of a percentage of body weight threshold of weight loss (five per cent of body weight) is well supported and aligned with international evidence.
- A small proportion of people in residential aged care services experienced significant unplanned weight loss in each six week pilot cycle (2.9 per cent), likely impacted by the reduced timeframes for the pilot.
- There was mixed feedback on retaining the exclusion criteria of people who are experiencing end-of-life care from data collection.
- Pilot survey respondents provided favourable feedback for the significant unplanned weight loss QI with the majority (83.3 per cent) assessing that this QI provides meaningful and actionable insights.
- Data collection was considered burdensome by some services, within the six week time frame of the pilot. Many serves considered the auto calculation data collection template that was provided as part of the pilot an essential tool to aid data collection.

A revised QI for Consecutive Unplanned Weight Loss was developed and piloted

Overview of Consecutive Unplanned Weight Loss

The current QI Program reports the number of people in residential aged care services who have experienced consecutive unplanned weight loss (of any amount) each month for three months. Based on the evidence review and sector consultations, a revised QI was developed for pilot. The piloted QI measured the percentage of people in the service who had experienced unplanned weight loss every month for three months. As the pilot was held over two, six week time periods, the data collection for the QI was adapted to fit the time period – but is significantly shorter than the three month data collection in the QI Program.

Table 8: QI selected for pilot – Percentage of care recipients who experienced consecutive unplanned weight loss

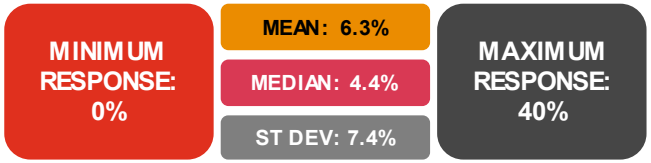
Criteria	Description
Pilot collection	The weight of the person was collected before the pilot cycle (previous weight), as well as in week one (starting weight), week three (middle weight) and week five (finishing weight), then their weight was compared to determine if there was consecutive weight loss of any amount across all four weights
QI reporting	People who experienced consecutive unplanned weight loss of any amount
Exclusions	• People who did not agree to be weighed at the starting, middle and or/finishing weight data collection dates • People who were receiving end-of-life care • People who did not have each of their previous, starting, middle and/or finishing weight recorded

Table 9: National average – pilot results

Pilot results	Value
QI: Percentage of care recipients who experienced consecutive unplanned weight loss	6.3%
Number of care recipients assessed for this QI	10,746

Summary pilot results (192 pilot data submissions)

QI: Percentage of people who experienced consecutive unplanned weight loss



> ***"The 6 week time frame was difficult to complete all three weight recordings...a longer time frame would be more acceptable"***
>
> - aged care service involved in the pilot

Summary of findings

- A revised QI was developed and piloted in response to the evidence review and sector feedback; this QI measures the percentage of people with consecutive unplanned weight loss of any amount.
- The reframing of the QI to report against the percentage of people who experienced consecutive unplanned weight loss is well supported by the sector and clinical experts.
- A relatively small proportion of people in residential aged care services experienced consecutive unplanned weight loss (6.3 per cent) in the pilot. However, reporting on a three-monthly basis in the QI Program is expected to produce higher percentages than was reported using a timeframe adapted to the six-week pilot cycle.
- It is possible that the pilot results reflect some overlap between people who experience both consecutive and unplanned weight loss. Despite this, expert advice is that both QIs are clinically meaningful and support quality improvement at a service level and should be included in the QI Program.
- A threshold of minimum quantity of weight loss was requested by some services in order for this QI to be more useful to them. However, the clinical experts agreed that the QI was suitable to include within the QI Program without a minimum threshold on the grounds that the indicator provided useful information regarding gradual trends of weight loss which can become clinically significant over time. Evidence-based literature and relevant experts could not identify a minimum threshold (in kilograms or percentage of body weight) to include in the QI.
- The six week time frame of the pilot is likely to have influenced the results and if the QI was implemented into the quarterly cycle of QI Program data, different results could be expected.

New Falls and Fractures QIs were developed and piloted

Overview of Falls and Fractured QIs

The quality indicator domain of falls and fractures is new to the QI Program. Based on the evidence review and sector consultations, two new QIs were developed and piloted. These QIs measured the percentage of people in the residential aged care service who had fallen in the past three months, and of those who had fallen, the percentage who had experienced a major injury from their fall. The sector and clinical experts agreed that it was important that major injuries other than fractures experienced from falls are included in the QI.

Table 10: QI selected for pilot – Percentage of care recipients who experienced one or more falls resulting in major injury

Criteria	Description
Pilot collection	Falls and falls resulting in major injury are collected by reviewing care records for each person over a three-month period
QI reporting	• People who experienced one or more falls at the service • People who experienced one or more falls resulting in major injury at the service
Exclusions	• People who were absent from the service for the duration of the assessment period • People who only experienced a fall or fall-related major injury that occurred while they were away from the service and not under direct supervision of service staff

> ***"This was probably the easiest of the QIs for us to complete as we have excellent reporting of falls. Loved the spreadsheets!"***
>
> - aged care service involved in the pilot

Table 11: National average – pilot results

Pilot results	Value
QI: Percentage of care recipients who experienced one or more falls	27.1%
QI: Percentage of care recipients who experienced one or more falls resulting in major injury	1.8%
Number of care recipients assessed for this QI	11,876

Summary pilot results (192 pilot data submissions)

QI1: Percentage of people who experienced one or more falls,

QI2: Percentage of people who experienced one or more falls with major injury

MINIMUM RESPONSE: QI1 - 0%, QI2 - 0%

MEAN: QI1 - 27.1%, QI2 - 1.8%

MEDIAN: QI1 - 27%, QI2 - 1.1%

ST DEV: QI1- 11.7%, QI2 - 2.7%

MAXIMUM RESPONSE: QI1 - 70.7%, QI2 - 18.8%

Summary of findings

- Two new QIs were developed, based on the evidence review and sector feedback, that measure the percentage of people who had a fall in the previous three months, and the percentage who had experienced a fall resulting in major injury.
- The falls and fractures QIs performed well when piloted in services and are supported by the sector and clinical experts.
- On average, over a quarter of people experienced one or more falls (27.1 per cent). Clinical experts indicated that this was higher than expected when compared with comparable international and Australian information. The range of service responses for people who experienced one or more falls was between 0 and 70.7 per cent. This variation should allow services to monitor changes in performance and support improvement and to provide consumers with the ability to compare information about quality in aged care services.
- There was a very low percentage of people who had experienced falls with a major injury (1.8 per cent national average). However, clinical experts indicated that this was a higher proportion than expected when compared with comparable international and Australian information. Major injuries from falls represents a serious burden of disease and impact on quality of life when scaled across the residential aged care population across Australia and is considered to be an important QI to drive quality improvement in minimising fall-related major injuries.
- Three quarters (75.0 per cent) of pilot survey respondents reported that the falls and fracture QIs provided meaningful and actionable insights about an individual's care. Almost all pilot survey respondents (88.1 per cent) reported the QI data collection and reporting process was feasible for inclusion in the QI Program.
- Importantly, given the small prevalence values, consumers may need contextual information to understand and use this QI to make informed decisions about the quality in aged care services.

A new Medication Management QI for Polypharmacy was developed and piloted

Overview of Medication Management – Polypharmacy

The quality indicator domain of medication management is new to the QI Program. Based on the evidence review and sector consultations, a QIs measuring polypharmacy (or the use of nine or more medications by a person) was developed and piloted. The QI measures the percentage of people in the service who were prescribed nine or more medications.

Table 12: QI selected for pilot – Percentage of care recipients who were prescribed nine or more medications

Criteria	Description
Pilot collection	A review of medication charts and/or administration records for each person in a single collection date
QI reporting	People who were prescribed nine or more medications
Exclusions	People admitted to hospital on the collection date

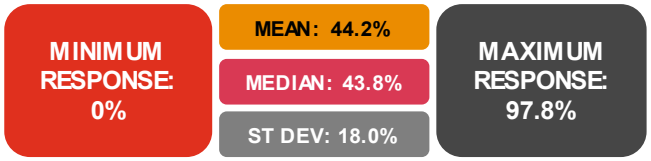
> ***"A medication prescription sits with the prescribing doctor, the influence a service can over this QI is limited."***
>
> - aged care service involved in the pilot

Table 13: National average – pilot results

Pilot results	Value
QI: Percentage of care recipients who were prescribed nine or more medications	**44.2%**
Number of care recipients assessed for this QI	**11,572**

Summary pilot results (192 pilot data submissions)

QI: Percentage of people prescribed nine or more medications



> ***"It was surprising to see the data at the end. It is useful to know how many residents have polypharmacy."***
>
> - aged care service involved in the pilot

Summary of findings

- A new QI was developed based on the evidence review and sector feedback, that measures the percentage of people who were prescribed nine or more medications.
- The polypharmacy QI performed well when piloted in services and is supported by the sector and clinical experts.
- A large proportion of people were prescribed nine or more medications – almost half of people in residential aged care (44.2 per cent). Clinical experts advised this was consistent with evidence from other international and Australian sources.
- The wide range of service responses for people with polypharmacy was 0 to 97.8 per cent. This variation in performance should allow services to monitor changes in performance and support their quality improvement. This should also provide consumers with the ability to compare information about quality in aged care services.
- The majority of pilot survey respondents (76.7 per cent) indicated that this QI provides meaningful and actionable insights about an individual's care. The polypharmacy QI is supported because of its impact on the health and wellbeing of people. However, there is some concern expressed by a small number of services and sector organisations about this QI due to the perceived limited control some services believe they have over doctor prescribing patterns. There is some evidence provided by clinical experts that services have significantly more influence over prescribing patterns than perceived.
- The majority (77.2 per cent) of pilot survey respondents reported that the data collection and reporting process for this QI made it feasible to include in the QI Program. However, services using paper-based medication administration systems reported data collection to be burdensome. Clinical experts indicated that targeted and additional support may be needed to move services towards contemporary electronic systems of medication management.
- Successful implementation may be assisted through ongoing clarification to the guidance materials to support increased consistency in understanding of QI definitions (e.g. medications) and improved accuracy of data collection.

A new Medication Management QI for Antipsychotic Medications was developed and piloted

Overview of Medication Management – Antipsychotic medications

The quality indicator domain of medication management is new to the QI Program. Based on the evidence review and sector consultations, a QI measuring the use of antipsychotic medications was developed and piloted. The QI measures the percentage of people in the residential aged care service who received an antipsychotic medication. People who received this medication for a diagnosed condition of psychosis were reported separately – this is because the use of this medication for this condition is clinically appropriate. In Australia, the inappropriate use of antipsychotic medication in disability and aged care services is sometimes referred to as 'chemical restraint'.

Table 14: QI selected for pilot – Percentage of care recipients who received antipsychotic medications

Criteria	Description
Pilot collection	A seven-day medication chart and/or administration records review for each person
QI reporting	People who received an antipsychotic medication
Additional reporting	People who received an antipsychotic medication for a diagnosed condition of psychosis
Exclusions	People admitted to hospital for the duration of the assessment period

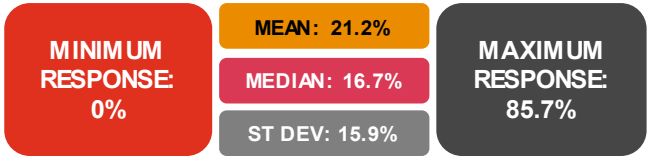
> ***"It was clear what you considered antipsychotic medication and that was good."***
>
> - aged care service involved in the pilot

Table 15: National average – pilot results

Pilot results	Value
QI: Percentage of care recipients who received an antipsychotic medication	**21.2%**
Percentage of care recipients who received an antipsychotic medication for a diagnosed condition of psychosis	**13.6%**
Number of care recipients assessed for this QI	**11,524**

Summary pilot results (192 pilot data submissions)

QI: Percentage of people who received an antipsychotic medication



> ***"Quite a lot of time spent going through medication charts, progress notes, etc. and then manually entering in Pilot template."***
>
> - aged care service with paper based medical record system involved in the pilot

Summary of findings

- A new QI was developed based on the evidence review and sector feedback; this QI measures the percentage of people who received an antipsychotic medication.
- The antipsychotic medication QI performed well when piloted in services and is supported by the sector and clinical experts.
- On average a fifth of people were reported as having received an antipsychotic medication (national average of 21.2 per cent). However, 13.6 per cent received this medication for a diagnosis of psychosis. Clinical experts advised that the percentage of people with a diagnosis of psychosis was higher than expected. It is likely that this reflects a misunderstanding by services in the pilot of what constitutes a formal diagnosis of 'psychosis', and how this is to be distinguished from people who display clinical symptoms similar to those seen in people diagnosed with psychosis (e.g. behaviours associated with dementia or delirium).
- A wide range of service responses were received in relation to people receiving an antipsychotic medication; these were between 0 and 85.7 per cent. This variation should allow services to monitor changes in performance and support quality improvement. Over time, as greater QI information is available, consumers may need contextual information to understand and use this QI to make informed decisions about quality in aged care services.
- Over two thirds (72.9 per cent) of pilot survey respondents reported that this QI provides meaningful and actionable insights about an individual's care. The QI is supported because of its impact on the health and wellbeing of people. However, there is some concern expressed by a small number of services and sector organisations about this QI due to the perceived limited control some services believe they have over doctor prescribing patterns. There is some evidence provided by clinical experts that services have significantly more influence over prescribing patterns than they perceive.
- The majority (72.2 per cent) of pilot survey respondents reported that the data collection and reporting process for this QI made it feasible to include in the QI Program. However, some services using paper-based medication administration systems reported data collection to be burdensome.

There are opportunities to evolve the QI Program over time

The QIs piloted would support the objectives of the QI Program

The evidence developed through the course of the project was considered and an assessment was made of the suitability of the QIs for the purposes of the QI Program (Table 16). The QIs were assessed as suitable to support the program objectives and can now move to the implementation phase. The inclusion of these QIs as part of the QI Program will be supported by a number of preparatory activities, key considerations are detailed in this report and intended to support successful implementation.

Table 16: Assessment of the QIs against the objectives of the QI Program

Pilot QI	Assessment of suitability of QI to support QI Program objectives
Percentage of care recipients with one or more pressure injuries, reported against six pressure injury stages	✓
Percentage of care recipients who were physically restrained	✓
Percentage of care recipients who experienced significant unplanned weight loss (5 per cent or more)	✓
Percentage of care recipients who experienced consecutive unplanned weight loss	✓
Percentage of care recipients who experienced one or more falls	✓
Percentage of care recipients who experienced one or more falls resulting in major injury	✓
Percentage of care recipients who were prescribed nine or more medications	✓
Percentage of care recipients who received antipsychotic medications	✓

Key

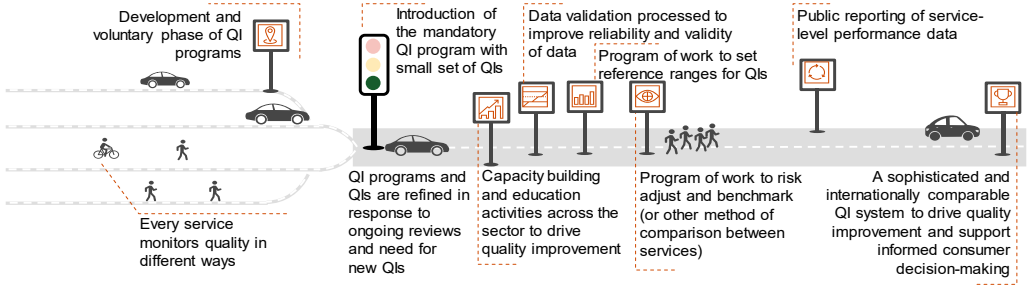
✓ The QI is suitable to support the QI Program to meet the objectives and is ready to move to implementation phase

✗ The QI is not suitable support the QI Program objectives

Other QI programs in health, aged care and disability in Australia and internationally have taken a number of years and sequential steps to evolve to meet their objectives.

The QI Program in Australia is relatively early in this evolution, and this project forms one more step in supporting the inclusion of QIs that are meaningful for the Australian context. Figure 5 illustrates the type and sequence of activities usually seen in the evolution of a program like this.

Figure 5: Common steps in the evolution of a quality indicators program



Short term (1-2 years)

- ✓ Mechanisms to support valid and reliable data collection and reporting of the revised and new QIs
- ✓ Capacity building, education and training
- ✓ Public information campaign aligned with introduction of any new QIs and build on understanding of the QI Program
- ✓ Standardise collection of contextual information during data collection and submissions

Medium term (3-5 years)

- ✓ Increase data validation, analysis and methods of reporting back to service
- ✓ Development of reference ranges

Long term (>5 years)

- ✓ Risk adjustment and benchmarking (or other method of comparison between services)
- ✓ Public reporting of service data or more granular data

In light of the evidence from international and other QI Programs, there are some short, medium and longer term opportunities to improve the QI Program.

These opportunities focus initially on building the capacity of the QI Program to meet the first objective to support quality improvement by services and the sector through the introduction of refined and new QIs.

Longer term opportunities focus on refining an established QI Program, so that in time, data from the program can be used confidently and meaningfully by consumers to make informed decisions about quality of care.

www.pwc.com.au