Flinders UNIVERSITY | Caring Futures Institute

INSPIRING ACHIEVEMENT

Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: an evidence review

October 2021

Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Evidence review

Julie Ratcliffe[1], Jyoti Khadka[1], Matthew Crocker[1], Kiri Lay[1],
Gillian Caughey[2], Jenny Cleland[1], Sue Gordon[1], Johanna Westbrook[3]

[1] Caring Futures Institute, Flinders University

[2] Register of Senior Australians, South Australian Health and Medical Research Institute

[3] Australian Institute of Health Innovation, Macquarie University

This report has been prepared by the Caring Futures Institute Flinders University in collaboration with the Register of Senior Australians (ROSA) South Australian Health and Medical Research Institute and the Australian Institute of Health Innovation Macquarie University for the information of the Australian Department of Health.

Suggested citation: Suggested citation: Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Evidence Review. Caring Futures Institute, Flinders University, October 2021.

Contents

Glossary

Acronym	Description
15D	15-Dimensional Instrument
ACCOM	Australian Community Care Outcomes Measurement
ACCOM-CM	Australian Community Care Outcomes Measurement-Case Manager
AD-5D	Alzheimer's Disease Five Dimension
ADRQL	Alzheimer's Disease-related Quality of Life
ALFSS	Assisted Living Family Satisfaction Scale
ALSS	Assisted Living Satisfaction Scale
AQoL-6D	Assessment of Quality of Life Instrument – 6 Dimension
AQoL-8D	Assessment of Quality of Life Instrument – 8 Dimension
ASCOT-SCT4	Adult Social Care Outcomes Toolkit four-level self-completion questionnaire
ASCOT-INT4	Adult Social Care Outcomes Toolkit four-level interview schedule
CCI-6D	Consumer Choice Index-6 Dimensions
CEQ	Consumer Experience Questionnaire
CLINT	Client Interview Instrument
COMQOL-A5	Comprehensive Quality of Life Scale-Adult version 5
CPVQ	Consumer Perception of Value Questionnaire
CQI	Consumer Quality Index
CSAT-HC	Client Satisfaction: Home Care
DEMQOL	Dementia Quality of Life Instrument
DEMQOL-Carer	Dementia Quality of Life Instrument – Carer version
DUKE	Duke Health Profile
D-QoL	Dementia Quality of Life Instrument
EQ-5D-3L	EuroQoL 5 Dimensions 3-levels
EQ-5D-5L	EuroQoL 5 Dimensions 5-levels
EQ-HWB	EuroQoL Health and Wellbeing
EQ-HWB-S	EuroQoL Health and Wellbeing short version
GSGL	Good Spirit Good Life
HCSM	Home Care Satisfaction Measure
HUI2	Health Utility Index Mark 2
HUI3	Health Utility Index Mark 3
ICECAP-O	ICEpop CAPability measure for older people
interRAI-HC	interRAI home care
interRAI-LTCF	interRAI long term care facility
JoLS	Joy-of-Life Scale
LTC-QOL	Long term care quality of life assessment scale
MANSA	Manchester Short Assessment of quality of life
MFSS	Minnesota Family Satisfaction Survey
MIV	My Inner View
MNHFS	Maryland Nursing Home Family Survey

Acronym	Description
MTRC	Measure of Thriving in Residential Care
NHCAHPS FS	Nursing Home CAHPS Family Survey
NHCAHPS LS	Nursing Home CAHPS Long Stay Survey
NHCR-QOL	Nursing Home Care Related Quality of Life
NHP	Nottingham Health Profile
ONHFSS	Ohio Nursing Home Family Satisfaction Survey
ONHRSS	Ohio Nursing Home Resident Satisfaction Survey
OPQOL-35	Older Peoples Quality of Life-35
OPQOL-Brief	Older Peoples Quality of Life-short version
PGCMS	Philadelphia Geriatric Centre Moral Scale
PQ	Pyramid Questionnaire
PWI-A	Personal Wellbeing Index-Adult
QCE-ACC	Quality of Care-Aged Care Consumers
QOL-ACC	Quality of Life Aged Care Consumer
QoL-AD	Quality of Life in Alzheimer’s Disease
QoL-AD-NH	Quality of Life for people with Alzheimer’s Disease Nursing Home
QOLNHR	Quality of Life Nursing Home Resident
QPP	Quality from the Patients’ Perspective
QUALID	Quality of Life in Late-Stage Dementia
QUALIDEM	Dementia specific Quality of Life Instrument
RCSS	Residential Care Satisfaction Scale
RSI	Resident Satisfaction Index
RSQ	Resident Satisfaction Questionnaire
SERVQUAL (NHS)	SERVQUAL Nursing Home Service Quality Inventory
SF-8	8 item Short Form Survey
SF-12	12 item Short Form Survey
SF-36	36 item Short Form Survey
SNHI	Satisfaction with Nursing Home Instrument
SNHS	Satisfaction with Nursing Home Scale
SWAL	Satisfaction with Assisted Living
SWLS	Satisfaction With Life Scale
USS	User Satisfaction Survey
WHOQoL-100	World health Organisation Quality of Life Scale – 100 items
WHOQoL-AGE	World health Organisation Quality of Life Scale – AGE
WHOQoL-BREF	World health Organisation Quality of Life Scale – BREF
WHOQoL-OLD	World health Organisation Quality of Life Scale – OLD

Executive Summary

This report provides a comprehensive evidence review of validated tools to measure quality of life, consumer experience or consumer satisfaction in aged care, and examines their appropriateness for residential aged care and home care settings for the purposes of incorporation into Australia's National Aged Care Mandatory Quality Indicator Program (QI Program).

The final report of the Royal Commission into Aged Care Quality and Safety recommended the development of a comprehensive suite of quality indicators for aged care. This included implementing 'a comprehensive quality of life assessment tool for people receiving aged care in residential care and at home' [Recommendation 22c] to facilitate continuous improvement and the transparency and accountability of Australia's aged care system.

A comprehensive evidence review of national and international literature on validated tools to measure quality of life, consumer (older person and/or family carer) satisfaction and consumer experience in aged care (including both home recipients or residential aged care) was conducted.

- An evidence-based ranking (based on *standardised psychometric and assessment methods and identified strengths and weaknesses)* was undertaken.
- Evidence regarding implementation, data analysis and reporting was considered and informed recommendations for embedding the preferred tool/s in the QI Program. Adoption of standardised tools will facilitate national benchmarking, promote consumer choice and increase public accountability and transparency.

Quality of Life

- A total of 46 quality of life tools from 25 countries were identified, including 10 developed in Australia. Most tools focused on health-related quality of life, as opposed to quality of life more broadly, and were developed with adult populations of all ages.
- Eleven quality of life tools developed specifically for application with populations of older people were identified; ICECAP-O (index of capability for older people), OPQOL (older people's quality of life), QOL-ACC (older people aged care specific quality of life), WHOQoL-AGE (older people's quality of life), GSGL (older indigenous people specific quality of life); with 6 focusing on people with dementia -ADRQOL, DEMQOL, D-QoL, QoL-AD, QUALIDEM and QUALID (late stage dementia only).
- Evidence ratings identified the **QOL-ACC (older person aged care specific to home and residential care)** as the highest ranked quality of life tool. The QOL-ACC provides the highest level of psychometric evidence for application with aged care consumers in both home care and residential care settings for Australia's aged care system. The **GSGL (older Indigenous person specific)** tool was identified as providing the highest level of psychometric evidence for application with older indigenous aged care consumers.

Consumer Experience and Satisfaction

- A total of 29 consumer experience and consumer satisfaction tools (13 experience and 16 satisfaction tools) were identified. Most tools were developed in the USA with 4 tools developed in Australia.
- In contrast to the quality of life tools, most consumer experience and consumer satisfaction tools were developed specifically for application with older people and /or family members in aged care settings, predominantly residential care.
- Two consumer experience tools, **QCE-ACC (generic measure of care experience for both home and residential care)** and the **CCI-6D (residential care specific consumer experience)**

and one consumer satisfaction tool the **RSQ (residential and home care consumer satisfaction)** were identified as having the highest level of psychometric evidence and appropriate for Australia's aged care system.

Quality of life and consumer experience/satisfaction tools are not inter-changeable and are designed to measure different concepts and as such include different dimensions/items.

- If only one concept is to be taken forward this review recommends quality of life as the most important person-centred quality indicator for Australia's aged care system.

Limited guidance is available in the examined literature on sampling and recommended frequency of administration for quality of life, consumer experience and/or consumer satisfaction tools in aged care for the purposes of incorporation within the QI program. This lack of evidence highlights the need for further consultation with the sector, in particular with aged care consumers and providers about how often these types of assessments should be undertaken and the application of results at both local and national levels to facilitate improvements. There is a strong case for pilot studies to provide further evidence related to sampling, frequency of administration and results application prior to widespread implementation.

Recommendations for Implementation:

- It is important to strive for self-assessment of quality of life, care experience or satisfaction using a validated psychometrically robust tool by the older person themselves wherever possible. Where self-assessment is not possible, for example, due to severe physical frailty and/or cognitive impairment, proxy assessment by a family member or close friend who knows the person well and who has regular contact with the person should be sought.
- Preferable modes of tool administration are self-completion using electronic format touch screen technology (tablet) computer or hard copy (paper and pen survey) for the person or proxy respectively. Where self-completion is not possible, interviewer assisted formats should be considered with a prescribed interview script to minimise the possibility of interviewer bias.
- For inclusion within the QI program, all older Australians accessing aged care in Australia in either home or residential aged care settings should be surveyed about their quality of life and/or aged care experience/satisfaction at regular time intervals (every 6-12 months) using a validated assessment tool designed for this purpose.
- Reporting of quality of life, consumer experience and/or consumer satisfaction tools in aged care with relevance to the QI program needs to be case mix adjusted to provide meaningful comparisons. As a consequence of minimal evidence, further consideration needs to be given to the most appropriate methods to summarise and present data for quality of life, consumer experience and/or consumer satisfaction data for different audiences e.g., the general public, aged care consumers and service providers. This also includes stratification of data analyses by aged care recipients with and without dementia and data aggregation by facility, service provider, state or geographical (metropolitan, rural and remote) areas.

1 Background

In 2017-2018, almost one million Australians accessed home care services and over 230,000 people were permanently living in residential aged care at a cost to government alone of over $18.1 billion (1). These estimates are expected to increase exponentially in the coming decades as a consequence of a rapid increase in Australia's ageing population. By 2050 it is predicted that over 3.5 million older Australians will need to access aged care services either in their own homes or in a residential care facility (2). There is increasing recognition of the need for person-centred quality indicators as important complements to clinical indicators for assessing the quality of Australia's aged care system (3, 4). The final report of the Royal Commission into Aged Care Quality and Safety highlighted the need for a philosophical shift to place the people receiving care at the centre of quality and safety regulation and that as part of this the voices of people receiving care must be heard to ensure that the system is relevant and appropriate for the people it is intended to support. It also recommended the development of a comprehensive suite of quality indicators for both residential and home care, including quality of life assessment to facilitate continuous improvement and the transparency and accountability of Australia's aged care system (5). In assessing the economic value of any aged care program, quality of life is also an essential outcome measure (3).

This report provides a comprehensive **evidence review of validated tools to measure quality of life, consumer experience or consumer satisfaction** in aged care, and examines their appropriateness for residential aged care and home care settings for the **purposes of incorporation into Australia's National Aged Care Mandatory Quality Indicator Program (QI Program).** Validated tools that have been applied in aged care settings in Australia and/or internationally to assess, monitor and evaluate quality of life, consumer experience or consumer satisfaction from the perspective of older people and/or family carers accessing home or residential care were identified. Tools were rated for methodological quality based on **standardised psychometric and assessment methods** to provide a summary of the respective strengths and weaknesses of each tool and an evidence based ranking of preferred tools was compiled. Recommendations regarding implementation, data analysis and reporting were then considered for embedding the preferred tool/s as an integral component of Australia's QI Program. This will support aged care providers through access to robust, valid data to measure and monitor performance and support continuous quality improvement and, over time, provide consumers transparent information about quality in aged care to assist decision making.

2 Literature Review

2.1 Search strategy and data extraction

A comprehensive evidence review was undertaken to identify national and international literature on the measurement of quality of life, consumer (older person and/or family carer) satisfaction and consumer experience in aged care. The review builds upon a recent systematic review of instruments for assessing quality of life in older adults (aged 65 years and over) accessing aged care services undertaken in collaboration by Westbrook's and Ratcliffe's research teams (6).

This original review searched MEDLINE, EMBASE, PsycINFO, Cochrane Library and CINAHL databases from inception to January 2021. Studies were included in this review if they were available in the English language; contained the term 'quality of life'; studied and described an aged care population and administered standardised quality of life (QoL) instrument/s (i.e., verbal QoL questionnaire or QoL self-assessment survey) to study participants. A total of 29 quality of life instruments available in the English language were identified from multiple countries and applied in home or residential care settings. For this report, this original review was extended in the following ways:

1. Searching for additional terms beyond quality of life to capture studies that contain the terms 'consumer experience' and/or 'client experience' and or 'consumer satisfaction' and/or 'client satisfaction' and/or 'person-centred care'.
2. Incorporating grey literature published in Australia and/or internationally on the topic area (Appendix 2 and Table A2). Relevant grey literature was identified through an online search of published government reports, and other relevant research and policy documents on government and/or regulatory body websites. For example, the Australian Government Department of Health, Aged Care Quality and Safety Commission (Australia) and the National Institute for Health and Care Excellence (UK).

3. Updating the review to the present (end July 2021) to include recent developments. Reference lists of identified publications, reports and websites were also searched to identify any additional relevant publications beyond those already captured.
4. Focusing on the psychometric properties of the identified tools and the extent of their validity, reliability and responsiveness in aged care populations in Australia and/or internationally to provide evidence to support the ranking of validated tools.
5. Drawing out evidence on the strengths and limitations, with a focus on identification of enablers and barriers to implementation and lessons learnt from implementation of tools across different settings.

2.2 Selection criteria

Articles were included in this review if they met the following criteria:

- Published in English language
- Qualitative and/or quantitative design
- Study sample of older adults aged ≥65 years and/or suitable proxies (e.g., family carers)
- Focused on the development and/or application of quality of life, consumer experience and/or consumer satisfaction tool/s within aged care.

Full details of the search criteria and data extraction are provided in Appendix 1 to this report.

The review focused specifically on the psychometric properties and performance characteristics of tools that have been designed and/or applied in aged care (differentiating residential and in home settings) to measure quality of life, experience and/or satisfaction from the perspective of the older person or proxy assessor. In consultation with our Project Advisory Group (comprising aged care representatives from ECH, Uniting AgeWell, Dementia Alliance International, the Australian Nursing and Midwifery Association and consumer representatives, Appendix 1) and key representative/s from the Department of Health, a set of standardised criteria were developed, refined and applied to systematically compare and rank tools. Criteria included in the review were:

- Design properties including the extent to which tool/s were co-designed with older people and developed in aged care or transferred from another sector e.g., health system, disability care.
- Psychometric testing, psychometric properties and performance characteristics (including practicality, reliability, content and construct validity) in home or residential care settings.
- Applicability and suitability of the identified tools for different aged care populations
- e.g., culturally, and linguistically diverse (CALD) groups, Aboriginal and Torres Strait Islander peoples, older people with cognitive impairment and dementia.

3 Assessment of Psychometric Properties

The psychometric properties of identified tools were examined according to standardised criteria identified in the COnsensus-based Standards for the selection of health status Toolment INstruments (COSMIN) taxonomy. COSMIN criteria were supplemented by the Food and Drug Administration (FDA) guidelines on the principles for selecting, Developing, Modifying, and Adapting Patient-Reported Outcome Measures (PROMs).(7-9) All tools were assessed for a range of psychometric properties:

- content and face validity
- acceptability and feasibility

- construct validity
- reliability
- responsiveness.

Where the psychometric properties of the tools could be identified and extracted, a comprehensive assessment of their quality was conducted by applying the psychometric properties criteria presented in Table 1. These criteria were developed in consultation with our Project Advisory Group and follow the guidelines proposed by COSMIN and FDA (7-9). Given the main aim was to identify preferred tool/s for application in the Australian aged care sector, **higher grades were assigned to good evidence emanating from the Australian or OECD country aged care sectors** relative to non-OECD countries. The available psychometric evidence for each tool was assessed and verified by an experienced psychometrician (JK) and quality graded as high*, high, medium, low or no evidence available.

The following definitions were applied:

- High*: criteria are achieved with good evidence in the Australian aged care population.
- High: criteria are achieved with good evidence internationally (OECD member countries) but no current Australian evidence.
- Medium: criteria are achieved with good evidence in aged care population from non-OECD countries.
- Low: criteria are not achieved. Limited amount of evidence in small samples and not Australian specific.
- No evidence available (-).

The COSMIN checklist and FDA guidelines indicate that content, face and construct validity are the most important psychometric criteria to address in providing evidence of the methodological quality of quality of life and consumer experience tools (7-9). Accordingly, the ranking of preferred tools attached the greatest weight to evidence of content, face and construct validity followed by responsiveness and reliability evidence.

Description of Psychometric Assessment Components

3.1 Content and face validity

Content validity assesses the extent to which the set of items included within a tool comprehensively cover the different components of the concept to be measured. Face validity is a closely related concept to content validity which examines whether the quality of life, consumer experience and/or consumer dimensions or domains included within the tool are sensible, appropriate and relevant to the target population. Most quality of life tools currently in use in aged care and health system settings were developed based on the judgements of researchers with limited involvement from consumers in the development process. Hence content and face validity have either not been assessed at all or were assessed post hoc following the development of a new tool. More recently there has been a move towards direct involvement of consumers in all stages of development for new quality of life tools. This has been demonstrated to improve content and face validity thereby improving the quality of the tool and its relevance to the population with whom it is intending to be applied (10, 11).

For this review, content and face validity of tools for assessing quality of life, consumer experience and/or consumer satisfaction in aged care were assessed according to available and accessible information about the developmental processes adopted and their relevance to older people and/or family carers in either home care or residential care setting. Post hoc assessments of the content and/or face validity of tools for older people in aged care settings were also included.

3.2 Acceptability and feasibility

Acceptability and feasibility assess the practicality of a tool for administration in a specific group of people. It covers aspects such as burden of completion and whether the person completing the tool can meaningfully respond to the questions being asked. Acceptability and feasibility were assessed according to several key indicators including time taken to complete the tool, levels of missing data and understanding. In the absence of reported information, the time take to complete the tool was estimated relative to the number of questions included and known reporting times of other similar tools in aged care populations. Evidence of acceptability and feasibility was indicated where the tool under consideration demonstrated relatively low respondent burden in terms of time taken to completion (in minutes), low missing data and high levels of understanding. For older people in aged care settings this includes careful consideration of whether the person or their proxy can meaningfully complete the tool. Older people with moderate to severe cognitive impairment may have difficulties understanding the questions being asked and proxy assessors may experience difficulties in knowing the required information (e.g., how the older person feels emotionally) for proxy report. Missing data can also be used to indicate acceptability and feasibility since high levels of missing data indicates that the person completing the tool has not completed some dimensions. Though non-completion can occur for many reasons, it indicates that the tool will not produce useable data for all participants. Non-completion impacts upon the quality of the results obtained and hence for inclusion in the QI Program it is important to strive for full completion of the tool wherever possible.

3.3 Construct validity

Construct validity assesses whether a tool captures the hypothesised or underlying construct/s it is intended to measure. For this review the underlying constructs were quality of life, consumer experience and/or consumer satisfaction in aged care. Construct validity can be assessed in two main ways. Firstly, by assessing the level of convergence between similar dimensions or domains and overall scores from the tool under consideration with other validated tools designed to measure the same or a closely related concept in the population of interest (older people accessing aged care services). This is referred to in the psychometrics literature as convergent validity (7-9). Secondly, by assessing the ability of the tool to differentiate between groups known to be different, for example older people living with or without long-term health condition/s or older people with differing levels of care needs. This is referred to in the psychometrics literature as known group validity (7-9).

3.4 Reliability

Reliability can be assessed in several ways. Inter-rater reliability is the level of agreement between different raters. In aged care settings inter-rater reliability can be assessed by measuring the extent to which the older person and a proxy assessor indicate the same (or different) response options when responding to the items presented in a quality of life, consumer experience and/or consumer satisfaction tool. Inter-mode reliability refers to the level of agreement when the tool is administered in alternative formats (e.g., face to face interviews vs telephone interviews vs self-reports) in individuals with similar socio-demographic characteristics.

A number of statistical methods exist for calculating the level of inter-rater reliability or the level of inter-mode reliability ranging from simple (e.g. calculation of the % of agreement between two or more raters) through to more complex (e.g., Cohen's Kappa statistic) (12, 13). Finally, test re-test reliability investigates the extent to which a tool can reliably replicate the same result (e.g., quality of life score more than once in a short time interval), normally within 1-3 weeks of the initial assessment where there has been no change in the individual's circumstances. Test re-test reliability is important for longitudinal assessment of quality of life over time and for economic evaluation in assessing whether differences in quality of life over time pre and post intervention are genuinely due to the intervention provided and not an artefact of the tool.

3.5 Responsiveness

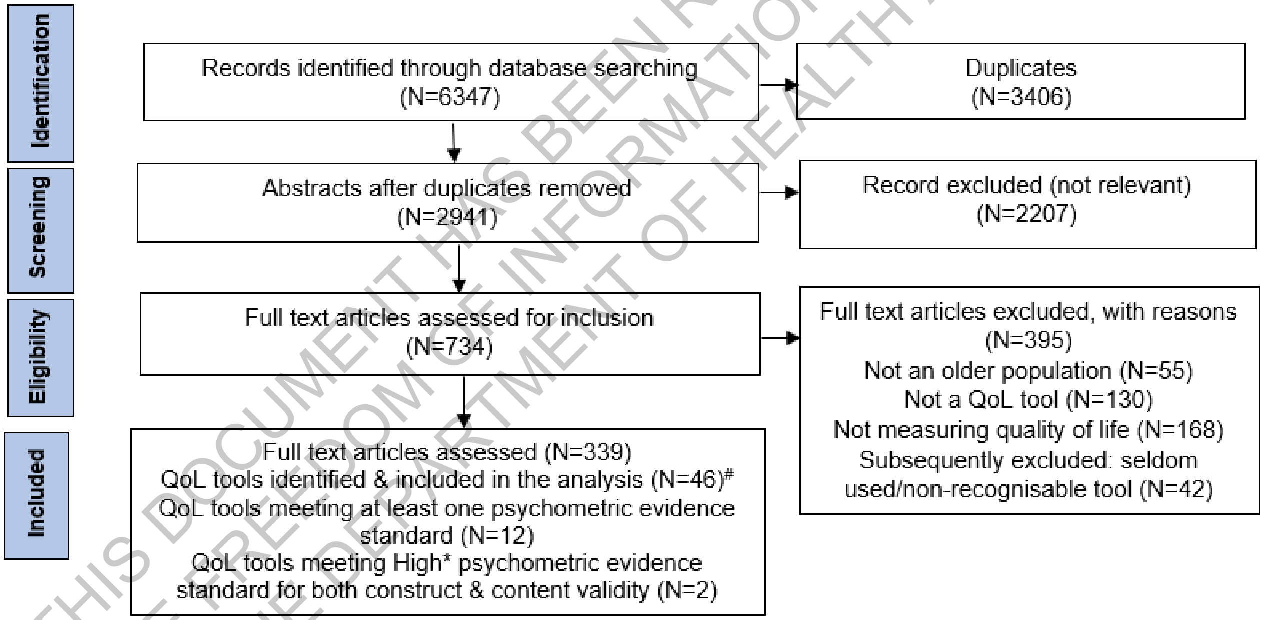
Responsiveness refers to the ability of a tool to adequately capture change over time in the indicator of interest when change is expected. For example, where the introduction of a targeted intervention is expected to lead to improvements in quality of life, consumer experience and/or consumer satisfaction. Responsiveness can be assessed at the aggregate level and/or the dimension level. An example of the measurement of responsiveness at a dimension level is where a targeted intervention to reduce social isolation for older people living alone is expected to lead to higher scores in dimension/s related to social connectedness at the end of the intervention period relative to baseline.

4 Results

The process and results from each stage of the literature review are presented in the following PRISMA diagrams.

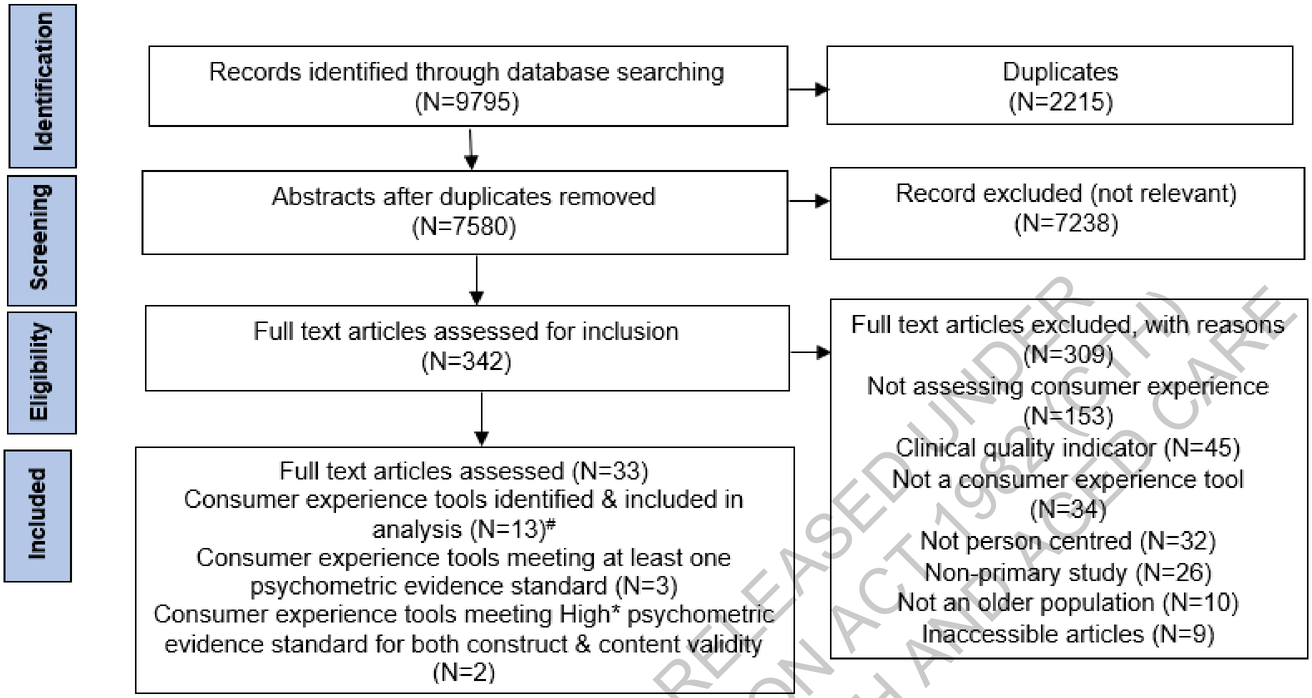
PRISMA diagram for quality of life

PRISMA = Preferred Reporting Items for Systematic Review and Meta analysis
(#1 tool identified through grey literature search)



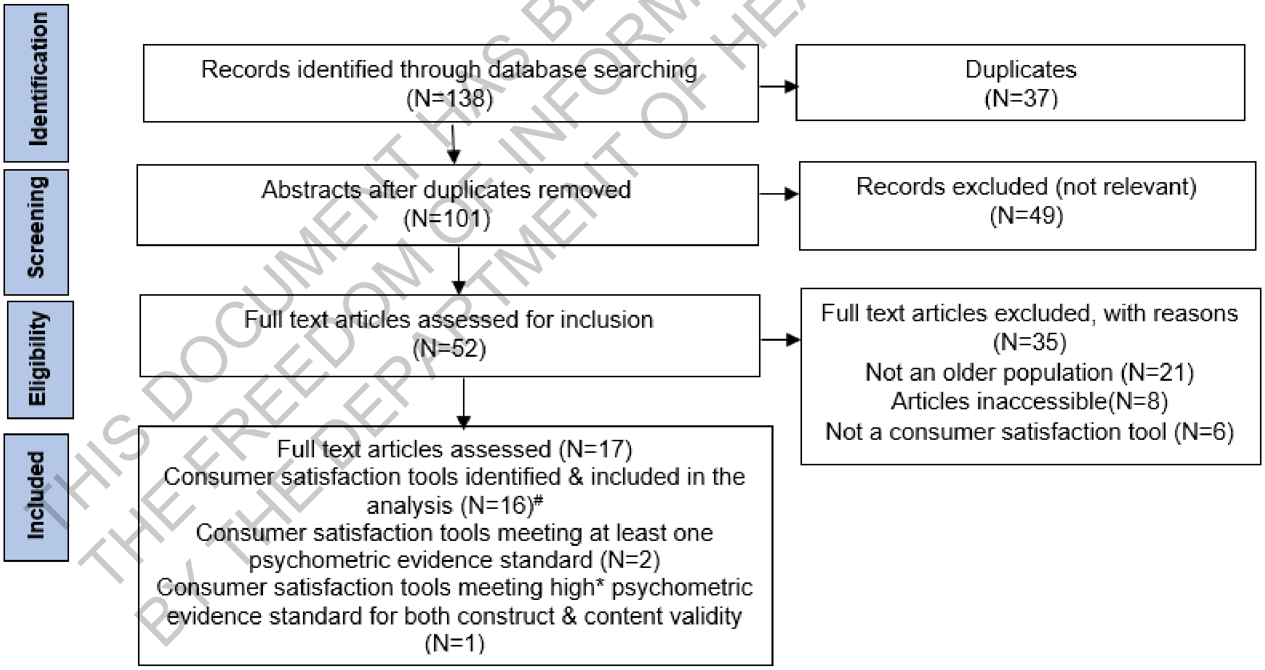
PRISMA diagram for consumer experience

(#1 tool identified through grey literature search)



PRISMA diagram for consumer satisfaction

(#2 tools identified through grey literature search)



4.1 Quality of life tools

This literature review identified a total of 46 quality of life tools from 25 countries (summarised in Table 2) including 10 tools developed in Australia. Most of the identified tools are focused on health-related quality of life (as opposed to quality of life more broadly) and were developed and applied more commonly in health care settings with adult populations of all ages. Several quality of life tools have been developed specifically for application with populations of older people. This included ICECAP-O (index of capability for older people), OPQOL (older people's quality of life), QOL-ACC (older people aged care specific quality of life), WHOQoL-AGE (older people's quality of life), older Indigenous people (Good Spirit Good Life Tool) and people with dementia e.g. ADRQOL, DEMQOL, D-QoL, QoL-AD, QUALIDEM and QUALID (late stage dementia only).

A variety of modes of administration are available including self-complete, interviewer administered and proxy versions. However, for those tools that have proxy versions there tends to be a lack of guidance covering when they should be used, the level of cognitive impairment beyond which proxy assessment should be sought and who is the most appropriate proxy assessor. For tools with both self-complete and proxy versions available some guidance is available from instrument developers, notably for the DEMQOL and the EuroQoL. For example, current information from the DEMQOL instruments developers indicates that for most studies, DEMQOL and DEMQOL-Proxy are used together. Current guidance from the EuroQol group indicates that proxy assessment (by a caregiver) should be used in special cases where the person is not mentally or physically able to self-report their health related quality of life. Judgements on capacity/incapacity to provide self-assessments should be made at an individual level commencing with the person themselves rather than the person or persons administering the quality of life assessments (14).

The recall period over which individuals are asked about their quality of life varies markedly across tools ranging from asking the person to respond in relation to today/their current situation, the past one week, two weeks, one month, three months or whole life (illustrated at Table 2). For utilising the quality of life tool within the QI Program the recall period needs to be

relatively brief, preferably asking the older person to respond in relation to the present or the past week to avoid the possibility of recall bias over an extended period of time and to provide a comprehensive assessment of the older person's current situation to facilitate meaningful comparisons of quality of life over time. The number of included dimensions and items also varies markedly across tools ranging from relatively brief tools with few dimensions/items e.g., QOL-ACC, EQ-5D-3L, EQ-5D-5L, ICECAP-O to longer and more complex tools e.g., SF-36, WHOQoL-100. The length of the tool is typically related to the number of included dimensions, with consequent implications for respondent burden and completion times, an important consideration for older people receiving aged care services. Average completion times for tools range from five minutes or less for relatively brief tools (e.g., QOL-ACC, ICECAP-O, EQ-5D) and up to 60 minutes for more complex tools (e.g., WHOQoL-100).

User guides (largely directed at tool administrators as opposed to the person/s reporting) are available for half (N=23; 50%) of the identified quality of life tools and the majority have dedicated websites with varying amounts of information presented about tool development, instructions on how to apply for a license to use the tool and examples of published studies in which the tool has been applied. Whilst the vast majority of user guides are provided free of charge some instrument developers charge a fee for access to user guides (e.g., ADRQL and the InterRAI). In addition, whilst most quality of life tools are provided with free access for applications in research, several tools charge a licensing fee for commercial applications including the QOL-ACC, EQ-5D and ASCOT. Most tools are presented in the English language. A minority of quality of life tools (EQ-5D, HUI2, HUI3, SF-12, SF-36 and SWLS) have validated translations available in Italian, Greek, German, Chinese and Vietnamese, the most prevalent culturally and linguistically diverse (CALD) populations of older people accessing aged care services in Australia (15, 16).

The majority of quality of life tools are non-preference based and are scored using simple summative scoring systems whereby individual responses to items/quality of life dimensions are equally weighted to determine an overall total score. Some quality of life tools are preference weighted and this is an important requirement for application of a tool in economic evaluation. Scoring systems for preference based tools are weighted according to the relative importance of individual items/quality of life dimensions in determining the overall quality of life score. For example, the relative importance of physical health in determining overall quality of life may be different to emotional state or autonomy. These differences can be accounted for in a preference weighting. Preference-based scoring systems are typically derived from large general population samples comprising adults of all ages. Notable exceptions are the ICECAP-O and the QOL-ACC tools which were designed specifically for older populations. The preference based scoring algorithm pertaining to the ICECAP-O was developed with a community based sample (N=255) of older adults in the UK (17). The QOL-ACC scoring system is currently based on a simple summative scoring algorithm. A preference based scoring system for the QOL-ACC tool based on the preferences of aged care consumers is currently in development and will be available for application in early 2022.

The number of included dimensions and the ways in which these are described vary across quality of life tools. To facilitate ease of comparison across tools, Table 3 presents a classification of the tools using a consistent framework according to the nine key domains of quality of life previously identified as important to older people in OECD countries (18):

- Physical health: functional status, physical conditions and their related symptoms, pain, and perceptions of overall health.
- Mental health: mental and cognitive health conditions, as well as clinical symptoms that would indicate mental health problems.
- Emotional state: experiences of positive and negative emotions which are not obviously symptoms of mental health. This includes items which explore feelings of peace, calm, happiness, and loneliness.
- Social connection: the frequency and quality of social interactions. Items addressing feelings of belonging, friendship and support were also categorised under this domain.
- Environment: living conditions and deployable resources including social care services as well as items which ask respondents to reflect on the emotional, psychological and physical effects of living conditions.
- Personhood: satisfaction with personally and culturally meaningful activities which provide joy and a sense of identity.
- Autonomy: capacity and satisfaction with one’s ability to manage activities of daily living. Items associated with (in)dependence were also categorised as relating to autonomy.
- Spiritual connection: feelings of faith, and inner peace, as well as involvement in religious or spiritual practices like prayer.
- Overall quality of life: single item question asking respondents to rate their quality of life as a whole.

The most commonly included quality of life domains relate to emotional state, physical health and social connections, followed by personhood and autonomy with mental health (as opposed to emotional state) and spiritual connection less often included (illustrated at Table 3). A minority of the identified quality of life tools include dimensions additionally identified by consumer representatives from our Project Advisory Group (Appendix 1) as important to the overall quality of life of older people accessing aged care services including intimacy/sex life, food and incontinence (illustrated at Table 3A).

4.2 Quality of life tools: applications in aged care

An overview of extracted studies from the review including the application of quality of life tools in aged care settings in Australia and internationally is presented in Table 4. A total of 12 quality of life tools have been applied in Australia in home care settings (ACCOM, AQOL, ASCOT, COMQOL, D-QOL, EQ-5D, GSGL, ICECAP-O, LTQ-QOL, OPQOL-Brief, QOL-ACC, QOL-AD) and ten quality of life tools have been applied in Australian residential care settings (AD-5D, COMQOL, DEMQOL, EQ-5D, GSGL, HUI3, LTC-QOL, QOL-ACC, QOL-AD, QUALID). The size of the populations in which the tools have been applied varies substantially. As would be expected, in general, tools that have been developed more recently have been applied in smaller total populations relative to more established tools. The largest population sizes relate to the INTERAI and HUI3 instruments. This is largely reflective of their joint application in a large-scale published study involving over 500,000 older people to assess quality of life in home and residential care settings in Ontario, Canada (19). The vast majority of the identified studies comprised cross-sectional studies assessing the quality of life of older people accessing aged care services at a single time point. Other identified applications included quality of life assessment to measure the effectiveness of an intervention using either a randomised control study design or quasi-experimental methods, longitudinal studies (conducted with people with dementia and applying dementia specific quality of life tools QOL-AD, QUALID and QUAL-DEM) and psychometric assessment studies.

4.3 Quality of life tools: psychometric assessment

A ranking of preferred tools according to standardised psychometric assessment criteria is presented in Table 5. As previously stated, tools were ranked according to the quality grading of the available evidence pertaining to the psychometric criteria with a higher ranking applied to tools presenting evidence of content, face and construct validity (followed by evidence of responsiveness and reliability in the Australian aged care population (bold highlighted tools) relative to international (non-Australian) evidence (non-bold highlighted tools).

[1] Quality of Life–Aged Care Consumers (QOL-ACC)

The QOL-ACC instrument was developed in 2020 from a research study funded by the Australian Research Council and led by the Caring Futures Institute, Flinders University, in collaboration with researchers from the University of Sydney and Australian National University (ANU) and partner organisations ECH, Helping Hand, Uniting AgeWell, Uniting ACT NSW, Presbyterian Aged Care and Dementia Alliance International (11). The QOL-ACC is the first quality of life tool, developed from its inception with older Australians accessing aged care in both home and residential care settings. It has been designed specifically for quality assessment and economic evaluation in aged care to capture consumer (older person and family carer) focused quality of life outcomes from their own perspective. The QOL-ACC consists of six dimensions: mobility, emotional wellbeing, social connections, independence, activities, and pain management with five response levels attached to each dimension. These final six dimensions were confirmed by the QOL-ACC project aged care provider partners as both relevant to and highly influenced by the care and services provided to the older person in either home or residential care settings (Appendix 4).

[2] Good Spirit, Good life (GSGL)

The GSGL tool is a non-preference-based tool developed in 2020 that measures the quality of life of older Aboriginal Australians aged 45 years and over (20). The GSGL consists of twelve dimensions: family and friends, country, community, culture, health, respect, elder role, supports and services, safety and security, spirituality, future planning, and basic needs. Each dimension consists of five response levels. There is also a carer version of the GSGL tool available. It is the first instrument of its kind developed from its inception with older Aboriginal people and was designed to be applied with this population.

[3] Dementia Quality of Life (DEMQOL/DEMQOL-Proxy/DEMQOL PROXY-U/DEMQOL-PROXY-U)

The DEMQOL instruments measure the health-related quality of life of individuals with dementia and were developed in the mid-2000s (21). DEMQOL is a self-report non-preference-based measure completed by the person with dementia, and the DEMQOL-Proxy is competed by a caregiver (proxy reported by the caregiver). The DEMQOL has 28 items, and the DEMQOL-proxy has 31 items that both cover five dimensions: health and well-being, cognitive functioning, social relationships, daily activities, and self-concept. Both versions have four response levels. The DEMQOL-U and the DEMQOL-Proxy-U were developed in 2012 based on the DEMQOL and the DEMQOL-Proxy as preference based tools to enable to the DEMQOL to be used in economic evaluation (22).

[4] EuroQol-5 dimensions-5 level (EQ-5D-5L)

The EQ-5D-5L is a generic preference-based measure of health-related quality of life, developed in 2009. It consists of five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression with five response levels attached to each dimension. There are two versions of the EQ-5D. The EQ-5D-5L was developed to improve the reliability and sensitivity of the original EQ-5D instrument and to increase the number of possible health states(23). The EQ-5D-5L has the option of being administered with the visual analogue scale (EQ-VAS). The EQ-VAS is a vertical scale with two endpoints ‘the best health you can imagine’ and ‘the worst health you can imagine’ in which individuals are asked to record their self-rated health on the scale (0-100). The EQ-5D-5L can also be administered with a cognition bolt-on item for individuals who may have cognitive impairment.

[5] 36-Item Short Form Survey (SF-36)

The SF-36 was originally developed in the 1990s and is a non-preference-based instrument measuring health-related quality of life (24). The SF-36 was adapted from a survey used in the Medical Outcomes Study identifying differences in physician practice and patient outcomes in different settings. The instrument consists of 36 items that cover eight dimensions: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions. It also has a single item that measures perceived change in health. The instrument has between two and six response levels for each item.

[6] Investigating Choice Experiments Capability Measure for Older People (ICECAP-O)

The ICECAP-O is a preference based older person specific instrument developed in 2006 that measures capability (17, 25). The instrument focuses on a broader concept of quality of life and wellbeing and consists of five dimensions: attachment, security, role, enjoyment, and control. Each dimension has one item with four response levels per item. The ICECAP-O is based on Sen’s capability theory which is reflected in the response options using ‘able to’ or ‘can’. The ICECAP-A was developed in 2012 as a measure of capability for all adults (aged 18 years and above) (17). The instrument consists of five dimensions: attachment, stability, achievement, enjoyment, and autonomy. Each dimension has one item with four response levels.

[7] Australian Community Care Outcome Measure (ACCOM)

The ACCOM was developed in the late 2010s and is a preference-based instrument measuring functional, health and social care-related quality of life of older people receiving community services at home (26). The ACCOM was developed building upon the ASCOT measure which is a preference-based instrument that measures social care-related quality of life. The ACCOM uses the eight care-related items from the ASCOT as its core components: control over daily life, personal cleanliness and comfort, food and drink, personal safety, social participation and involvement, occupation, accommodation cleanliness and comfort, and dignity. It also includes functional measures of the consumer's capabilities and care needs using the Functional Screen developed by the Australian Health Services Research Institute. Basic demographic information including age, income, living circumstances and cultural background are also collected. The instrument is completed by consumers (ACCOM) and by case managers (ACCOM-CM).

[8] Long Term Care Quality of Life assessment scale (LTC-QOL)

The LTC-QOL is a non-preference-based instrument developed in the mid-late 2000s (27). The LTC-QOL focuses on the outcomes of care, support, treatment, and protection interventions of older people receiving long term care at home and in long-term care facilities. The instrument consists of nine items that cover five dimensions: social capacity, self-efficacy, supportive relationships, mood state, and the absence of fear and distress. Each item has five response levels. The LTC-QOL is intended to be administered twice within a two week period and then every 12 weeks to monitor progress. There is also a proxy version available.

[9] EuroQol-5 dimensions-3 level (EQ-5D-3L)

EQ-5D-3L is a generic preference-based instrument that measures health-related quality of life. This original version of the EQ-5D was developed in 1990 and consists of five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression with 3 response levels attached to each dimension (28). Like the EQ-5D-5L, the EQ-5D-3L has the option of being administered with the visual analogue scale (EQ-VAS). The EQ-VAS is a vertical scale with two endpoints 'the best health you can imagine' and 'the worst health you can imagine' in which individuals are asked to record their self-rated health on the scale (0-100). The EQ-5D-3L can also be administered with a cognition bolt-on item for individuals who may have cognitive impairment.

[10] Alzheimer's Disease Five Dimension (AD-5D)

The AD-5D is a new preference-based instrument that was developed in 2016 to measure health-related quality of life of individuals with dementia (29). It was derived from the Quality of Life-Alzheimer's Disease (QOL-AD) instrument which is a widely used non-preference-based instrument that measures quality of life of people with dementia. The AD-5D was developed to enable utility weights to be derived from the QOL-AD in order for the instrument to be used in economic evaluations of interventions with older people with dementia. The AD-5D consists of five dimensions: physical health, mood, memory, living situation, and ability to do things for fun. Each dimension has four response levels.

Quality of Life Tools: Summary Table

Rank	Tool	Country of origin	Primary focus	Development population	Respondent	Dimensions	Residential care	Home care
1	QOL-ACC	Australia	Aged care specific QoL	Older adults and family carers, home and residential care	Self-completion; interviewer administered; proxy	Physical health; Emotional state; Social connection; Personhood; Autonomy	✓	✓
2	GSGL	Australia	QoL older Indigenous people	Aboriginal Australians ≥45 years	Interviewer administered; proxy	Physical health; Social connection; Environment; Spiritual feeling	✓	✓
3	DEMQOL	UK	Health Related QoL people with dementia	Older adults with dementia	Interviewer administered	Emotional state; Mental health; Social connection; Environment; Overall question	✓	-
4	EQ-5D-5L	UK	Health Related QoL	Adults	Self-completion; interviewer administered; telephone interview; proxy	Physical health; Mental health; Personhood; Overall question	✓	✓
5	SF-36	USA	Health-related QoL	Adults	Self-completion	Physical health; Emotional state; Mental health; Social connection; Autonomy	✓	✓
6	ICECAP-O	UK	Capability	Adults aged 65 and over	Self-completion	Emotional state; Social connection; Personhood; Autonomy	✓	✓
7	ACCOM	Australia	Social Care Related QoL	Older adults who receive home care packages	Self-completion; interviewer administered	Social connection; Environment; Personhood; Autonomy	✓	-
8	LTC-QOL	Australia	Long Term Care aged 55+	Nursing home residents	Interviewer administered (carer/proxy and person)	Emotional state; Social connection; Environment	✓	✓
9	EQ-5D-3L	UK	Health Related Quality of Life	Adults	Self-completion; interviewer administered; telephone interview; proxy	Physical health; Mental health; Personhood; Overall question	✓	✓
10	AD-5D	Australia	Health Related Quality of Life for people with dementia	Older adults and family carers of people with dementia	Self-completion; interviewer administered (carer/proxy and person)	Physical health; Emotional state; Social connection; Environment; Personhood; Autonomy; Overall question	✓	-

4.3.1 Content and face validity

Content and face validity evidence was available for seven (16%) of the identified quality of life tools (Table 5). The AD-5D has strong evidence of content validity in the Australian context for older people with dementia. QOL-ACC provides strong evidence of both content validity and face validity having been co-designed from its inception and tested with Australian aged care consumers in both home and residential care settings. Similarly, GSGL has strong evidence of both content validity and face validity for older Indigenous people having been co-designed from its inception with this population. This tool is specific to older Indigenous Australians and is not intended for broader application to the Australian aged care population.

4.3.2 Acceptability and feasibility

Three quality of life tools (QOL-ACC, GSGL and ICECAP-O) demonstrated acceptability and feasibility in Australian aged care populations (Table 5) with published studies presenting evidence of relatively high response and completion rates indicative of a low respondent burden and evidence of ability to provide meaningfully responses.

4.3.3 Construct validity

Construct validity was the most investigated psychometric criterion with eight tools classified as addressing construct validity to a high standard internationally (Table 5: ADRQL, D-QOL, HUI2, INTERAI, QOL-AD, QUALID, SF-12, SF-36). Seven tools applied in Australian aged care populations have demonstrated high construct validity (DEMQOL, EQ-5D, GSGL, ICECAP-O, LTC-QOL, QOL-ACC, SF-36). Construct validity is an important psychometric criterion that assesses whether a tool captures the hypothesized or underlying construct/s it is intended to measure. For the EQ-5D and the SF-36 the underlying construct is health related quality of life. For DEMQOL the underlying construct is quality of life for people with dementia. For LTC-QoL the underlying construct is quality of life for people accessing long term care. The GSGL tool captures the underlying construct of quality of life and wellbeing of older Indigenous people. The ICECAP-O has capability as its underlying construct and for the QOL-ACC tool the underlying construct is the quality of life of older Australians accessing aged care.

4.3.4 Reliability and Responsiveness

Several tools have a high level of psychometric evidence in relation to various aspects of reliability (Table 5) including inter-rater (SF-12, SF-36), mode of administration (QOL-ACC, SF-36) and test re-test (EQ-5D, GSGL, LTC-QOL). A high level of reliability in the Australian context was found for two tools, the GSGL (test re-test reliability) and the QOL-ACC (mode of administration). Evidence of responsiveness (the ability of a tool to adequately capture change over time in quality of life when change is expected) requires repeated assessments of quality of life over time. A high level of evidence of responsiveness is currently available for two tools, the SF-12 and the EQ-5D. Both tools have been widely applied internationally in health system settings for economic evaluation and are specifically focused on health related quality of life rather than quality of life more broadly which is a more relevant concept for older people accessing aged car (30, 31). These findings largely concur with the information presented in Table 4 that the applications of quality of life tools in aged care to date have largely been cross-sectional studies rather than longitudinal in nature.

s22

[redacted]

s22

[redacted]

6 Conclusions

Using evidence-based psychometric criteria and assessment, tools to assess, monitor and evaluate quality of life, consumer experience or consumer satisfaction from the perspective of older people (and/or family carers) accessing home or residential aged care services in Australia have been identified.

This includes two quality of life tools:

1. QOL-ACC (older person aged care specific to both home and residential aged care) and
2. GSGL (older Indigenous person specific).

Two consumer experience tools:

1. QCE-ACC (generic measure of care experience for both home and residential care and
2. CCI-6D (residential care specific consumer experience)

One consumer satisfaction tool:

1. RSQ (residential and home care consumer satisfaction).

In practice, no perfect tool exists, and all tools have their own purported advantages and disadvantages. Furthermore, this review has highlighted that quality of life and consumer experience/satisfaction tools are not inter-changeable. Tools classified under each category have in general been designed to measure these different concepts with different dimensions/items.

Like health system settings where both patient reported outcomes measures (PROMs) and patient reported experience measures (PREMs) are increasingly being recognised as important in both primary care and hospital settings, ideally quality of life and consumer experience should be measured as important and complementary quality indicators for Australia's aged care system in both home and residential care. Appropriate case mix adjustment to account for key socio-demographic and clinical characteristics at an individual level will enable quality of life and consumer experience scores to be attributed to the care and services provided in home or residential care settings. This will support aged care providers through access to robust, valid data to measure and monitor performance and support continuous quality improvement and, over time, provide consumers with transparent information about quality in aged care to assist decision making.

If only one concept is to be taken forward, in response to and in accordance with the Royal Commission recommendations [Rec no 22c], this review recommends quality of life as the most important person-centred quality indicator for Australia's aged care system in both residential and home care settings.

7 References

1. Australian Institute of Health and Welfare. Older Australian at a glance Canberra: AIHW; 2018 [Available from: https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/summar.
2. The Royal Commission into Aged Care Quality and Safety. Financing aged care. Consultation paper 2. . Canberra: Commonwealth of Australia 2020.
3. Ratcliffe J, Laver K, Couzner L, Cameron ID, Gray L, Crotty M. Not just about costs: the role of health economics in facilitating decision making in aged care. Age Ageing. 2010;39(4):426-9.
4. Ratcliffe J, Laver K, Couzner L, Crotty M. Health economics and geriatrics: challenges and opportunities. Geriatrics, Intech Open Science. 2012:209-34.
5. The Royal Commission into Aged Care Quality and Safety. Final report- Volume 1: Summary and Recommendations. Commonwealth of Australia 2021.
6. Siette J, Jorgensen ML, Georgiou A, Dodds L, McClean T, Westbrook JI. Quality of life measurement in community-based aged care - understanding variation between clients and between care service providers. BMC Geriatr. 2021;21(1):390.
7. Mokkink LB, Prinsen CAC, Patrick D, Alonso J, Bouter LM, de vet HCW, et al. COSMIN methodology for systemtatic reviews of Patient-reported Outcome Measures (PROMS) user manual. Version 1.0. Netherlands: COSMIN; 2018.
8. Prinsen CAC, Mokkink LB, Bouter LM, Alonso J, Patrick DL, de Vet HCW, et al. COSMIN guideline for systematic reviews of patient-reported outcome measures. Qual Life Res. 2018;27(5):1147-57.
9. Food and Drug Adminstraion. Principles for Selecting, Developing, Modifying, and Adapting Patient-Reported Outcome Instruments for Use in Medical Device Evaluation, draft guidance. U.S. Department of Health and Human Services 2020.
10. Connell J, Carlton J, Grundy A, Taylor Buck E, Keetharuth AD, Ricketts T, et al. The importance of content and face validity in instrument development: lessons learnt from service users when developing the Recovering Quality of Life measure (ReQoL). Qual Life Res. 2018;27(7):1893-902.
11. Ratcliffe J, Cameron I, Lancsar E, Walker R, Milte R, Hutchinson CL, et al. Developing a new quality of life instrument with older people for economic evaluation in aged care: study protocol. BMJ Open. 2019;9(5):e028647.
12. Pesudovs K, Burr JM, Harley C, Elliott DB. The development, assessment, and selection of questionnaires. Optom Vis Sci. 2007;84(8):663-74.
13. Kandel H, Khadka J, Goggin M, Pesudovs K. Patient-reported Outcomes for Assessment of Quality of Life in Refractive Error: A Systematic Review. Optom Vis Sci. 2017;94(12):1102-19.
14. EuroQoL Research Foundation. EQ-5D-5L | Proxy version Rotterdam, Netherlands: EuroQoL Office; 2021 [Available from: https://euroqol.org/eq-5d-instruments/eq-5d-5l-available-modes-of-administration/proxy/.
15. Australia FoECC. Review of Australian Research on Older People from Culturally and Linguistically Diverse Backgrounds. 2015.
16. Statistics ABo. Census of Population and Housing: Reflecting Australia - Stories from the Census, 2016 2017 [01 September 2021]. Available from: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0~2016~Main%20Features~Ageing%20Population~14.
17. Coast J, Flynn TN, Natarajan L, Sproston K, Lewis J, Louviere JJ, et al. Valuing the ICECAP capability index for older people. Soc Sci Med. 2008;67(5):874-82.
18. van Leeuwen KM, van Loon MS, van Nes FA, Bosmans JE, de Vet HCW, Ket JCF, et al. What does quality of life mean to older adults? A thematic synthesis. PLoS One. 2019;14(3):e0213263.
19. Hirdes JP, Bernier J, Garner R, Finès P, Jantzi M. Measuring health related quality of life (HRQoL) in community and facility-based care settings with the interRAI assessment instruments: development of a crosswalk to HUI3. Qual Life Res. 2018;27(5):1295-309.
20. Smith K, Gilchrist L, Taylor K, Clinch C, Logiudice D, Edgill P, et al. Good Spirit, Good Life: A Quality of Life Tool and Framework for Older Aboriginal Peoples. Gerontologist. 2020;61(5):E163-E72.
21. Smith S, Lamping D, Banerjee S, Harwood R, Foley B, Smith P, et al. Measurement of health-related quality of life for people with dementia: Development of a new instrument (DEMQOL) and an evaluation of current methodology. Health technology assessment (Winchester, England). 2005;9:1-93, iii.
22. Mulhern B, Rowen D, Brazier J, Smith S, Romeo R, Tait R, et al. Development of DEMQOL-U and DEMQOL-PROXY-U: generation of preference-based indices from DEMQOL and DEMQOL-PROXY for use in economic evaluation. Health Technol Assess. 2013;17(5):v-xv, 1-140.

23. Herdman M, Gudex C, Lloyd A, Janssen B, Kind P, Parkin D, et al. Development and preliminary testing of the new five-level version of EQ-5D (EQ-5D-5L). Qual Life Res. 2011;20(10):1727-36.
24. Ware JE, Jr., Sherbourne CD. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. Med Care. 1992;30(6):473-83.
25. Flynn TN, Chan P, Coast J, Peters TJ. Assessing quality of life among British older people using the ICEPOP CAPability (ICECAP-O) measure. Applied Health Economics and Health Policy. 2011;9(5):317-29.
26. Beatriz Cardona AS, Michael Fine, Cathy Duncan, Peter Samsa, Kathy Eager. Ageing well at home: measuring the impact of community care for older people. Macquarie University, Australian Health Services Research Institute: University of Wollongong; 2017.
27. McDonald T. Measurement features of a long-term care quality of life (LTC-QoL) assessment scale. Journal of Care Services Management. 2013;7(3):76-86.
28. The EuroQol G, EuroQol G. EuroQol - a new facility for the measurement of health-related quality of life. Health Policy. 1990;16(3):199-208.
29. Nguyen K-H, Mulhern B, Kularatna S, Byrnes J, Moyle W, Comans T. Developing a dementia-specific health state classification system for a new preference-based instrument AD-5D. Health Qual Life Outcomes. 2017;15(1):21-.
30. Makai P, Brouwer WB, Koopmanschap MA, Stolk EA, Nieboer AP. Quality of life instruments for economic evaluations in health and social care for older people: a systematic review. Soc Sci Med. 2014;102:83-93.
31. Ratcliffe J, Lancsar E, Flint T, Kaambwa B, Walker R, Lewin G, et al. Does one size fit all? Assessing the preferences of older and younger people for attributes of quality of life. Qual Life Res. 2017;26(2):299-309.
32. Milte R, Ratcliffe J, Bradley C, Shulver W, Bilton R, Crotty M. CCI-6D User Guide: Basic information on how to use the CCI-6D instrument. Flinders University and NHMRC Cognitive Decline Partnership Centre, Adelaide, South Australia. 2017 [
33. Milte R, Ratcliffe J, Chen G, Crotty M. What Characteristics of Nursing Homes Are Most Valued by Consumers? A Discrete Choice Experiment with Residents and Family Members. Value Health. 2018;21(7):843-9.
34. Khadka J, Ratcliffe J, Chen G, Kumaran S, Hutchinson C, Milte R, et al. A new measure of quality of care experience in aged care: psychometric assessment and validation of the Quality of Care Experience (QCE) questionnaire. Report prepared for the Royal Commission into Aged Care Quality and Safety. 2021 Jan 2021.
35. Ratcliffe J, Chen G, Cleland J, et al. Australia’s aged care system: assessing the views and preferences of the general public for quality of care and future funding: Royal Commission into Aged Care Quality and Safety; 2020.
36. Triemstra M, Winters S, Kool RB, Wiegers TA. Measuring client experiences in long-term care in the Netherlands: a pilot study with the Consumer Quality Index Long-term Care. BMC Health Services Research. 2010;10(1):95.
37. Wells Y, Fetherstonhaugh D, Solly K. Development of a consumer experience reporting questionnaire for residential aged care homes in Australia. Australasian Journal on Ageing. 2019;38.
38. Boldy D, Davison M, Duggan R. Client satisfaction as a driver of quality improvement in services for older people: A Western Australian case study. Australasian Journal on Ageing. 2015;34: 62-67.
39. Fethney J, Jeon Y-H, Ludford I, Stewart K. Validity and reliability of the client perception of value questionnaire. Contemp Nurse. 2013;43(2):183-90.
40. Fitzpatrick R. Capturing what matters to patients when they evaluate their hospital care. Qual Saf Health Care. 2002;11(4):306.
41. Dunsch F, Evans DK, Macis M, Wang Q. Bias in patient satisfaction surveys: a threat to measuring healthcare quality. BMJ Glob Health. 2018;3(2):e000694.
42. McColl E, Jacoby A, Thomas L, Soutter J, Bamford C, Steen N, et al. Design and use of questionnaires: a review of best practice applicable to surveys of health service staff and patients. Health Technol Assess. 2001;5(31):1-256.
43. Broering JM, Paciorek A, Carroll PR, Wilson LS, Litwin MS, Miaskowski C. Measurement equivalence using a mixed-mode approach to administer health-related quality of life instruments. Qual Life Res. 2014;23(2):495-508.
44. Muehlhausen W, Doll H, Quadri N, Fordham B, O'Donohoe P, Dogar N, et al. Equivalence of electronic and paper administration of patient-reported outcome measures: a systematic review and meta-analysis of studies conducted between 2007 and 2013. Health Qual Life Outcomes. 2015;13:167.
45. Rasmussen SL, Rejnmark L, Ebbehøj E, Feldt-Rasmussen U, Rasmussen Å K, Bjorner JB, et al. High Level of Agreement between Electronic and Paper Mode of Administration of a Thyroid-Specific Patient-Reported Outcome, ThyPRO. Eur Thyroid J. 2016;5(1):65-72.

46. Chan MY, Haber S, Drew LM, Park DC. Training Older Adults to Use Tablet Computers: Does It Enhance Cognitive Function? Gerontologist. 2016;56(3):475-84.
47. Australian Bureau of Statistics. Use of information technology by people with disability, older people and primary carers Canberra2020 [Available from: https://www.abs.gov.au/articles/use-information-technology-people-disability-older-people-and-primary-carers.
48. Australian Institute of Health and Welfare. Australia's health 2020: data insights Canberra AIHW; 2020 [14th Sept 2021]. Available from: https://www.aihw.gov.au/reports/australias-health/australias-health-2020-data-insights/contents/summary.
49. Ratcliffe J, Flint T, Easton T, Killington M, Cameron I, Davies O, et al. An Empirical Comparison of the EQ-5D-5L, DEMQOL-U and DEMQOL-Proxy-U in a Post-Hospitalisation Population of Frail Older People Living in Residential Aged Care. Appl Health Econ Health Policy. 2017;15(3):399-412.
50. Easton T, Milte R, Crotty M, Ratcliffe J. An empirical comparison of the measurement properties of the EQ-5D-5L, DEMQOL-U and DEMQOL-Proxy-U for older people in residential care. Qual Life Res. 2018;27(5):1283-94.
51. Milte R, Ratcliffe J, Bradley C, Shulver W, Crotty M. Evaluating the quality of care received in long-term care facilities from a consumer perspective: development and construct validity of the Consumer Choice Index – Six Dimension instrument. Ageing and Society. 2019;39(1):138-60.
52. Ayton DR, Gardam ML, Pritchard EK, Ruseckaite R, Ryan J, Robinson SJ, et al. Patient-Reported Outcome Measures to Inform Care of People With Dementia-A Systematic Scoping Review. Gerontologist. 2021;61(5):e185-e94.
53. Naglie G, Tomlinson G, Tansey C, Irvine J, Ritvo P, Black SE, et al. Utility-based Quality of Life measures in Alzheimer's disease. Qual Life Res. 2006;15(4):631-43.
54. Ratcliffe J, Chen G, Khadka J, Kumaran S, Hutchinson C, Milte R, et al. Australia's aged care system: the quality of care experience and community expectations. Caring Future Institute, Flinders University, South Australia. 2020.
55. Kuhrij LS, Wouters MW, van den Berg-Vos RM, de Leeuw FE, Nederkoorn PJ. The Dutch Acute Stroke Audit: Benchmarking acute stroke care in the Netherlands. Eur Stroke J. 2018;3(4):361-8.
56. Dover DC, Schopflocher DP. Using funnel plots in public health surveillance. Popul Health Metr. 2011;9(1):58.
57. Department of Health UK. Patient Reported Outcome Measures (PROMs) in England: The case-mix adjustment methodology. 2011.
58. Fugard AJB, Stapley E, Ford T, Law D, Wolpert M, York A. Analysing and reporting UK CAMHS outcomes: an application of funnel plots. Child Adolesc Ment Health. 2015;20(3):155-62.

Figure 1: Unadjusted (1a) and risk-adjusted (1b) mean quality of life scores comparing performance of 20 community aged care providers (simulated data). Red line represents population mean score. Orange dots represent positive outliers and blue dots represent negative outliers.

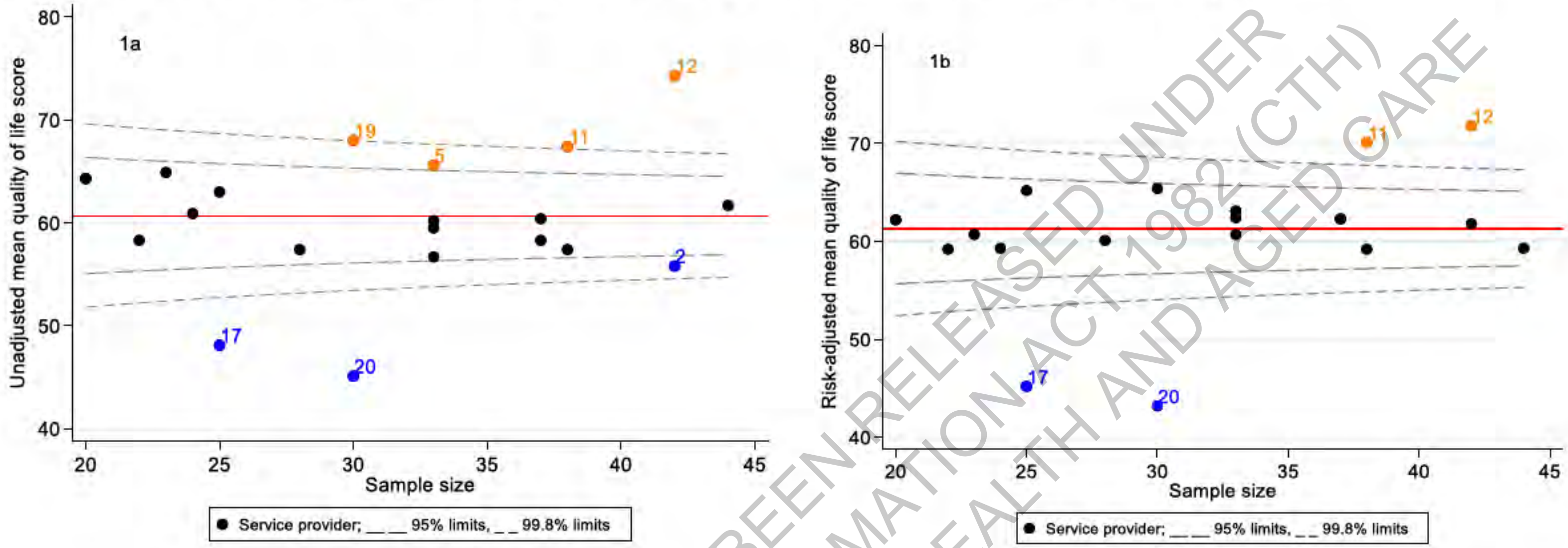


Table 1: **Standardised Psychometric Assessment Criteria**

Psychometric Property	**Criteria**
Content and face validity	
Content identification and selection: degree to which the content of a tool is an adequate reflection of the construct to be measured.	Achieved: Comprehensive consultation (interviews/focus groups) with a representative aged care population and/or experts in aged care and/or comprehensive literature review to identify domains/items/levels for the tool and/or pilot tool developed and assessed with appropriate statistical justification for item reduction by factor or Rasch analysis, floor and ceiling effects and missing values considered. Not achieved: Not carried out above.
Face validity: degree to which the items in a tool are sensible, appropriate and relevant to the people who use the tool on a day-to-day basis.	Achieved: Consultation with aged care users/families/experts. Not achieved: Not carried out above.
Acceptability and feasibility	
The practicality of the tool for administration in an aged care population and setting.	Achieved: High response rate (≥70%), Low respondent burden in terms of time taken to completion, low missing values (≤5%) for majority of items and whether items and levels are clear and understandable (i.e., no/limited assistance required to complete) Not achieved: High respondent burden in terms of time taken to completion, high missing values for (>5%) for majority of items and low level of understanding
Construct validity	
Convergent validity: degree of convergence of the tool and its dimensions under consideration with other validated tools and similar dimensions)	Achieved: Tested against other appropriate tool/s/dimension/s and the correlation is between 0.3-0.7 and/or statistically significant. Low to moderate correlations signify adequate convergence validity but also that the two tools are sufficiently different and not replicating another instrument. Not achieved: The correlation is poor (<0.30) or very high (>0.70). A poor correlation signifies lack of any convergence, and a high correlation signifies that instrument under consideration are measuring similar construct and hence redundant.
Known group validity: ability of the tool to differentiate between groups known to be different by other variables.	Achieved: Tested between appropriate groups (e.g., older people with and without health conditions, self-reported health/quality of life ratings, different level of care needs etc) and significant difference between groups as expected. Not achieved: Tested between debatable groups i.e., no clarity whether groups are known to be different; AND/OR insignificant difference between known groups AND/OR differences observed are not in expected direction (i.e., group with poor health rating has higher scores than the group with good/excellent health ratings).
Reliability	

Psychometric Property	**Criteria**
Inter-rater reliability: level of agreement between different raters, e.g., two or more independent raters.	Achieved: Cohen's Kappa statistics >0.6 or correlation co-efficient >0.7 or Limits of agreement (LOA) <minimally importance difference in score Not achieved: Cohen's Kappa statistics <0.6 or correlation co-efficient<0.7 or Limits of agreement (LOA) > Minimally Importance Difference (MID)* in score
Inter-mode reliability: level of agreement between modes of administration e.g., face-to-face interviews vs telephone interviews vs self-reports.	Achieved: Cohen's Kappa statistics >0.6 or correlation co-efficient>0.7 or Limits of agreement (LOA) <minimally importance difference in score Not achieved: Cohen's Kappa statistics <0.6 or correlation co-efficient<0.7 or Limits of agreement (LOA) > Minimally Importance Difference (MID)* in score
Test-retest reliability: extent to which the tool can reliably replicate the same result e.g., quality of life score more than once at a short time interval usually within 2-3 weeks.	Achieved: Intraclass correlation Correlations (ICC) ≥0.8 Not achieved: Intraclass correlation coefficient (ICC) <0.8
Responsiveness	
Ability of the tool to capture change over time when change is expected.	Achieved: Instrument scores change over time > Minimally Importance difference in Score (MID)# or Effect Size ≥1.00 after intervention/treatment Not achieved: Instrument scores change over time < Minimally Importance difference in Score (MID) or Effect Size < 1.00 after intervention/treatment
Note: # MID (if reported) is the change in score of an instrument (either positive or negative) that is important from the older person or clinician's perspectives; FDA= Food and Drug Administration; OECD=Organisation for Economic Co-operation and Development	

Table 2: Description of Quality of Life (QOL) Tools

	15D	ACCOM	ACCOM-CM	AD-5D	ADRQL	AQoL-6D	AQoL-8D	ASCOT-SCT4	COMQOL-A5
Country of Origin	Finland	Australia	Australia	Australia	USA	Australia	Australia	UK	Australia
Primary Focus	Health Related Quality of Life	Social Care Related Quality of Life	Social Care Related Quality of Life	Health Related Quality of Life for people with dementia	Health Related Quality of Life for people with dementia	Health Related Quality of Life	Health Related Quality of Life	Social Care Related Quality of Life	Health Related Quality of Life
Development population	Adults	Older adults who receive home care packages	Case managers of older adults who receive home care packages	Older adults and family carers of people with dementia	Older adults with dementia	Adults	Adults	Adults who receive social care	Adults
Respondent	Self-completion; interviewer administered; proxy	Self-completion; interviewer administered	Self-completion	Self-completion; interviewer administered (carer/proxy and person)	Interviewer (carer) administered	Self-completion	Self-completion	Self-completion	Self-completion; interviewer administered (person)
Guidance on self vs proxy completion	No	Always self-reported	Always proxy completed	Yes	Always proxy completed	No	No	No	No
Recall period	Present	Present	Present	Present	Past 2 weeks	Past 1 week	Past 1 week	Present	Present, past month, past three months
Dimensions	15	8	8	5	5	6	8	8	7
Items	15	9	31	5	47	20	35	9	44
Levels	5	2-4 (one open ended question)	2-4 (one open ended question)	4	2	4-6	4-6	4	5
Average completion time	5 minutes	10 minutes	10 minutes	5 minutes	10-15 minutes	2-3 minutes	5 minutes	5-10 minutes	45 minutes

	15D	ACCOM	ACCOM-CM	AD-5D	ADRQL	AQoL-6D	AQoL-8D	ASCOT-SCT4	COMQOL-A5
User guide	Yes	Yes	Yes	No	Yes	No	No	Yes	No
Translations*	32 (I, G, D, C, V)	0	0	N/A	6	5 (I, D, C)	5 (I, D, C)	4	N/A
Preference or Non-Preference based	Preference and Non-Preference	Preference	Preference	Preference	Preference	Preference	Preference	Preference	Non-preference
Website	www.15d-instrument.net/15d/	N/A	N/A	https://chsr.centre.uq.edu.au/research-groups/health-economics-modelling-unit/measuring-and-valuing-health-outcomes	N/A	https://www.aqol.com.au	https://www.aqol.com.au	https://www.pssru.ac.uk/ascot/	N/A

* Italian(I), Greek(G), German(D), Chinese(C) and Vietnamese(V); N/A: not available or data could not be found

	DEMQOL	DUKE	D-QoL	EQ-5D-3L	EQ-5D-5L	EQ-HWB	EQ-HWB-S	GSGL	HUI2
Country of Origin	UK	France	USA	UK	UK	UK (validated in 5 countries, inc. Australia)	UK (validated in 5 countries, inc. Australia)	Australia	Canada
Primary Focus	Health Related Quality of Life for people with dementia	Health Related Quality of Life	Health Related Quality of Life for people with dementia	Health Related Quality of Life	Health Related Quality of Life	Health and Wellbeing Related Quality of Life for Social Care Sectors	Health and Wellbeing Related Quality of Life for Social Care Sectors	Health Related Quality of Life for Aboriginal Australians	Health Related Quality of Life
Development population	Older adults with dementia	Adults	Older adults with dementia	Adults	Adults	Patients and carers of patients, social care users and general public	Patients and carers of patients, social care users and general public	Aboriginal Australians ≥45 years	Adults children

	DEMQOL	DUKE	D-QoL	EQ-5D-3L	EQ-5D-5L	EQ-HWB	EQ-HWB-S	GSGL	HUI2
Respondent	Interviewer administered	Self-completion	Interviewer administered	Self-completion; interviewer administered; telephone interview; proxy	Self-completion; interviewer administered; telephone interview; proxy	Self-completion	Self-completion	Interviewer administered; proxy	Self-completion; interview administered; proxy
Guidance on self vs proxy completion	No	No	Unknown (protected by paywall)	Proxy to complete when patients are mentally or physically incapable of reporting on their health-related quality of life because of severe intellectual disability or mental health problems	When patients are mentally or physically incapable of reporting on their health-related quality of life because of severe intellectual disability or mental health problems	No	No	No	Yes
Recall period	Past 1 week	Present and past 1 week	N/A (protected by paywall)	Present	Present	Past 1 week	Past 1 week	Present	Usual (present), Recall (past 1 week, past 2 weeks, past 4 weeks)
Dimensions	4	10	6	5	5	7	7	4	7
Items	29 32 (Proxy version)	17	29	5	5	25	9	12	7
Levels	4	3	5	3	5	5	5	5	3-5
Average completion time	<10 minutes	10 minutes	25 minutes	N/A	N/A	N/A	N/A	5 minutes	8-10 minutes
User guide	Yes	Yes (A$100)	No	Yes	Yes	Yes	Yes	Yes	Yes

	DEMQOL	DUKE	D-QoL	EQ-5D-3L	EQ-5D-5L	EQ-HWB	EQ-HWB-S	GSGL	HUI2
Translations*	3	21	4	Yes (I, G, D, C, V)	Yes (I, G, D, C, V)	4 (D, C)	4 (D, C)	0	38 (I, G, D, C, V)
Preference or Non-Preference based	Preference and Non-Preference	Non-preference	Non-preference	Preference	Preference	Non-preference	Preference	Non-preference	Preference
Website	https://www.bsms.ac.uk/research/neuroscience/cds/research/demqol.aspx#h1	N/A	https://eprovide.mapi-trust.org/instruments/dementia-quality-of-life-instrument#member_access_content	https://euroqol.org/	https://euroqol.org/	https://scharr.dept.shef.ac.uk/e-qaly/about-the-project/	https://scharr.dept.shef.ac.uk/e-qaly/about-the-project/	https://www.aboriginalageingwellresearch.com/	http://www.healthutilities.com/

* Italian(I), Greek(G), German(D), Chinese(C) and Vietnamese(V); N/A: not available or data could not be found

	HUI3	ICECAP-O	interRAI-LTCF	interRAI-HC	JoLS	LTC-QOL	MANSA	NHCR-QOL	NHP
Country of Origin	Canada	UK	Canada	Canada	Norway	Australia	UK	South Korea	UK
Primary Focus	Health Related Quality of Life	Broader Health Related Quality of Life	Health Related Quality of Life	Health Related Quality of Life of people who receive care in their home	Broader Health Related Quality of Life	People accessing Long Term Care aged 55+	Broader Health Related Quality of Life	Environmental and social care related Quality of Life	Measure perceived health problems
Development population	Adults	Adults aged 65 and over	N/A	N/A	Residential aged care residents	Nursing home residents	Patients with diagnosis of mental health illness	Literature review, experts and nursing home residents	Adults
Respondent	Self-completion; interviewer administered; proxy	Self-completion	Interview administered	Interview administered	Interview administered	Interviewer administered (carer/proxy and person)	Interviewer administered (person)	Self-completion	Self-completion; Interviewer administered
Guidance on self vs proxy completion	Yes	No	N/A	N/A	No	No	N/A	No	No

	HUI3	ICECAP-O	interRAI-LTCF	interRAI-HC	JoLS	LTC-QOL	MANSA	NHCR-QOL	NHP
Recall period	Usual (present), Recall (past 1 week, past 2 weeks, past 4 weeks)	Present	N/A	N/A	Past 1 week	Past 2 weeks	Present to past 1 year	Unknown	N/A
Dimensions	8	5	6	18	5	5	5	2	14
Items	8	5	50	N/A	18	9	16	17	45
Levels	5-6	4	N/A	N/A	7	5	7	2	2
Average completion time	8-10 minutes	5-10 minutes	40-60 minutes	40-60 minutes	N/A	N/A	10 minutes	N/A	10 mins
User guide	Yes	No	Yes ($60.95)	Yes ($60.95)	No	Yes	No	No	No
Translations*	38 (I, G, D, C, V)	8 (D, C)	11 (I)	9 (I)	0	Unknown	N/A	0	19 (G, D, I)
Preference or Non-Preference based	Preference	Preference	N/A	N/A	Non-preference	Non-preference	Non-preference	Non-preference	Non-preference
Website	http://www.healthutilities.com/	www.birmingham.ac.uk/icecap	www.interrai.org/instruments/	www.interrai.org/instruments/	N/A	http://ltc-qol.info/about	N/A	N/A	N/A

* Italian(I), Greek(G), German(D), Chinese(C) and Vietnamese(V); N/A: not available or data could not be found

	OPQOL-35	OPQOL-Brief	PGCMS	PWI-A	QOL-ACC	QoL-AD	QoL-AD-NH	QOLNHR	QUALID
Country of Origin	UK	UK	USA	Australia	Australia	USA	USA	USA	USA
Primary Focus	Health Related Quality of Life	Health Related Quality of Life	Health Related Quality of Life	Subjective wellbeing of adults	Aged care specific Quality of Life	Alzheimer's Disease Specific Quality of Life	Alzheimer's Disease Specific Quality of Life	Nursing home residents	Late-stage Dementia

	OPQOL-35	OPQOL-Brief	PGCMS	PWI-A	QOL-ACC	QoL-AD	QoL-AD-NH	QOLNHR	QUALID
Development population	Adults over 65 years living at home	Adults over 65 years living at home	Adults	Adults	Older adults and family carers, home and residential care	Older adults (mean age: 78.3) with Alzheimer's)	Older adults with dementia in residential care (mean age – 85.8)	Nursing home residents	Nursing home residents with late-stage dementia (clinician observations)
Respondent	Self-completion	Self-completion	Self-completion	Self-completion; interviewer administered	Self-completion; interviewer administered; proxy	Interviewer administered	Interviewer administered (Carer/Proxy and Self-report)	Interviewer administered	Proxy (carer with 30 or more hours of exposure to resident over previous week); Interview administered
Guidance on self vs proxy completion	No	No	No	No	In development	No	N/A	No	N/A
Recall period	Present	Present	Present	Present	Present	Present	Present	Not specified	Past 1 week
Dimensions	6	4	5	7	6	6	6	7	3
Items	35	13	17	10	6	13	15	N/A	11
Levels	5	5	2	11	5	4	4	4-5	5
Average completion time	N/A	N/A	N/A	5-10 minutes	5 minutes	10-15 minutes	10-15 minutes	N/A	5 minutes (Interviewer completion)
User guide	No	No	No	Yes	Yes	Yes	No	N/A	No
Translations*	N/A	N/A	N/A	28 (I, G, D)	N/A	9 (D)	1 (D)	N/A	5+ (I)

	OPQOL-35	OPQOL-Brief	PGCMS	PWI-A	QOL-ACC	QoL-AD	QoL-AD-NH	QOLNHR	QUALID
Preference or Non-Preference based	Non-preference	Non-preference	Non-preference	Non-preference	Preference	Preference (AD-5D)	Preference (AD-5D)	Non-preference	Non-preference based
Website	N/A	N/A	N/A	http://www.acqol.com.au/instruments#measures	https://www.qol-acc.org/	N/A	N/A	N/A	N/A

* Italian(I), Greek(G), German(D), Chinese(C) and Vietnamese(V); N/A: not available or data could not be found

	QUALIDEM	SF-8	SF-12	SF-36	SWLS	WHOQoL-100	WHOQoL-AGE	WHOQoL-BREF	WHOQoL-OLD
Country of Origin	Netherlands	USA	USA	USA	USA	15 countries (inc. Australia)	Finland, Poland, Spain	17 countries (inc. Australia)	25 countries (inc. Australia)
Primary Focus	Dementia Specific ages 65+	Health-related Quality of Life	Health-related Quality of Life	Health-related Quality of Life	Subjective Wellbeing	Health Related Quality of Life	Health Related Quality of Life in older people	Health Related Quality of Life	Health Related Quality of Life in older people
Development population	Nursing home residents (care staff)	General Population (adults)	General Population (adults)	General Population (adults)	University Students + Older adults	Adults	Adults ≥50 years	Adults	Adults
Respondent	Proxy (Carer/nurse)	Self-completion	Self-completion	Self-completion	Self-completion	Self-completion; interviewer administered	Self-completion; interviewer administered	Self-completion; interviewer administered	Self-completion; interviewer administered
Guidance on self vs proxy completion	N/A	No	No	No	No	Yes; should be self-completed if respondent can read	No	Yes; should be self-completed if respondent can read	No
Recall period	1 or 2 weeks	4 weeks	4 Weeks, 1 Week	Present, 1 week, 4 weeks and 1 year	Present and whole life	Past 2 weeks	Past 2 weeks	Past 2 weeks	Unknown
Dimensions	9	8	8	8	3	6	6	6	6
Items	37 (mild-severe) 18 (very severe)	8	12	36	5	100	13	26	24
Levels	4	5-6	2-6	2-6	7	5	5	5	5
Average completion time	10 minutes	1-3 minutes	5-10 minutes	≤10 minutes; tested in older adults 65+	1-3 minutes	30 minutes (self-completion)	N/A	N/A	N/A
User guide	Yes	No	No	No	No (only a scoring guide)	Yes	No	Yes	No

	QUALIDEM	SF-8	SF-12	SF-36	SWLS	WHOQoL-100	WHOQoL-AGE	WHOQoL-BREF	WHOQoL-OLD
Translations*	English (D)	30+ (C, D, V)	205 (D, I, G, C, V)	213 (D, I, G, C, V)	33 (I, G, D, C, V)	38 (I, D, C)	N/A	38 (I, D, C)	N/A
Preference or Non-Preference based	Non-preference based	Preference based	Preference based	Preference based	Non-preference based	Non-preference	Non-preference	Non-preference	Non-preference
Website	https://www.dementiaresearch.org.au/wp-content/uploads/2016/06/QUALIDEM_User_Guide.pdf	https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/survey-instrument.html	https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/survey-instrument.html	https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/survey-instrument.html	http://labs.psychology.illinois.edu/~ediener/SWLS.html	https://www.who.int/mental_health/publications/whoqol/en/	N/A	https://www.who.int/mental_health/publications/whoqol/en/	https://www.who.int/mental_health/evidence/WHOQOL_OLD_Manual.pdf?ua=1

* Italian(I), Greek(G), German(D), Chinese(C) and Vietnamese(V); N/A: not available or data could not be found

Table 3: Included dimensions

	Instrument	Physical health	Emotional state	Mental health	Social connection	Environment	Personhood	Autonomy	Spiritual feeling	Overall question
1	15D	✓	✓	✓			✓			
2	ACCOM				✓	✓	✓	✓		
3	ACCOM-CM				✓	✓	✓	✓		
4	AD-5D	✓	✓		✓	✓	✓	✓		✓
5	ADRQL	✓	✓		✓	✓	✓	✓		
6	AQoL-6D	✓	✓	✓	✓			✓		
7	A-QoL-8D	✓	✓	✓	✓			✓		
8	ASCOT-SCT4				✓	✓	✓	✓		
9	COMQOL-A5	✓	✓	✓	✓	✓	✓			
10	DEMQOL		✓	✓	✓	✓				✓
11	DEMQOL-Carer		✓	✓	✓	✓				✓
12	DUKE	✓	✓	✓	✓	✓				
13	D-QoL		✓	✓	✓		✓	✓		✓
14	EQ-5D-3L	✓		✓			✓			✓
15	EQ-5D-5L	✓		✓			✓			✓
16	EQ-HWB	✓	✓	✓	✓		✓	✓		
17	EQ-HWB-S	✓	✓	✓	✓		✓	✓		
18	GSGL	✓	✓	✓	✓	✓	✓		✓	
19	HUI2	✓	✓	✓			✓	✓		

	Instrument	Physical health	Emotional state	Mental health	Social connection	Environment	Personhood	Autonomy	Spiritual feeling	Overall question
20	HUI3	✓	✓	✓						
21	ICECAP-O		✓		✓		✓	✓		
22	interRAI-LTCF		✓		✓	✓	✓	✓		
23	interRAI-HC	✓	✓		✓	✓	✓	✓		
24	JoLS		✓		✓	✓	✓		✓	
25	LTC-QOL		✓		✓	✓	✓			
26	MANSA	✓		✓	✓	✓				✓
27	NHCR-QOL				✓	✓				
28	NHP	✓	✓	✓	✓	✓	✓	✓		
29	OPQOL-35	✓	✓		✓	✓	✓	✓		✓
30	OPQOL-Brief	✓			✓	✓		✓		✓
31	PGCMS		✓	✓	✓		✓	✓		✓
32	PWI-A	✓			✓	✓				✓
33	QOL-ACC	✓	✓		✓		✓	✓		
34	QoL-AD	✓	✓		✓	✓	✓	✓		✓
35	QoL-AD-NH	✓	✓		✓	✓	✓	✓		✓
36	QOLNHR	✓	✓		✓	✓	✓	✓	✓	
37	QUALID	✓	✓		✓					
38	QUALIDEM	✓	✓		✓	✓		✓		
39	SF-8	✓	✓	✓	✓			✓		
40	SF-12	✓	✓	✓	✓			✓		
41	SF-36	✓	✓	✓	✓			✓		
42	SWLS		✓			✓		✓		✓
43	WHOQoL-100	✓	✓	✓	✓	✓	✓	✓		✓
44	WHOQoL-AGE	✓	✓		✓	✓	✓	✓		✓
45	WHOQoL-BREF	✓	✓	✓	✓	✓	✓	✓		✓
46	WHOQoL-OLD	✓	✓		✓		✓	✓		

Table 3a: QOL instruments that ask a question about the following

Instrument	Intimacy/sex life	Food	Incontinence
15D	✓		
AQOL-6D	✓		
AQOL-8D	✓		
ASCOT-SCT4		✓	
ASCOT-INT4		✓	
DEMQOL	✓		✓
OPQOL-35	✓		
QOLNHR		✓	
QUALID		✓	
WHOQOL-100	✓		
WHOQOL-AGE	✓		
WHOQOL-BREF	✓		
WHOQOL-OLD	✓		
ACCOM		✓	
NHP	✓		
interRAI-HC			✓
MANSA	✓		

Table 4: Application of quality of life instruments across country, context setting and study design

Tool	Setting	Number of studies	Countries (no. of studies in that country)	Reference for Australian studies	Population total	Mean age	Study design (no. of studies)
15AD	Residential care	3	Finland (3)	-	752	83	Cross-sectional (2); RCT (1)
	Home care	-	-	-	-	-	-
AD-5D	Residential care	1	Australia (1)	[1]	284	-	RCT (1)
	Home care	-	-	-	-	-	-
ACCOM	Residential care	-	-	-	-	-	-
	Home care	1	Australia (1)	[2]	224	-	Cross-sectional (1)
ACCOM-CM	Residential care	-	-	-	-	-	-
	Home care	1	Australia (1)	[2]	28	-	Cross-sectional (1)
ADRQL	Residential care	15	USA (8); Denmark (2); Spain (3); Germany (1); Norway (1); Belgium (1)	-	1,987	83	Cross-sectional (8); Psychometrics (2); RCT (1); Test-retest (1); Quasi-experimental (1); Prospective cohort (1)
	Home care	-	-	-	-	-	-
AQoL	Residential care	1	Malaysia (1)	-	49	71	Cross-sectional (1)
	Home care	4	Australia (3); Malaysia (1)	[3-5]	910	77	Cross-sectional (2); RCT (1); RCT follow-up (1)
ASCOT-SCT4	Residential care	-	-	-	-	-	-
	Home care	9	Australia (1); UK (5); The Netherlands (1); Germany (1); Finland (1)	[6]	31,901	80	Cross-sectional (2); Psychometrics (5); RCT (1); Cohort study (1)
COMQOL-A5	Residential care	-	-	-	-	-	-
	Home care	1	Australia (1)	[7]	76	-	Cross-sectional (1)
DEMQOL	Residential care	13	Australia (9); UK (2); USA (1); The Netherlands (1)	[8-16]	5,537	85	RCT (5); Cross-sectional (4); Mixed Methods (2); Test-retest (1); Quasi-experimental (1); Psychometrics (1)
	Home care	-	-	-	-	-	-
DUKE	Residential care	1	France (1)	-	1,306	85	Cross-sectional (1)
	Home care	-	-	-	-	-	-
D-QOL	Residential care	-	-	-	-	-	-
	Home care	11	Australia (1); USA (5); The Netherlands (2); Norway (1); France (1); UK (1)	[17]	2,733	84	Cross-sectional (6); RCT (3); Psychometrics (2);

Tool	Setting	Number of studies	Countries (no. of studies in that country)	Reference for Australian studies	Population total	Mean age	Study design (no. of studies)
EQ-5D-3L	Residential care	29	Netherlands (6); Spain (3); UK (3); Sweden (2) Belgium (2); Austria (2) New Zealand (1); Denmark (1); South Korea (1); Canada (1); China (1); Hong Kong (1); Hungary (1); Lebanon (1); Malaysia (1); Germany (1); Taiwan (1)	-	12,376	82	Cross-sectional (13); RCT (7); Quasi-experimental (6); Longitudinal (1); Psychometrics (1); Test-retest (1)
	Home care	14	Australia (2); The Netherlands (4); Denmark (3); Germany (2); Hungary (1); UK (2)	[18, 19]	3,904	81	RCT (9); Cross-sectional (3); Quasi-experimental (1); Psychometrics (1)
EQ-5D-5L	Residential care	6	Australia (5); Romania (1)	[9-12, 20]	1,974	82	Cross-sectional (3); RCT (1); Psychometrics (1); Longitudinal (1)
	Home care	4	Australia (2); Netherlands (1); UK (1)	[21, 22]	723	82	Cross-sectional (3); Longitudinal cohort (1)
GSGL	Residential care	1	Australia (1)	[23]	6	-	Psychometrics (1)
	Home care	1	Australia (1)	[23]	56	-	Psychometrics (1)
HUI2	Residential care	3	Australia (1); Canada (1); USA (1)	[24]	6,154	83	Cross-sectional (1); RCT (1); Psychometrics (1)
	Home care	5	Canada (4); USA (3)	-	7,174	80.8	Cross-sectional (3); Psychometrics (1); RCT (1)
HUI3	Residential care	2	Australia (1); USA (1)	[24]	565,237	-	RCT (1); Cross-sectional (1)
	Home care	1	USA (1)	-	565,037	-	Cross-sectional (1)
ICECAP-O	Residential care	3	The Netherlands (1); Germany (1); Spain (1)	-	434	82	Psychometrics (2); Cross-sectional (1)
	Home care	4	Australia (2); The Netherlands (1); UK (1)	[21, 22]	1,675	80	Cross-sectional (3); Psychometrics (1)
interRAI-LTCF	Residential care	2	Canada (2)	-	928	80	Cross-sectional (1)
	Home care	3	Germany (3); Belgium (1); Finland (1); Iceland (1); Italy (1); The Netherlands (1)	-	4,724	80	RCT (2); Comparative study (1)
JoLS	Residential care	1	Norway (1)	-	188	87.4	Cross-sectional (1)
	Home care	-	-	-	-	-	-

Tool	Setting	Number of studies	Countries (no. of studies in that country)	Reference for Australian studies	Population total	Mean age	Study design (no. of studies)
LTC-QOL	Residential care	1	Australia (1)	[25]	28	86	Mixed-methods (1)
	Home care	2	Australia (1); Austria (1); England (1); Finland (1)	[26]	920	83	Cross-sectional (2)
MANSA	Residential care	1	The Netherlands (1)	-	163	68	Cross-sectional (1)
	Home care	2	The Netherlands (2)	-	305	74	Cross-sectional (2)
NHCR-QOL	Residential care	1	South Korea (1)	-	667	81	Mixed-methods (1)
	Home care	-	-	-	-	-	-
NHP	Residential care	9	Turkey (4); Germany (3); The Netherlands (1); Spain (1)	-	2,141	80	Cross-sectional (4); RCT (3); PsychometricS (2); Quasi-experimental (1)
	Home care	1	Finland (1)	-	668	82	RCT (1)
OPQOL-35	Residential care	1	Philippines (1)	-	200	70	Cross-sectional (1)
	Home care	-	-	-	-	-	-
OPQOL-Brief	Residential care	1	Norway (1)	-	188	87	Cross-sectional (1)
	Home care	1	Australia (1)	[6]	87	80	Cross-sectional (1)
PGCMS	Residential care	3	Germany (1); Turkey (1); Netherlands (1)	-	815	82	Cross-sectional (3)
	Home care	1	Netherlands (1); Finland (1)	-	257	81	Cross-sectional (2)
PWI-A	Residential care	2	Spain (1); Turkey (1)	-	555	77	Cross-sectional (2)
	Home care	-		-	-	-	-
QOL-ACC	Residential care	1	Australia (1)	[27]	69	85	Psychometrics (1)
	Home care	3	Australia (3)	[27-29]	1,155	80	Psychometrics (1)
QOL-AD	Residential care	36	Australia (5); Canada (2); Spain (9); UK (11); Estonia (4); Finland (3); USA (2); Norway (1); France (4); Brazil (1); Switzerland (1); Netherlands (6); Denmark (2); Germany (6); Sweden (4)	[30-34]	7,267	84	RCT (7); Cross-sectional (15); Quasi-experimental (7); Longitudinal cohort (5); Mixed methods (2)
	Home care	7	Australia (1); Finland (1); Netherlands (1); UK (1); USA (2); Denmark (1)	[35]	1,444	78	Cross-sectional (4); RCT (2); Longitudinal cohort (1)
QOL-AD-NH	Residential care	1	Australia (1)	[36]	18	86	Test-retest (1)
	Home care	-	-	-	-	-	-
QOLNHR	Residential care	2	USA (2)	-	2,050	84	Cross-sectional (2)
	Home care	-	-	-	-	-	-

Tool	Setting	Number of studies	Countries (no. of studies in that country)	Reference for Australian studies	Population total	Mean age	Study design (no. of studies)
QUALID	Residential care	26	Australia (1); Norway (14); Sweden (5); The Netherlands (2); Spain (2); Italy (1); USA (1)	[37]	9,242	85	Cross-sectional (11); RCT (9); Longitudinal (3); Psychometrics (3)
	Home care	-	-	-	-	-	-
QUALIDEM	Residential care	23	The Netherlands (16); Germany (5); Switzerland (1); Norway (1)	-	6,336	84	Cross-sectional (8); RCT (7); Quasi-experimental (3); Longitudinal (2); Psychometrics (2); Mixed methods (1)
	Home care	-	-	-	-	-	-
SF-8	Residential care	3	USA (2); Japan (1)	-	172	85	Test-retest (1); Quasi-experimental (1); Cross-sectional (1)
	Home care	2	USA (1); Japan (1)	-	738	76	Cross-sectional (1); Psychometrics (1)
SF-12	Residential care	14	Hong Kong (6); Germany (4); China (3); USA (1)	-	3,370	81	RCT (2); Cross-sectional (8); Mixed methods (1); Quasi-experimental (1)
	Home care	10	The Netherlands (5); China (2); Sweden (1); USA (1); Germany (1)	-	2,002	82	Cross-sectional (6); RCT (4)
SF-36	Residential care	29	Australia (1); USA (4); Turkey (3); China (2); Nigeria (1); Taiwan (2); Germany (2); Belgium (3); Brazil (1); Norway (3); South Africa (1); Sweden (1); Iran (2); Italy (1); The Netherlands (1); Nepal (1)	[38]	7,164	80	RCT (7); Cross-sectional (17); Longitudinal (2); Quasi-experimental (3);
	Home care	17	Australia (2); New Zealand (1); USA (3); Norway (3); The Netherlands (3); Canada (1); Spain (1); China (1); UK (1)	[39, 40]	284,182	78	RCT (9); Cross-sectional (3); Longitudinal (2); Quasi-experimental (1); Psychometrics (2)
SWLS	Residential care	6	USA (3); Poland (1); Hong Kong (1); Italy (1)	-	997	83	Cross-sectional (5); Quasi-experimental (1)

Tool	Setting	Number of studies	Countries (no. of studies in that country)	Reference for Australian studies	Population total	Mean age	Study design (no. of studies)
	Home care	3	Canada (1); Italy (1); Netherlands (1)	-	3,591	80	Quasi-experimental (2); Cross-sectional (1)
WHOQoL-100	Residential care	2	Iran (1); Hong Kong (1)	-	297	85	Cross-sectional (1); RCT (1)
	Home care	-	-	-	-	-	-
WHOQoL-AGE	Residential care	-	-	-	-	-	-
	Home care	1	Poland (1)	-	176	75	Cross-sectional (1)
WHOQoL-BREF	Residential care	22	Indonesia (3); Sweden (2); Turkey (2); Hong Kong (2); Portugal (2); China (1); Brazil (1); Sri Lanka (1); Finland (1); Germany (1); Italy (1); Poland (1); The Netherlands (1); Hungary (1); Jordan (1); Korea (1)	-	6,963	78	Cross-sectional (19); RCT (2); Test-retest (1)
	Home care	3	Turkey (1); Spain (1); Czech Republic (1)	-	545	77	Cross-sectional (2); Case-control (1)
WGOQoL-OLD	Residential care	4	Turkey (1); Brazil (1); Sweden (1); Singapore (1)	-	420	78	Cross-sectional (3); Quasi-experimental (1)
	Home care	1	Czech Republic (1)	-	361	77	Cross-sectional (1)

Table 5: Psychometric properties of quality of life tools

		Content validity			Construct Validity		Reliability			
Rank	Tool	Content identification	Face validity	Acceptability and Feasibility	Convergent	Known group	Inter-rater	Mode of administration	Test-rest	Responsiveness
1	**QOL-ACC**	High*[27, 28]	High*[28]	High*[28]	High* [29]	High* [29]	-	High*[28]	-	-
2	**GSGL**	High*[23]	High*[23]	High* [23]	High*[23]	High*[23]	-	-	High*[23]	-
3	**DEMQOL**	-	-	-	High*[8]	High*[41]	-	-	-	Low*[12, 13]
4	**EQ-5D-5L**	-	-	-	High*[11]	High*[11, 20]	-	-	-	
5	**SF-36**	Low*[39]	-	High[41]	High*[39]	High[42]	High[41]	High[41]	-	Low*[39]
6	**ICECAP-O**	-	-	Medium[43]	High*[43, 44]	High[43, 45]	-	-	-	-
7	**ACCOM**	Medium*[2]	-	Medium*[2]	High*[2]	Medium*[2]	Low* [2]	-	-	-
8	**LTC-QOL**	-	-	-	High* [26]	-	-	-	High* [26]	-
9	**EQ-5D-3L**	-	-	-	High[46]	High*[18]	-	-	High[46]	
10	**AD-5D**	High*[1]	-	-	-	-	-	-	-	-
11	**ASCOT-SCT4**	-	-	Medium[43]	Low*[6]	Medium[43]	-	-	-	-
12	**OPQOL-Brief**	-	-	Low* [6]	Low* [6]	Low* [6]	-	-	-	-
13	QoL-AD	Low[47]	-	Low[45, 48]	High[45, 49]	High[45, 47]	Low[47]	-	Low[47, 48, 50]	Low[47, 51]
14	interRAI-LTCF	-	-	-	High[52]	High[53]	-	-	Medium[52]	-
15	ADRQL	-	-	-	High[54]	High[55, 56]	-	-	-	-
16	SF-12	-	-	-	High[57, 58]	-	High[58]	-	-	High[57]
17	D-QoL	-	-	High[42]	High[42]	-	-	-	-	-
18	QUALID	-	-	-	High[21]	-	-	-	-	-
19	HUI2	-	-	Low[59]	-	High[51]	-	-	-	High[51]
20	15D	-	-	-	-	High[60]	-	-	-	Low[61]
21	QOLNHR	High[62]	-	-	-	-	-	-	-	-
22	SWLS	-	-	-	Low[63]	-	-	-	-	-
23	MANSA	-	-	-	-	Low[64]	-	-	-	-
24	SF-8	-	-	-	-	-	-	-	Low[64, 65]	-

* Indicates that evidence is based on studies conducted with an Australian aged care population

References (Tables 1-11)

1. Nguyen, K.-H., et al., *Developing a dementia-specific health state classification system for a new preference-based instrument AD-5D.* Health Qual Life Outcomes, 2017. **15**(1): p. 21-21.
2. Beatriz Cardona, A.S., Michael Fine, Cathy Duncan, Peter Samsa, Kathy Eager, *Ageing well at home: measuring the impact of community care for older people*. 2017, University of Wollongong: Macquarie University, Australian Health Services Research Institute.
3. de Morton, N.A., et al., *Validation of the de Morton Mobility Index (DEMMI) with older community care recipients.* Australas J Ageing, 2011. **30**(4): p. 220-225.
4. Lewin, G., K. Concanen, and D. Youens, *The home independence program with non-health professionals as care managers: An evaluation.* Clin Interv Aging, 2016. **11**: p. 807-817.
5. Lewin, G., et al., *A randomised controlled trial of the Home Independence Program, an Australian restorative home-care programme for older adults.* Health Soc Care Community, 2013. **21**(1): p. 69-78.
6. Kaambwa, B., et al., *An empirical comparison of the OPQoL-Brief, EQ-5D-3 L and ASCOT in a community dwelling population of older people.* 2016.
7. Butler, J. and J. Ciarrochi, *Psychological Acceptance and Quality of Life in the Elderly.* Qual Life Res, 2007. **16**(4): p. 607-615.
8. Fleming, R., et al., *The relationship between the quality of the built environment and the quality of life of people with dementia in residential care.* Dementia (London), 2016. **15**(4): p. 663-680.
9. Harrison, S.L., et al., *Psychotropic medications in older people in residential care facilities and associations with quality of life: a cross-sectional study.* 2018.
10. Harrison, S.L., et al., *Associations between the Drug Burden Index, Potentially Inappropriate Medications and Quality of Life in Residential Aged Care.* Drugs Aging, 2018. **35**(1): p. 83-91.
11. Ratcliffe, J., et al., *An Empirical Comparison of the EQ-5D-5L, DEMQOL-U and DEMQOL-Proxy-U in a Post-Hospitalisation Population of Frail Older People Living in Residential Aged Care.* Applied health economics and health policy, 2017. **15**(3): p. 399-412.
12. Crotty, M., et al., *Should we provide outreach rehabilitation to very old people living in Nursing Care Facilities after a hip fracture? A randomised controlled trial.* Age Ageing, 2019. **48**(3): p. 373-380.
13. Edwards, C.A., C. McDonnell, and H. Merl, *An evaluation of a therapeutic garden's influence on the quality of life of aged care residents with dementia.* Dementia (London), 2013. **12**(4): p. 494-510.
14. Chenoweth, L., et al., *PerCEN: a cluster randomized controlled trial of person-centered residential care and environment for people with dementia.* Int. Psychogeriatr, 2014. **26**(7): p. 1147-1160.
15. Low, L.-F., et al., *The Sydney Multisite Intervention of LaughterBosses and ElderClowns (SMILE) study: cluster randomised trial of humour therapy in nursing homes.* BMJ Open, 2013. **3**(1): p. e002072.
16. Brodaty, H.M.B.B.S.M.D.D.S.F.R.A.C.P.F.R.A.N.Z.C.P., et al., *Successful Ingredients in the SMILE Study: Resident, Staff, and Management Factors Influence the Effects of Humor Therapy in Residential Aged Care.* Am J Geriatr Psychiatry, 2014. **22**(12): p. 1427-1437.
17. Bootsman, N.J.M., et al., *The relationship between physical activity, and physical performance and psycho-cognitive functioning in older adults living in residential aged care facilities.* J Sci Med Sport, 2018. **21**(2): p. 173-178.
18. Hetherington, S., et al., *Engineering Improved Balance Confidence in Older Adults With Complex Health Care Needs: Learning From the Muscling Up Against Disability Study.* Arch Phys Med Rehabil, 2018. **99**(8): p. 1525-1532.
19. Salkeld, G., et al., *Quality of Life Related to Fear of Falling and Hip Fracture in Older Women: A Time Trade off Study.* BMJ, 2000. **320**(7231): p. 341-345.
20. Dyer, S.M., et al., *Clustered domestic residential aged care in Australia: fewer hospitalisations and better quality of life.* Med J Aust, 2018. **208**(10): p. 433-438.
21. Siette, J., et al., *Quality of life measurement in community-based aged care – understanding variation between clients and between care service providers.* BMC geriatrics, 2021. **21**(1): p. 390-390.
22. Bulamu, N., et al., *Impact of consumer-directed care on quality of life in the community aged care sector.* Geriatr Gerontol Int, 2017. **17**(10): p. 1399-1405.
23. Smith, K., et al., *Good Spirit, Good Life: A Quality of Life Tool and Framework for Older Aboriginal Peoples.* Gerontologist, 2020. **61**(5): p. E163-E172.
24. Arendts, G., et al., *A clinical trial of nurse practitioner care in residential aged care facilities.* Arch Gerontol Geriatr, 2018. **77**: p. 129-132.
25. Annear, M.J., et al., *"Bringing the outside world in": Enriching social connection through health student placements in a teaching aged care facility.* Health Expect, 2017. **20**(5): p. 1154-1162.
26. McDonald, T. and F. Russell, *Long-Term Care Quality-of-Life Scale utility in community home care.* Nurs Health Sci, 2019. **21**(4): p. 494-500.

27. Cleland, J., et al., *Developing dimensions for a new preference-based quality of life instrument for older people receiving aged care services in the community.* Qual Life Res, 2021. **30**(2): p. 555-565.
28. Hutchinson, C., et al., *The integration of mixed methods data to develop the Quality of Life - Aged Care Consumers (QOL-ACC) instrument.* BMC Geriatrics (under review), 2021.
29. Khadka, J., et al., *Assessing the construct and known group validity of the Quality of Life- Aged Care Consumer (QOL-ACC): a new preference-based quality of life measure for aged care* Qual Life Res (under review), 2021
30. Elliott, K.E.J., et al., *Residents with mild cognitive decline and family members report health students 'enhance capacity of care' and bring 'a new breath of life' in two aged care facilities in Tasmania.* Health Expect, 2015. **18**(6): p. 1927-1940.
31. Potter, K., et al., *Deprescribing in Frail Older People: A randomised controlled trial.* PLoS One, 2016. **11**(3): p. e0149984-e0149984.
32. Lalic, S., et al., *Polypharmacy and medication regimen complexity as factors associated with staff informant rated quality of life in residents of aged care facilities: a cross-sectional study.* Eur J Clin Pharmacol, 2016. **72**(9): p. 1117-1124.
33. Moyle, W., et al., *Exploring the effect of companion robots on emotional expression in older adults with dementia: A pilot randomized controlled trial.* J Gerontol Nurs, 2013. **39**(5): p. 46-53.
34. Scott, T.L., B.M. Masser, and N.A. Pachana, *Multisensory Installations in Residential Aged-Care Facilities: Increasing Novelty and Encouraging Social Engagement Through Modest Environmental Changes.* J Gerontol Nurs, 2014. **40**(9): p. 20-31.
35. Harrison, F., et al., *What do clients expect of community care and what are their needs? The Community care for the Elderly: Needs and Service Use Study (CENSUS).* Australasian Journal on Ageing, 2014. **33**(3): p. 206-213.
36. Travers, C., *Increasing enjoyable activities to treat depression in nursing home residents with dementia: A pilot study.* Dementia (London), 2017. **16**(2): p. 204-218.
37. Agar, M., et al., *Effects of facilitated family case conferencing for advanced dementia: A cluster randomised clinical trial.* PLoS One, 2017. **12**(8): p. e0181020-e0181020.
38. Hewitt, J., et al., *Progressive Resistance and Balance Training for Falls Prevention in Long-Term Residential Aged Care: A Cluster Randomized Trial of the Sunbeam Program.* J Am Med Dir Assoc, 2018. **19**(4): p. 361-369.
39. Osborne, R.H., et al., *Quality of life assessment in the community-dwelling elderly: Validation of the Assessment of Quality of Life (AQoL) Instrument and comparison with the SF-36.* J Clin Epidemiol, 2003. **56**(2): p. 138-147.
40. Tay, T., et al., *Sensory Impairment, Use of Community Support Services, and Quality of Life in Aged Care Clients.* J Aging Health, 2007. **19**(2): p. 229-241.
41. Gandek, B., et al., *Psychometric evaluation of the SF-36® health survey in medicare managed care.* Health Care Financ Rev, 2004. **25**(4): p. 5-25.
42. Kanwar, A., et al., *Frailty and Health-Related Quality of Life Among Residents of Long-Term Care Facilities.* J Aging Health, 2013. **25**(5): p. 792-802.
43. Hackert, M.Q.N.M., J.v.P. Exel, and W.B.F.P. Brouwer, *Valid Outcome Measures in Care for Older People: Comparing the ASCOT and the ICECAP-O.* Value Health, 2017. **20**(7): p. 936-944.
44. Resnick, B., et al., *Reliability and Validity Testing of the Quality of Life in Late-Stage Dementia Scale.* Am J Alzheimers Dis Other Demen, 2018. **33**(5): p. 277-283.
45. Logsdon, R.G., et al., *Assessing quality of life in older adults with cognitive impairment.* Psychosom Med, 2002. **64**(3): p. 510-519.
46. van Leeuwen, K.M.M., et al., *Comparing Measurement Properties of the EQ-5D-3L, ICECAP-O, and ASCOT in Frail Older Adults.* Value Health, 2015. **18**(1): p. 35-43.
47. Thorgrimsen, L., et al., *Whose Quality of Life Is It Anyway? The Validity and Reliability of the Quality of Life-Alzheimer's Disease (QoL-AD) Scale.* Alzheimer Dis Assoc Disord, 2003. **17**(4): p. 201-208.
48. Hoe, J., et al., *Use of the QOL-AD for measuring quality of life in people with severe dementia—the LASER-AD study.* Age Ageing, 2005. **34**(2): p. 130-135.
49. Bhattacharya, S., et al., *Generic and Disease-Specific Measures of Quality of Life in Patients with Mild Alzheimer's Disease.* Dement Geriatr Cogn Disord, 2010. **30**(4): p. 327-333.
50. Gibbons, L., S. McCurry, and L. Teri, *Quality of Life in Alzheimer's disease: Patient and Caregiver Reports.* Journal of Mental Health and Aging, 1999. **5**: p. 21-32.
51. van Haeften-van Dijk, A.M., et al., *Community day care with carer support versus usual nursing home-based day care: effects on needs, behavior, mood, and quality of life of people with dementia.* Int. Psychogeriatr, 2016. **28**(4): p. 631-645.

52. Hirdes, J.P. and P. Stolee, *Residents' Self-Reported Quality of Life in Long-Term Care Facilities in Canada.* Can J Aging, 2015. **34**(2): p. 149-164.
53. Kehyayan, V., et al., *Predictors of Long-Term Care Facility Residents' Self-Reported Quality of Life With Individual and Facility Characteristics in Canada.* J Aging Health, 2016. **28**(3): p. 503-529.
54. Sloane, P.D., et al., *Evaluating the Quality of Life of Long-Term Care Residents With Dementia.* The Gerontologist, 2005. **45**(suppl-1): p. 37-49.
55. Cordner, Z., et al., *Quality of Life in Nursing Home Residents with Advanced Dementia: QUALITY OF LIFE IN ADVANCED DEMENTIA.* Journal of the American Geriatrics Society (JAGS), 2010. **58**(12): p. 2394-2400.
56. Kasper, J.D., et al., *Evaluation of the validity and reliability of the alzheimer disease-related quality of life assessment instrument.* Alzheimer Dis Assoc Disord, 2009. **23**(3): p. 275-284.
57. van Leeuwen, K.M., et al., *What can local authorities do to improve the social care-related quality of life of older adults living at home? Evidence from the Adult Social Care Survey.* Health Place, 2014. **29**: p. 104-113.
58. Diefenbach, G.J., D.F. Tolin, and C.M. Gilliam, *Impairments in life quality among clients in geriatric home care: associations with depressive and anxiety symptoms.* Int J Geriatr Psychiatry, 2012. **27**(8): p. 828-835.
59. Woods, B., et al., *Improved quality of life and cognitive stimulation therapy in dementia.* Aging Ment Health, 2006. **10**(3): p. 219-226.
60. Juola, A.-L.M.D., et al., *Burden of Potentially Harmful Medications and the Association With Quality of Life and Mortality Among Institutionalized Older People.* J Am Med Dir Assoc, 2016. **17**(3): p. 276.e9-276.e14.
61. Pitkälä, K.H.M.D.P., et al., *Education to Reduce Potentially Harmful Medication Use Among Residents of Assisted Living Facilities: A Randomized Controlled Trial.* J Am Med Dir Assoc, 2014. **15**(12): p. 892-898.
62. Kane, R.A., et al., *Quality of Life Measures for Nursing Home Residents.* J Gerontol A Biol Sci Med Sci, 2003. **58**(3): p. M240-M248.
63. Pavot, W., et al., *Further Validation of the Satisfaction With Life Scale: Evidence for the Cross-Method Convergence of Well-Being Measures.* J Pers Assess, 1991. **57**(1): p. 149-161.
64. Chao, Y.-Y., et al., *Exergames-Based Intervention for Assisted Living Residents: A Pilot Study.* J Gerontol Nurs, 2014. **40**(11): p. 36-43.
65. Chao, Y.-Y., et al., *Physical and Psychosocial Effects of Wii Fit Exergames Use in Assisted Living Residents: A Pilot Study.* Clin Nurs Res, 2015. **24**(6): p. 589-603.
66. Milte, R., et al., *Evaluating the quality of care received in long-term care facilities from a consumer perspective: Development and construct validity of the Consumer Choice Index - Six Dimension instrument.* Ageing and Society, 2017. **39**: p. 1-23.
67. Khadka, J., et al., *A new measure of quality of care experience in aged care: pschometreic assessment and validiton of the Quality of Care Experience (QCE) questionnaire.*, The Royal Commission into Aged Care Quality and Safety, Editor. 2020, Caring Future Institute, Flinders University. : Canberra
68. Wells, Y., D. Fetherstonhaugh, and K. Solly, *Development of a consumer experience reporting questionnaire for residential aged care homes in Australia.* Australasian Journal on Ageing, 2019. **38**.
69. Lood, Q., et al., *Associations between person-centred climate and perceived quality of care in nursing homes: A cross-sectional study of relatives' experiences.* J Adv Nurs, 2019. **75**(11): p. 2526-2534.
70. Ratcliffe, J., et al., *Australia's aged care system: assessing the views and preferences of the general public for quality of care and future funding*. 2020, Royal Commission into Aged Care Quality and Safety: Adelaide, South Australia.
71. Fethney, J., et al., *Validity and reliability of the client perception of value questionnaire.* Contemp Nurse, 2013. **43**(2): p. 183-190.
72. Boldy, D., M. Davison, and R. Duggan, *Client satisfaction as a driver of quality improvement in services for older people: A Western Australian case study.* Australasian journal on ageing, 2014. **34**.
73. Boldy, D.P., S.-C. Chou, and A.H. Lee, *Assessing resident satisfaction and its relationship to staff satisfaction in residential aged care.* Australasian journal on ageing, 2004. **23**(4): p. 195-197.
74. Chou, S.-C., D. Boldy, and A. Lee, *Resident Satisfaction and Its Components in Residential Aged Care.* The Gerontologist, 2002. **42**: p. 188-98.
75. Chou, S.C., D.P. Boldy, and A.H. Lee, *Measuring resident satisfaction in residential aged care.* Gerontologist, 2001. **41**(5): p. 623-631.
76. Frentzel, E., et al., *Giving Voice to the Vulnerable The Development of a CAHPS Nursing Home Survey Measuring Family Members' Experiences.* Medical care, 2012. **50 Suppl**: p. S20-7.
77. Sangl, J., et al., *The Development of a CAHPS® Instrument for Nursing Home Residents (NHCAHPS).* J Aging Soc Policy, 2007. **19**(2): p. 63-82.
78. Davis, M.A., J.G. Sebastian, and J. Tschetter, *Measuring Quality of Nursing Home Service: Residents' Perspective.* Psychological Reports, 1997. **81**(2): p. 531-542.

79. Verho, H. and J. Arnetz, *Validation and application of an instrument for measuring patient relatives' perception of quality of geriatric care.* International journal for quality in health care : journal of the International Society for Quality in Health Care / ISQua, 2003. **15**: p. 197-206.
80. Sikorska-Simmons, E., *Development of an Instrument to Measure Resident Satisfaction With Assisted Living.* Journal of Applied Gerontology, 2001. **20**: p. 57-73.
81. Sikorska-Simmons, E., *Facility Ownership and Resident Satisfaction with Assisted Living.* Journal of housing for the elderly, 2005. **19**(1): p. 23-40.
82. Shippee, T.P., et al., *Family Satisfaction With Nursing Home Care: The Role of Facility Characteristics and Resident Quality-of-Life Scores.* Research on aging, 2017. **39**(3): p. 418-442.
83. Geron, S.M., et al., *The home care satisfaction measure: A client-centered approach to assessing the satisfaction of frail older adults with home care services.* J Gerontol B Psychol Sci Soc Sci, 2000. **55**(5): p. S259-S270.
84. Ejaz, F., et al., *Developing a Satisfaction Survey for Families of Ohio's Nursing Home Residents.* The Gerontologist, 2003. **43**: p. 447-58.
85. Edelman, P., et al., *Measuring Resident and Family Member Determinants of Satisfaction With Assisted Living.* The Gerontologist, 2006. **46**: p. 599-608.
86. Ryden, M., et al., *Development of a measure of resident satisfaction with the nursing home.* Research in nursing & health, 2000. **23**: p. 237-45.
87. Straker, J.K., et al., *Developing and Testing a Satisfaction Survey for Nursing Home Residents: The Ohio Experience.* J Aging Soc Policy, 2007. **19**(2): p. 83-105.
88. Porock, D., J. Li, and Y.P. Chang, *Measuring the 'dose' of person-centred care in aged care: Development of staff and family questionnaires.* J Adv Nurs, 2020. **76**(7): p. 1850-1861.
89. Yeung, P., et al., *Psychometric testing of a person-centred care scale the Eden Warmth Survey in a long-term care home in New Zealand.* Contemp Nurse, 2016. **52**(2-3): p. 176-90.
90. Gesell, S.B., *A measure of satisfaction for the assisted-living industry.* J Healthc Qual, 2001. **23**(2): p. 16-25.

s22

[redacted]

Appendix 2 Grey literature search

Methods

A web-based grey literature search using Google Chrome was carried out on 24th August 2021 to search for relevant websites using the following keywords: "quality of life, quality of care, experience, satisfaction" AND "questionnaire, instrument, tool*, measure*, scale, survey" AND "aged care, home care, community care, community services, residential, nursing home*. We screened first 100 hits to maximise relevance to the search criteria. Country specific government websites were also searched including CMS (Centres for Medicare and Medicaid Services; www.cms.gov), Health Data.gov (www.healthdata.gov), my aged care (https://www.myagedcare.gov.au/), Aged care Quality and Safety Commission (https://www.agedcarequality.gov.au/); Productivity Commission (https://www.pc.gov.au), Council on the Ageing (www.cota.org.au), Ministry of Health (www.health.govt.nz), NICE (National Institute for Health and Clinical Excellence; www.nice.org.uk), Care Quality Commission (https://www.cqc.org.uk/), European Society for Quality in Health Care (www.edqm.eu), European Commission for Employment, Social Affairs & Inclusion (https://ec.europa.eu/social/) , European Directorate for the Quality Use of Medicines & Healthcare (www.esqh.net) and Canadian Institute for Health Information (www.cihi.ca).

Reference lists of identified publications, reports and websites were also searched to identify relevant publications.

Table A2: Additional Tools identified from grey literature

Quality of life	Consumer Experience	Consumer satisfaction
Personal Wellbeing Index (1;2;3)	Quality of Care Experience-Aged Care Consumers (QCE-ACC)- CFI (4,5)	Assisted Living Satisfaction Scale (6)
		Satisfaction with Assisted Living (7)

References

1. The South Australian Aged Care Wellbeing and Satisfaction Survey report – SA Innovation Hub: https://www.resthaven.asn.au/wp-content/uploads/2018/01/2017-Innovation-Hub-Deakin-Report-QoL-findings.pdf ; instrument identified: Personal Well-Being Index (PWI).
2. Australian Centre for Quality of Care- Personal Wellbeing Index. http://www.acqol.com.au/instruments
3. NSW Government- Wellness and Reablement in Aged Care: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2021_002.pdf
4. Royal Commission Report 20: Caring Future Institute, Flinders University https://agedcare.royalcommission.gov.au/sites/default/files/2021-02/attachment-qce-and-community-expectatons.pdf; Instrument identified: Quality of Care Experience (QCE-ACC).
5. Khadka J, Ratcliffe J, Chen G, Kumaran S, Milte R, Hutchinson C, Savvas S, Batchelor F. A new measure of quality of care in aged care: psychometric assessment, and validation of the Quality of Care Experience (QCE) questionnaire. Adelaide: Caring Futures Institute, Flinders University, Feb 2020.
6. Edelman P, Guihan M, Bryant F, Munroe D. Measuring Resident and Family Member Determinants of Satisfaction With Assisted Living. The Gerontologist 2006; 46: 599-608.
7. Gesell Satisfaction with assisted living

Appendix 3 Search strategy

In collaboration with an experienced Flinders University librarian separate searches were conducted for quality of life, consumer experience and consumer satisfaction using five online databases (Medline, CINAHL, PsycINFO, Web of Science and Cochrane). The following tables present the search strategies used and the corresponding results.

Table A3.1: Key words and search strategy for MEDLINE used for quality of life

#	Searches (Date Run: 12/08/2021)	Results
1	('quality of life' or 'qol' or 'wellbeing' or 'well-being').ab.	388093
2	(Tool* or tool* or rate or assess* or questionnaire* or instrument* or scale* or survey*).ab.	8453614
3	(elder care or eldercare or aged care or nursing home* or retirement village* or ((retirement or senior*) adj1 (center* or centre))).ab.	29671
4	(community care or adult day services or home care or home support or assisted living).ab.	19754
5	(aged/ or "aged, 80 and over"/ or frail elderly/).ab.	3296082
6	(elder* or geriatric* or gerontolog* or old age* or retire* or pensioner* or senior* or later life).ab.	339542
7	((old* or age* or aging) adj1 (person or people* or adult* or resident* or population* or men* or women* or male* or female*)).ab.	549352
8	(aged adj1 ("65" or "70" or "75" or "80" or "85")).ab.	45849
9	or/5-8	3756835
10	4 and 9	9594
11	3 or 10	37209
12	1 and 2 and 11 (human and English language)	2876

Table A3.2: Search hits for other databases for Quality of life

Database	Results
MEDLINE	**2876**
CINAHL	**1878**
PsycINFO	**1411**
Web of Science	**2353**
Cochrane	**1004**
Total	**9522**
Duplicate Total	**6347**

Table A3.3: Key words and search strategy used for MEDLINE for consumer experience

#	Searches (Date Run: 18/08/2021)	Results
1	(quality or care experience or person centered care or person centred care).ab.	1063550
2	(Tool* or tool* or rate or assess* or questionnaire* or instrument* or scale* or survey*).ab.	8419909
3	(elder care or eldercare or aged care or nursing home* or retirement village* or ((retirement or senior*) adj1 (center* or centre))).ab.	29540
4	(community care or adult day services or home care or home support or assisted living).ab.	19676
5	aged/ or "aged, 80 and over"/ or frail elderly/	3287308
6	(elder* or geriatric* or gerontolog* or old age* or retire* or pensioner* or senior* or later life).ab.	338307
7	((old* or age* or aging) adj1 (person or people* or adult* or resident* or population* or men* or women* or male* or female*)).ab.	546876
8	(aged adj1 ("65" or "70" or "75" or "80" or "85")).ab.	45641
9	or/5-8	3746638

#	Searches (Date Run: 18/08/2021)	Results
10	4 and 9	9545
11	3 or 10	37047
12	1 and 2 and 11 (human and English language)	5381

Table A3.4: Search hits for other databases for consumer experience

Database	Results
MEDLINE	**5381**
CINAHL	**3769**
PsycINFO	**1995**
Web of Science	**4361**
Cochrane	**1022**
Total	**16528**
Deduplicate total	**9795**

Table A3.5: Key words and search strategy used for consumer satisfaction

#	Searches (Date run: 18/08/2021)	Results
1	("home care satisfaction*" or "resident satisfaction*" or "older person* experience*" or "consumer experience*" or "consumer reported experience*" or "older person* reported experience").ab.	557
2	(Tool* or tool* or rate or assess* or questionnaire* or instrument* or scale* or survey*).ab.	8421772
3	(elder care or eldercare or aged care or nursing home* or retirement village* or ((retirement or senior*) adj1 (center* or centre))).ab.	29546
4	(community care or adult day services or home care or home support or assisted living).ab.	19684
5	aged/ or "aged, 80 and over"/ or frail elderly/	3288073
6	(elder* or geriatric* or gerontolog* or old age* or retire* or pensioner* or senior* or later life).ab.	338370
7	((old* or age* or aging) adj1 (person or people* or adult* or resident* or population* or men* or women* or male* or female*)).ab.	547023
8	(aged adj1 ("65" or "70" or "75" or "80" or "85")).ab.	45652
9	or/5-8	3747429
10	4 and 9	9549
11	3 or 10	37056
12	1 and 2 and 11 (limit 12 to human and English language)	63

Table A3.6: Search hits for other databases for consumer satisfaction

Database	Results
MEDLINE	**63**
CINAHL	**56**
PsycINFO	**35**
Web of Science	**50**
Cochrane	**14**
Total	**218**
Duplicate Total	**138**

Appendix 4: Quality of life: aged care services and supports impacting QOL-ACC dimensions

Home care	**Residential care**
Physical Mobility	**Physical Mobility**
Mobility aids (wheelchair, walker, stick)	Mobility aids (wheelchair, walker, stick)
Home modifications (sensors, slip mats, handrails etc)	Nursing home design (sensors, slip mats, handrails etc)
Allied health (physio, exercise physiologists etc)	Allied health (physio, exercise physiologists etc)
Pain management	**Pain management**
GP referral	Medication administration and management
Allied health (physio, exercise physiologists etc)	Non-pharmacological interventions (heat packs, massage therapy)
Non-pharmacological interventions (heat packs, massage)	Allied health (physio, exercise physiologists etc)
Medication management	
Emotional wellbeing	**Emotional wellbeing**
Transport to and from social engagements	Facilitating access to outside and garden spaces
Social clubs/activities/events	Transport to and from social engagements
Psychological interventions/counselling/social workers	Facilitating visitor/family communication and face to face connections
	Communal and shared spaces
Independence	**Independence**
Activities of daily living support (eating, dressing, showering)	Activities of daily living support (eating, dressing, showering)
Flexibility around daily routine	Flexibility around daily routine
Allied health (physio, exercise physiologists etc)	Allied health (physio, exercise physiologists etc)
Social relationships	**Social relationships**
Facilitating visitor/family communication and face to face connections - communication technologies	Facilitating visitor/family communication and face to face connections - communication technologies
Transport to and from social engagements	Transport to and from social engagements
Social clubs/activities/events	Social clubs/activities/events
	Communal and shared spaces
Leisure activities/hobbies	**Leisure activities/hobbies**
Transport to and from leisure activities/hobbies	Social clubs/activities/events
Social clubs/activities/events	Facilitating hobbies (individual and/or group)
Facilitating hobbies (individual and/or group)	

www.pwc.com

Expansion of quality indicators for residential aged care

Consultation summary report

18 January 2022

pwc
The University Of Queensland Australia
ROSA

Disclaimer

This consultation summary report is not intended to be read or used by anyone other than Department of Health.

We prepared this consultation summary report solely for Department of Health's use and benefit in accordance with and for the purpose set out in our work order with Department of Health dated 23 September 2021. In doing so, we acted exclusively for Department of Health and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than Department of Health in connection with this consultation summary report
- to Department of Health for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this consultation summary report for anyone other than Department of Health. If anyone other than Department of Health chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than Department of Health receiving or using this consultation summary report.

Liability limited by a scheme approved under Professional Standards legislation.

Document control

Document status	Draft
Content last updated	18 January 2022
Version	V0.6
Point of contact	s47F [redacted]
Approver	Department of Health, Quality and Assurance Division, Choice and Transparency Branch
Date of approval	28 January 2022

Contents

1

Executive summary

Executive summary

Project overview

The Australian Government Department of Health (the Department) engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of senior Australians (ROSA) to assist in the development of quality indicators for residential aged care. The project is intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The overall aims of the QI Program are to:

- provide older people with information about the quality of aged care services when making choices about their care
- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation.

The consortium has been engaged to identify, assess, and pilot evidence based quality indicators across five quality of care domains and examine the use of consumer experience and quality of life (CEQOL) assessment tools. The project commenced in September 2021 and is scheduled to be completed in May 2022.

Evidence review

A review of national and international literature was undertaken and identified 13 quality of care domains (not already included in the QI Program) and 175 quality indicators for consideration in the further expansion of the QI Program in residential aged care. The quality of care domains and quality indicators were assessed and ranked in relation to importance, feasibility, usability, scientific attributes, ability of providers to influence and value to the QI Program.

Consumer experience and quality of life (CEQOL) was excluded from the evidence review due to work completed in this area by a separate Department appointed consortium. Flinders University conducted a comprehensive evidence review of validated tools to measure quality of life, consumer experience and consumer satisfaction in aged care[1].

For further details on the literature review findings, please refer to the residential aged care Evidence review summary report.

Stakeholder consultations

Stakeholder consultations were supported by two consultation briefing papers:

- Expansion of the residential aged care quality indicators consultation paper, and
- Expansion of the residential aged care quality indicators consultation paper for senior Australians, representatives, families and carers.

Consultation papers summarised the highest ranked quality of care domains (see over) and associated quality indicators, from the evidence review and the Flinder's University led CEQOL evidence review.

---

[1] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

1. Function and Activities of Daily Living (ADLs)	**5.** Depression
2. Medications (not already included in QI Program)	**6.** Behavioural symptoms
3. Continence	**7.** Hospitalisation
4. Infection control	**8.** Pain
9. Consumer experience and quality of life	

Feedback was sought from stakeholders including, senior Australians, their families and representatives, residential aged care service providers, peak bodies, government agencies, individual aged care, health and medical professionals.

Consultation sought to inform selection of quality of care domains, quality indicators and CEQOL assessment tools for pilot. Virtual consultations were held between 1 November and 16 December 2021, and written submissions received via Qualtrics survey between 24 November and 15 December 2021.

Communications were circulated through targeted distributions to stakeholders via the PwC Aged Care Quality Indicators mailbox as well as individual PwC mailboxes to previously interested stakeholders. Broad advertisements were also made through the Department's Provider eNewsletter, Aged Care Engagement Hub, direct emails via the Aged Care Engagement Database, and PwC's LinkedIn profile.

Virtual consultation

Stakeholders registered for virtual consultation sessions via the stakeholder consultation registration form accessed via the residential aged care email, the PwC website, and the Department's Engagement Hub. A total of 31 residential aged care virtual consultations were conducted with stakeholders:

- 20 workshops across the eight quality of care domains (at least two sessions were held per domain, with additional sessions held where registration numbers were high)
- 4 consultation workshops for senior Australians, their families and representatives
- 4 workshops focused on the CEQOL assessment tools
- 3 workshops with aged care peaks, the Sector Reference Group and the Consumer Reference Group.

Appendix A provides a list of virtual stakeholder consultation attendees. In each virtual consultation, attendees were asked to complete a short poll (Google Form) to provide feedback on which domains and presented quality indicators were most important to them. A summary of the poll results is provided at Appendix B.

Written consultation

Three written consultation surveys were published to seek written stakeholder feedback. Surveys were tailored to the audiences, senior Australians, their families and representatives; residential aged care service providers; and peak bodies, government and other agencies. A total of 80 written responses were recieved from stakeholders:

- 27 from senior Australians, their families and representatives
- 30 from residential aged care service providers
- 23 from peak bodies, government and other agencies.

In addition, nine organisations provided standalone written submissions outside the survey process. Appendix C provides an overview of the written consultation and respondent demographics, and Appendix D lists the organisations that provided feedback on the quality of care domains.

s22 [redacted]

s22 [redacted] The quality of care domains and quality indicators identified in the evidence review that were most preferred are presented below (in alphabetical order by domain).

Quality of care domain	Quality indicators / assessment tools
CEQOL	- Quality of life, Aged Care Consumers (QOL-ACC) - Good Spirit, Good life tool (GSGL)

s22 [redacted]

s22

[redacted]

Purpose of this deliverable

During consultations, stakeholders were asked to provide specific feedback on the perceived advantages and disadvantages of the quality indicators presented in the consultation papers. Analysis of feedback received through the virtual consultations, virtual poll, and written consultation surveys is presented. The structure of this document is outlined below:

- Section 1: Executive summary
- Section 2: Preferred quality of care domains
  Details each quality of care domain, the quality indicators presented for consultation, considerations presented to stakeholders, feedback received and key considerations for quality indicator development.
- Section 3: Non-preferred quality of care domains
  Details quality of care domains that were not preferred by stakeholders at this time and includes content reflective of Section 2.
- Section 4: Conclusion and next steps

Findings from the evidence review and consultation will inform advice sought from the Technical Expert Group (TEG) to refine and better define the identified quality indicators with respect to their technical specifications including definitions, data capture tools, frequency of data collection, exclusion criteria and appropriateness to take forward. These outcomes will help inform the selection of quality indicators by the Department for the pilot.

2

Preferred quality of care domains

Consumer experience and quality of life

To capture the consumer voice an assessment tool measuring quality of life, consumer experience or consumer satisfaction will be implemented. The *Royal Commission into Aged Care Quality and Safety* (Royal Commission) recommended a quality of life assessment tool should be implemented in residential aged care. [2]

Quality of life refers to a person's perception of their position in life taking into consideration their environment and their goals, expectations, standards, and concerns. It includes their emotional, physical, material, and social wellbeing.

Consumer experience looks at the experience of the consumer receiving care.

Consumer satisfaction considers a consumer's fulfillment with the care and services provided to them.

A review of quality of life, consumer experience and consumer satisfaction assessment tools by Flinders University identified quality of life as the most important measure for aged care. [3]

Quality indicators presented for consultation

#	Assessment tool
A	**Quality of life**
A.1	**Quality of Life–Aged Care Consumers (QOL-ACC)** This tool has been designed specifically for quality assessment in aged care to capture consumer (older person and family carer) focused quality of life outcomes from their own perspective. It was co-designed with consumers in Australia for used in aged care. The tool consists of six dimensions: mobility, emotional wellbeing, social connections, independence, activities, and pain management with five response levels attached to each dimension. There are self-completed, interviewer administered and proxy versions of the QOL-ACC available.
A.2	**Good Spirit, Good life tool (GSGL)** This non-preference based tool measures the quality of life of older Aboriginal Australians aged 45 years and over. It consists of twelve dimensions: family and friends, country, community, culture, health, respect, elder role, supports and services, safety and security, spirituality, future planning, and basic needs. There is also a carer version of the tool available. It is the first instrument of its kind developed from its inception with older Aboriginal people and was designed to be applied with this population.
A.3	**Dementia Quality of Life tool (DEMQOL)** This non-preference based tool measures the health-related quality of life of individuals with dementia. The tool has five dimensions: health and well-being, cognitive functioning, social relationships, daily activities, and self-concept. There are 28 self-report measures completed by the person with dementia, and 31 items competed by a caregiver.

s22

[redacted]

---

[2] Royal Commission into Aged Care Quality and Safety, Commonwealth of Australia. Final report 2021.

[3] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

s22

[redacted]

Key considerations presented for consultation

- There are currently no recommendations on how often quality of life, consumer experience or consumer satisfaction assessments should be completed. It is necessary to understand the appropriate frequency of assessment tool administration.
- It is preferable for consumers to self-complete quality of life, consumer experience and consumer satisfaction assessments, using a proxy (i.e. family member, carer, or both) only when required. It is necessary to understand when and how a proxy should be used to complete the assessment.
- Assessment tools are available in different formats, including via tablet, computer, or hard copy (pen and paper survey). Consideration is required to understand consumer preferences and the resources needed within residential aged care services when administering the preferred assessment.
- Assessment comprehensiveness varies across the three domains. Advice was sought on whether quality of life, being a holistic approach and particularly suited to the residential aged care environment (i.e. services have direct control over the consumers health and wellbeing), would be most suited to pilot.

s22

[redacted]

s22

[redacted]

Summary of feedback

Themes	Stakeholder feedback
Attribution and quality improvement	• Strong support was voiced by senior Australians and service providers for CEQOL measures in guiding quality improvement. • Quality of life measures were the most widely preferred. • Services believe that they were most able to influence consumer experience. • A number of services are currently using information on care recipient quality of life, experience and satisfaction to guide practice. This includes the use of the quality of life assessment tool QOL-ACC to support services to engage in meaningful conversations with care recipients and to support quality improvements. Other tools identified as being used in practice included the Adult Social Care Outcomes Toolkit (ASCOT) and EQ5D. • Stakeholders supported use of QOL-ACC, noting it would allow for meaningful conversations with care recipients and support quality improvements.
Definitions, inclusion, and exclusion criteria	• On balance, most stakeholders preferred a quality of life assessment tool over other tools measuring consumer experience and consumer satisfaction. • Quality indicators complimentary to CEQOL assessment tools include measures relating to the quality and types of food provided, access to outside spaces, and care recipient turnover. • Appropriate risk adjustment or inclusion/exclusion criteria are necessary to ensure services do not avoid accepting senior Australians with higher complexity or clinical care needs.
Feasibility, data collection and reporting	• Point in time measurement presents complexities in assessing a person's wellbeing. • Frequency of data collection should be carefully considered to limit burden on senior Australians (e.g. some care recipients may not like completing questionnaires or surveys). There were mixed views from stakeholders on the appropriate frequency of data collection. • Consideration should be given to the most appropriate mode of administration. Self-completion of CEQOL assessment tools is widely recognised as best practice. The use of an alternate workforce could also be considered to assist Australians in completing the relevant assessment, noting that service providers widely acknowledged the merit in the conversations it prompted. • Clear arrangements are required for proxy administered assessments, with some CEQOL assessment tools, including QOL-ACC, providing clear guidance to support proxy administration. • Assessments should be tailored to support senior Australians. This includes senior Australians with cognitive, visual or physical impairment, or culturally and linguistically diverse needs, including through the use of trusted representatives and/or the availability of assessment tools in different formats, including via tablet, computer or hard copy (pen and paper survey).

Stakeholders supported the inclusion of an assessment tool measuring quality of life in the QI Program. They preferred the following quality indicators:

- A.1 Quality of Life, Aged Care Consumers (QOL-ACC)

- A.2 Good Spirit, Good life tool (GSGL)
- A.3 Dementia Quality of Life tool (DEMQOL)

Further considerations

The current specification of a quality of life quality indicator will require refinement to meet the objectives of the QI Program. Further considerations are required to examine:

- whether the preferred assessment tools and quality indicator construct could inform care quality and quality improvement?
- which modalities for administration of quality of life assessment tools should be included (e.g. email, tablet, face to face, paper-based)?
- how data should be collected for care recipients who are unable to self-report their quality of life (e.g. those with communication or cognitive impairment)?
- how quality of life data collected from proxies should be reported?
- whether quarterly data collection and reporting is suitable?
- whether data collected and reported by services is sufficiently reliable to support QI Program objectives, or whether data could be practicably collected in a way that reduces potential bias?
- which exclusions would be necessary to ensure feasibility and appropriateness?

4

Conclusion and next steps

Conclusion

Stakeholders participating in consultation broadly supported the expansion of the QI Program, recognising the potential to support quality improvement, improve system-wide decision making, and (in time) support consumer choice. Quality indicators identified through the evidence review and listed below (in alphabetical order by domain) were supported in construct by stakeholders. However, it was recognised that the current specifications of these quality indicators require refinement to meet the objectives of the QI Program.

Quality of care domain	Quality indicators
CEQOL	• Quality of Life, Aged Care Consumers (QOL-ACC) • Good Spirit, Good life tool (GSGL)

s22

[redacted]

Next steps for the project

Technical Expert Group (TEG) meeting

The TEG will be convened in January 2022 to provide technical feedback on the potential quality of care domains and quality indicators identified through the evidence review and supported through the consultation process.

TEG advice will be sought to refine and better define the adapted quality indicators with respect to their technical specifications including definitions, data capture tools, frequency of data collection, exclusion criteria, and appropriateness to take forward. Feedback provided by the TEG will help inform the selection of quality indicators by the Department for the pilot.

Pilot

A six-week pilot will commence in March 2022, with residential aged care services. The pilot provides an opportunity to test, analyse and report on the proposed quality indicators and CEQOL assessment tools in the Australian residential aged care context, prior to Ministerial decision regarding quality indicators selected for inclusion in the QI Program.

Appendices

Appendix A: Stakeholder consultation session attendees

A series of consultation workshops delivered virtually using Microsoft Teams sought stakeholder feedback on the quality of care domains and quality indicators identified through the evidence review and the review of quality of life, consumer experience and consumer satisfaction assessment tools undertaken by Flinders University. Consultations were held from 1 November – 16 December 2021.

Consultation was promoted via the PwC residential aged care project mailbox, PwC LinkedIn posts, and the PwC project website, this occurred alongside promotion through Department communication channels via the provider eNewsletter, Aged Care Engagement Hub and direct emails using the Aged Care Engagement Database. In total, there were more than 788 registrations and 337 who attended.

Four consumer specific virtual consultations were held with concurrent projects underway by the Department. Three additional virtual consultation sessions were held with aged care services peak bodies, a sector reference group and a consumer reference group. As these sessions were hosted by a non-consortia partners, final registration and attendance numbers have not been captured in this report.

Count of registrations, accepted invites, and attendances of the virtual consultations

Table 1 Count of registrations, accepted invites, and attendances of the virtual consultations

Consultation session	Registered	Attended
s22 [redacted]	[redacted]	[redacted]
Consumer Experience and Quality of Life (CEQOL) Wednesday 24 November, 1 - 2pm AEDT	68	36

Consumer Experience and Quality of Life (CEQOL) Thursday 25 November, 12 - 1pm AEDT	37	11

s22 [redacted]

Consumer Experience and Quality of Life (CEQOL) Wednesday 8 December, 1 - 2pm AEDT	31	10
Consumer Experience and Quality of Life (CEQOL) Thursday 9 December, 12 - 1pm AEDT	23	7

s22 [redacted]

Appendix B: Virtual consultation poll results

As a part of the virtual consultations, a Google Poll was used to capture stakeholder feedback. The questions were not mandatory. The survey sought stakeholder feedback on the quality of care domains and quality indicators identified through the evidence review and the review of quality of life, consumer experience and consumer satisfaction assessment tools undertaken by Flinders University.

Quality of care domain poll results

The first poll question was: *Which domains are most important to you?* There was an option to choose more than one domain at a time. There were 229 responses to the quality of care domain polls throughout the virtual consultation period and 39 responses to the CEQOL domain polls. Stakeholders who attended multiple sessions could vote more than once, which may impact the validity of data for ranking purposes. Furthermore, one of the verbal prompts used during the virtual consultations was *What are you already collecting data for?.* As a result, the responses represent a high level indication of stakeholder preference towards the domain only and should be considered in the context of feedback recieved in the written and virtual consultations.

s22

[redacted]

Table 5 Summed count of CEQOL concepts and percentage of poll responses that were chosen as the most important

CEQOL domain	No. of participants that selected the domain as important	Proportion of poll responses that selected this domain as important
Quality of life	35	90%

s22

[redacted]

Quality indicators poll results

The second poll question asked participants: *What do you think the most important measures of this domain are?* When answering this poll question, participants were prompted to consider which quality indicators will assist services in continuous quality improvement activities and which will help consumers make decisions about choosing services. Stakeholders who attended multiple sessions could vote more than once, which may impact the validity of data for ranking purposes. As a result, the responses represent a high level indication of stakeholder preference towards the quality indicator only and should be considered in the context of feedback recieved in the written and virtual consultations.

s22

[redacted]

s22 [redacted]

Consumer experience and quality of life

Table 14 Poll results for CEQOL

Assessment tools	No. of participants that selected the assessment tool	Proportion of participants that selected the assessment tool
A.1 Quality of Life–Aged Care Consumers	34	89%
A.2 Good Spirit, Good life tool	16	42%
A.3 Dementia Quality of Life tool	25	66%

s22 [redacted]

Appendix C: Written consultations and survey respondent demographics

An online Qualtrics written consultation survey was used to seek stakeholder feedback on the quality of care domains and quality indicators identified through the evidence review, and the review of quality of life, consumer experience and consumer satisfaction assessment tools by Flinders University. The survey questions were not mandatory and were designed to guide feedback. The survey was available 24 November – 15 December 2021.

The written consultation was promoted via the PwC residential aged care project mailbox, PwC LinkedIn posts, and the PwC project website, this occurred alongside promotion through Department communication channels via the Provider eNewsletter, Aged Care Engagement Hub and direct emails using the Aged Care Engagement Database.

In total, there were 80 survey responses and 9 additional written standalone submissions were received. Written submissions have been incorporated into consultation findings. The tables below provide demographic information on the respondents who completed the survey only.

Survey respondent demographics

Table 15 Stakeholder type

Stakeholder type	Count
Peak bodies, government and other agencies	23
Senior Australians, their families and representatives	27
Service providers	30
Total	**80**

Table 16 Breakdown of peak bodies, government and other agencies by type

Stakeholder type	Count
Carer peak body	2
Consumer peak body	4
Health professional	5
Local council	1
Other peak body	7
Primary Health Network	0
State or territory government	0
Workforce association or union	4
Total	**23**

Table 17 Breakdown of senior Australians, their families and representatives

Stakeholder type	Count
Carer	2
Consumer advocacy group	6
Senior Australian consumers of aged care services	7
Consumer peak organisations or advocacy group representative (please specify)	0
Family	8
Other consumer representative	4
Total	**27**

Table 18 Breakdown of service providers by type

Stakeholder type	Count
Aged care provider peak body	3
Health professional	15
Local council	1
Other provider	8
Primary Health Network	1
State or territory government	2
Total	**30**

Table 19 Stakeholders by state and territory

State or territory*	Count
Australian Capital Territory	13
New South Wales	28
Northern Territory	12
Queensland	23
South Australia	19
Tasmania	12
Victoria	24
Western Australia	14
Total	**145**
Total unique responses	**80**

**Due to services operating in multiple jurisdictions, there may be more responses to this question than total responses to the survey.*
**Five respondents did not provide their state or territory*

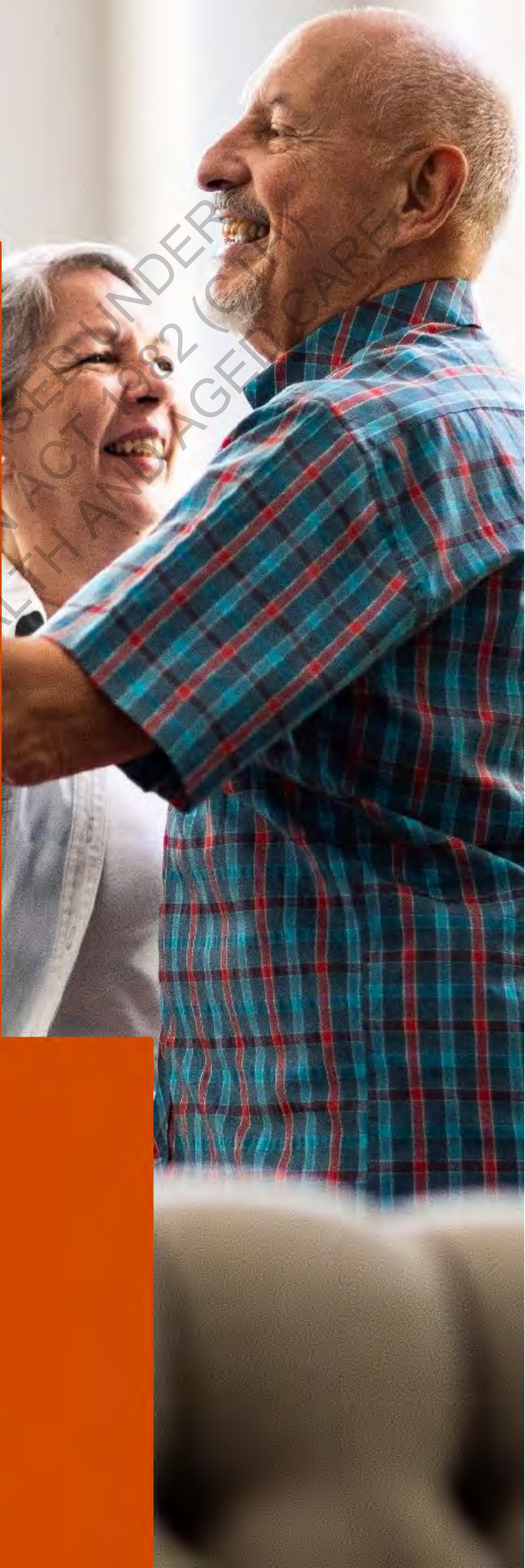
Table 20 Stakeholders by geographic classification

Geographic classification	Count
In a metropolitan area or major city	51
In a regional area	30
In a remote area	16
In a rural area	23
Total	**120**
Total unique responses	**80**

**Due to services operating in geographical areas, there may be more responses to this question than total responses to the survey.*

www.pwc.com.au

www.pwc.com



Expansion of quality indicators for residential aged care

Technical Expert Group pre-pilot summary

February 2022

pwc

The University Of Queensland Australia

ROSA

Disclaimer

This Technical Expert Group pre-pilot meeting summary is not intended to be used by anyone other than Department of Health.

We prepared this document solely for the Department of Health's use and benefit in accordance with and for the purpose set out in the Work Order with Department of Health dated 23 September 2021. In doing so, we acted exclusively for Department of Health and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than Department of Health in connection with this summary report
- to Department of Health for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this summary for anyone other than the Department of Health. If anyone other than the Department of Health chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than Department of Health receiving or using this summary report.

Liability limited by a scheme approved under Professional Standards legislation.

Contents

Background and context

Overview

Project overview

The Australian Government Department of Health (the Department) engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of senior Australians (ROSA) to assist in the development of quality indicators for residential aged care. The project is intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The overall aims of the QI Program are to:

- provide older people with information about the quality of aged care services when making choices about their care
- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation.

The consortium has been engaged to identify, assess, and pilot evidence based quality indicators across 4 quality of care domains and examine the use of consumer experience and quality of life (CEQOL) assessment tools. The project commenced in September 2021 and is scheduled to be completed in May 2022.

Evidence review

A review of national and international literature was undertaken and identified 13 quality of care domains (not already included in the QI Program) and 175 quality indicators for consideration in the further expansion of the QI Program in residential aged care. The domains and quality indicators were assessed and ranked in relation to importance, feasibility, usability, scientific attributes, ability of providers to influence and value to the QI Program.

CEQOL was excluded from the evidence review due to work completed in this area by a separate Department appointed consortium. Flinders University conducted a comprehensive evidence review of validated tools to measure quality of life, consumer experience and consumer satisfaction in aged care[1].

For further details on the literature review findings, please refer to the residential aged care Evidence review summary report.

Stakeholder consultations

Stakeholder consultations were supported by two consultation briefing papers:

- Expansion of the residential aged care quality indicators consultation paper, and
- Expansion of the residential aged care quality indicators consultation paper for consumers, consumer representatives, families and carers.

---

[1] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

Consultation papers summarised the highest ranked quality of care domains (see over) and associated quality indicators, from the evidence review and the Flinder's University led CEQOL evidence review.

1. Function and Activities of Daily Living (ADLs)	**6.** Behavioural symptoms
2. Medications (not already included in QI Program)	**7.** Hospitalisation
3. Continence	**8.** Pain
4. Infection control	**9.** Consumer experience and quality of life
5. Depression	

Feedback was sought from stakeholders including, senior Australians, their families and representatives, residential aged care services, peak bodies, government agencies, individual aged care, health and medical professionals.

Consultation sought to inform selection of quality of care domains, quality indicators and CEQOL assessment tools for pilot. Virtual consultations were held between 1 November and 16 December 2021, and written submissions and surveys received via Qualtrics between 24 November and 15 December 2021.

Communications were circulated through targeted distributions to stakeholders who had expressed interest via the PwC Residential Aged Care Quality Indicator mailbox as well as individual PwC staff mailboxes to previously engaged stakeholders. Broad advertisements were also made through the Department's Provider eNewsletter, Aged Care Engagement Hub, direct emails via the Aged Care Engagement Database, and PwC's LinkedIn profile.

Virtual consultation

Stakeholders registered for virtual consultation sessions via the stakeholder consultation registration form accessed via the residential aged care email, the PwC website, and the Department's Engagement Hub. A total of 31 residential aged care virtual consultations were conducted with stakeholders:

- 20 workshops across the eight quality of care domains (at least two sessions were held per domain, with additional sessions held where registration numbers were high)
- 4 workshops for senior Australians, their families and representatives
- 4 workshops focused on the CEQOL assessment tools
- 3 workshops held with the aged care peaks, the Sector Reference Group and the Consumer Reference Group.

In each virtual consultation, attendees were asked to complete a short poll (Google Form) to provide feedback on which quality of care domains and presented quality indicators were most important to them.

Written consultation

Three targetted consultation surveys were published to seek written stakeholder feedback. Surveys were tailored to the audiences, senior Australians, their families and representatives; residential aged care services; and peak bodies, government and other agencies. A total of 80 written responses were recieved from stakeholders:

- 27 from senior Australians, their families and representatives
- 30 from residential aged care services
- 23 from peak bodies, government and other agencies.

In addition, 9 organisations provided standalone written submissions outside the survey process.

Technical Expert Group

The purpose of the Technical Expert Group (TEG) is to provide technical feedback on the potential quality of care domains and quality indicators identified through the evidence review and consultation process. The TEG includes a range of technical experts (see Appendix A for membership details).

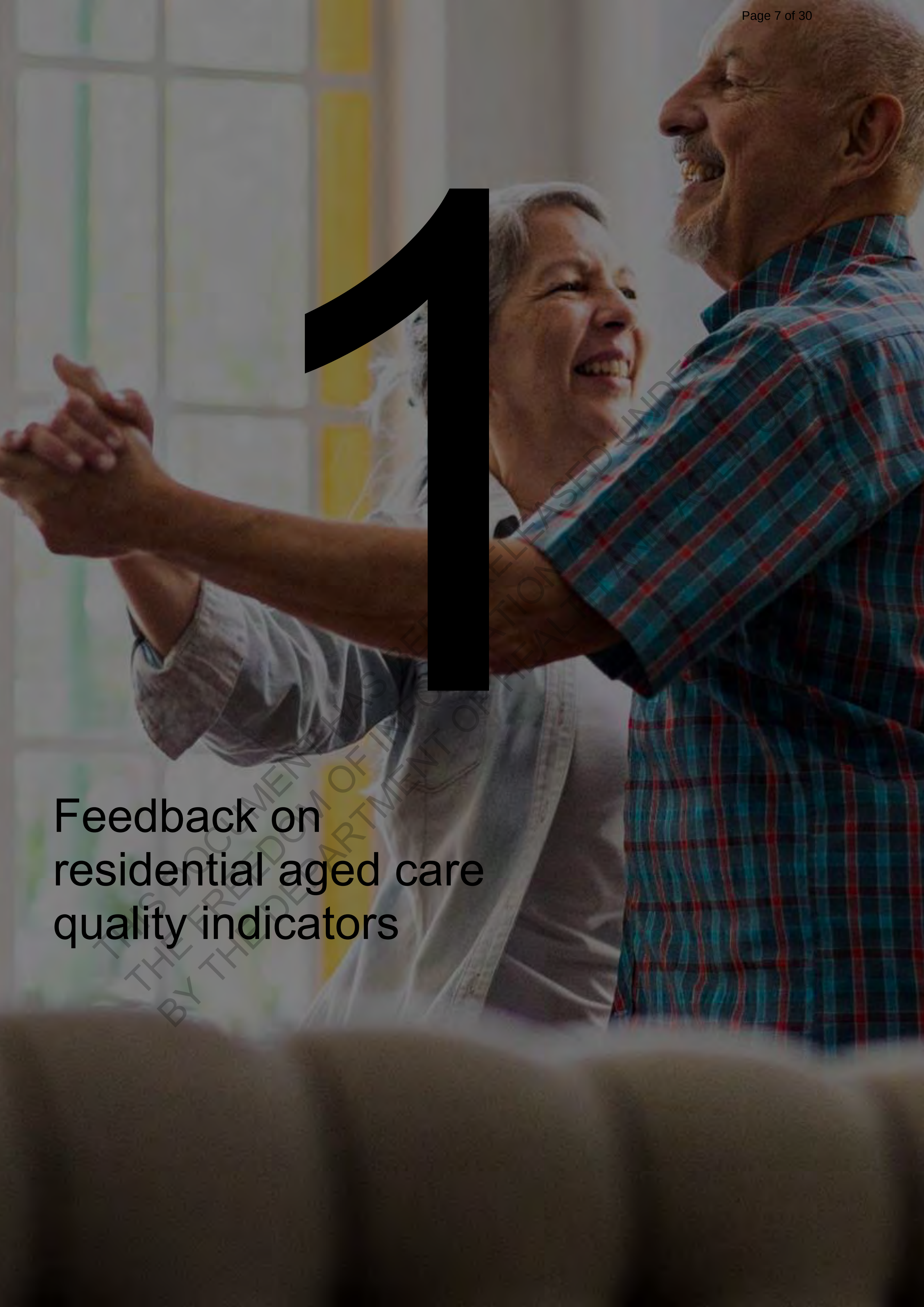
Quality indicators identified through the evidence review were supported in concept by stakeholders, however it was recognised the current constructs would need to be tailored to support the QI Program. Potential quality indicators were constructed based on stakeholder views to support TEG consideration.

TEG advice was sought to refine and better define the identified quality indicators with respect to their technical specifications—including definitions, data capture tools, frequency of data collection, exclusion criteria and appropriateness to take forward. Feedback provided by the TEG will help inform the selection of quality indicators by the Department for the pilot.

Prior to the TEG meeting, a briefing paper was circulated outlining the short list of quality of care domains and associated quality indicators favoured by stakeholders for inclusion in the QI Program. Feedback was obtained from the TEG via an online survey between 13 – 19 January 2022.

The pre-pilot TEG meeting convened on 24 January 2022 with the objectives of:

- sharing consolidated feedback from the online survey
- focussing discussion on divergent and outstanding issues, and
- seeking technical advice on the quality of care domains and potential quality indicators to be considered for pilot.



1

Feedback on residential aged care quality indicators

Quality of life

To capture the consumer voice, an assessment tool measuring quality of life, consumer experience or consumer satisfaction will be implemented. The *Royal Commission into Aged Care Quality and Safety* recommended a quality of life assessment tool be implemented in residential aged care.

Quality of life refers to a person's perception of their position in life taking into consideration their environment and their goals, expectations, standards, and concerns. It includes their emotional, physical, material, and social wellbeing.

Potential quality indicator presented to the TEG for consideration

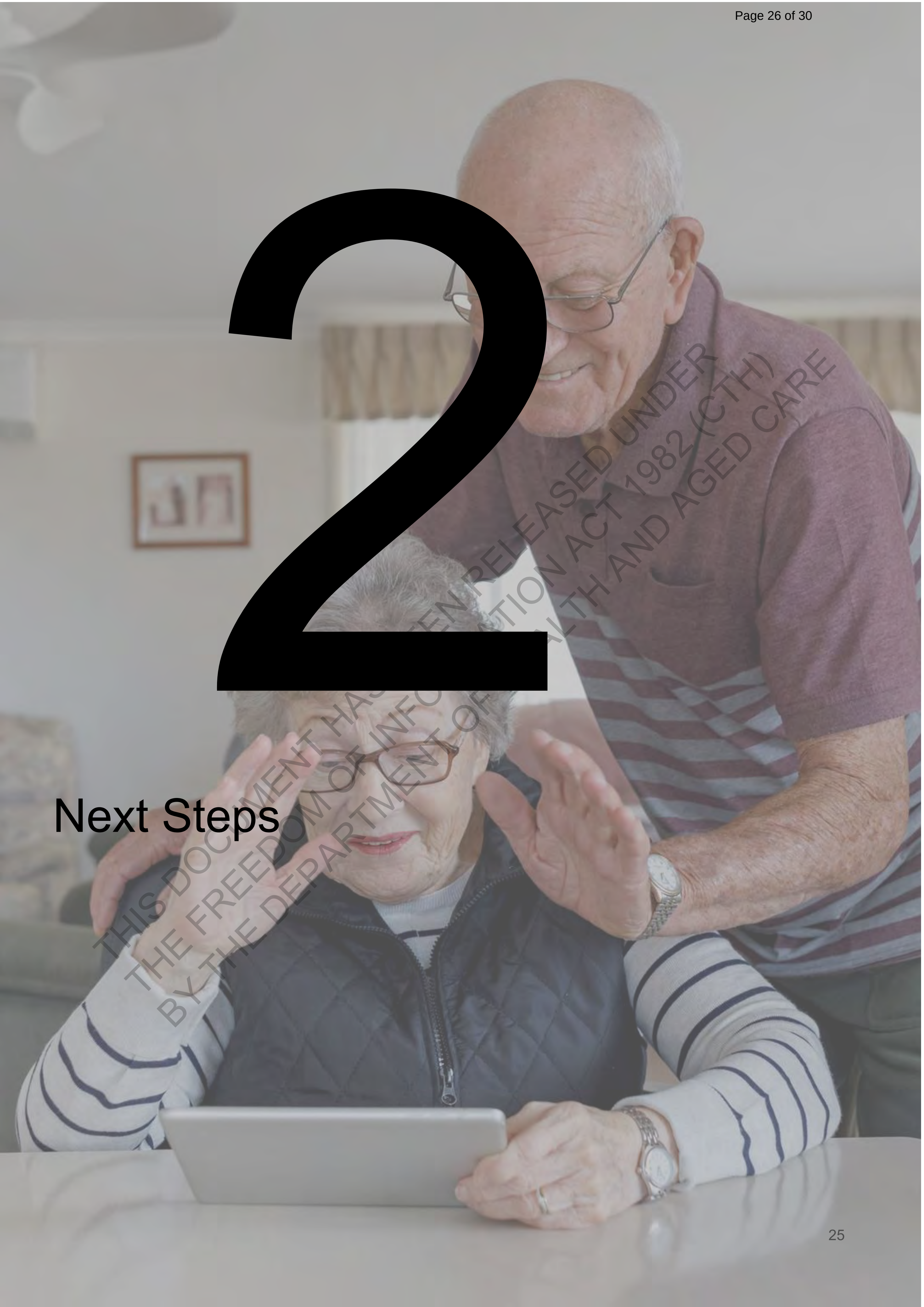
A potential quality indicator to measure quality of life using the Quality of Life-Aged Care Consumers (QOl-ACC) tool was constructed based on stakeholder views to support TEG consideration.

Potential quality indicator	Definition / assessment tool	Collection method	Technical Specifications		
			Numerator	Denominator	Exclusions
Percentage of care recipients whose quality of life declined	Quality of life measured using the Quality of life, Aged care consumers (QOL-ACC).	Comparison of QOL-ACC score for each care recipient, or their proxy, in relation to their last assessment - taken around the same time last quarter. Collection through online platforms, self-completion and scripted survey are to be considered. Opportunities and disadvantages of known/anonymous reporting must be determined to inform collection methods.	Number of care recipients whose scores on the QOL-ACC declined in the last 3 months.	All care recipients, minus exclusions.	Care recipients who withheld consent to undergo an assessment for quality of life for the entire quarter. Care recipients who were absent from the service for the entire quarter. Care recipients who are receiving end of life care.

Key considerations arising from TEG survey responses and consultation feedback

Themes	Survey results	Key considerations
Quality improvement	Quality of Life • Quality indicator supports care quality and quality improvement (n=8)* *total survey responses (n=11)	• CEQOL measures were widely considered to support quality improvement, with quality of life measures being preferred. • It was acknowledged that the Royal Commission recommended a comprehensive quality of life assessment tool and that Government has committed to this. • There are known challenges with correlating service providers impact on care recipient's consumer experience. This can be influenced by various factors including acute illness or a major change in health status. • Mixed views on whether all elements of a care recipient's quality of life can be influenced by service providers (e.g. some may be influenced by a care recipient's life circumstance. • It is important that 'decline' is defined and a clinically meaningful change in score is determined. Further consideration is required to define decline in quality of life and what change in score would be considered meaningful. • An alternative quality indicator was proposed to measure point in time quality of life.
Modalities of tool administration	Quality of life • Face to face (n=8) • Tablet (n=5) • Paper based (n=5) • Email (n=1) • All (n=5)* *total survey responses (n=11)	• Self-completion of CEQOL assessment tools is widely recognised as best practice, with clear arrangements for proxy administered assessments with clear guidance. • Assessments should be tailored to support senior Australians, including those with cognitive, visual or physical impairment, or culturally and linguistically diverse needs.
Use of proxies	Quality of life • Proxies could be used for care recipients who cannot self-report (yes n=4, unsure n=7)* *total survey responses (n=11)	• TEG members agreed that proxies are important advocates for senior Australians in aged care. • The proxy preferences of care recipients should be also considered (e.g. use of a preferred carer or staff member). • Communication experts could be engaged to support administration of the tool and improve reliability of data. • Challenges were described with the use of proxies to complete tools and the validity of results compared to self-reporting. • Care recipients self-completing assessment tools was preferred, however if required, proxies should be clearly defined.
Data collection frequency	Quality of life • Quality indicator to be collected quarterly (yes n=7, no n= 1)* **total survey responses (n=8)	• There was some support for revising the measure to one focused on single point prevalence (e.g. percentage of care recipients who have poor QoL or prevalence of unhappiness). This would reduce the data collection burden required to collect and compare sequential assessments. • Further consideration is required to determine an appropriate time period for data collection that will result in change e.g. 3, 6, or 12-months.

Themes	Survey results	Key considerations
Data reporting	Quality of life - Data collected by proxies should be reported separately (yes n=8, no n=1)* *total survey responses (n=10)	- There was support for the separation of proxy and non-proxy reported data, given statistical discrepancy that should be adjusted for any future publication.
Collection bias	- Data should be collected by someone independent from the service (n=7) or a combination of independent and service collection (n=4)* *total survey responses (n=11)	- Concerns were raised that service provider bias may emerge if quality of life reporting was published publicly. - There was support for use of independent collectors.
Exclusions	- Are there instances that should be excluded (yes n=2, no n=5)* *total survey responses (n=7)	- There was support inclusion of all care recipients.



2

Next Steps

Project next steps

Project findings identified through the evidence review, stakeholder consultations and TEG consultations will be consolidated and presented to the Department with potential quality indicators and CEQOL assessments tools, to help inform selection for pilot.

A 6-week pilot will be conducted to test the proposed quality indicators and CEQOL assessment tools in the Australian residential aged care context prior to decisions being made about the further expansion of the QI Program. Additional information about the pilot dates and times will be made available on the residential aged care project website.

3

Appendices

www.pwc.com.au

www.pwc.com

Expansion of the QI Program

Technical Expert Group briefing paper

13 January 2022

pwc

The University Of Queensland Australia

ROSA

Disclaimer

This Technical Expert Group briefing paper is not intended to be used by anyone other than Department of Health.

We prepared this briefing paper solely for Department of Health's use and benefit in accordance with and for the purpose set out in the Work Order with Department of Health dated 23 September 2021. In doing so, we acted exclusively for Department of Health and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than Department of Health in connection with this briefing paper
- to Department of Health for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this briefing paper for anyone other than Department of Health. If anyone other than Department of Health chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than Department of Health receiving or using this briefing paper.

Liability limited by a scheme approved under Professional Standards legislation.

Contents

Project background

Overview

The Australian Government Department of Health (the Department) has engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of Senior Australians (ROSA) at the South Australian Health and Medical Research Institute (SAHMRI) to assist in the development of two projects: the expansion of the residential aged care quality indicators and the development of quality indicators for in-home aged care. These projects are intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The consortium has been engaged to identify, assess, and pilot evidence based quality indicators across four areas of care for residential aged care and five areas of care for in-home aged care, and examine the use of consumer experience and quality of life assessment tools for both residential and in-home care. This project commenced in September 2021 and is scheduled to be complete by May 2022.

Evidence Review

A review of national and international literature identified:

- 13 evidence based quality of care domains and 109 quality indicators for potential expansion of the QI Program for residential aged care
- 19 evidence based quality of care domains and 230 quality indicators for the potential development of the QI Program for in-home aged care.

The domains and quality indicators across both projects were assessed and ranked in relation to importance, feasibility, usability, scientific attributes, ability of providers to influence and value to the QI Program.

Further details on the literature review outcomes can be accessed via the following links:

- Residential aged care evidence review summary report
- In-home aged care evidence review summary report.

A comprehensive evidence review of validated tools to measure quality of life, consumer experience and consumer satisfaction in aged care was also conducted by Flinders University[1].

Stakeholder consultations

The highest ranked quality of care domains and quality indicators for the evidence review for both residential and in-home aged care were summarised into consultation briefing papers. Feedback was sought from stakeholders, including service providers, peak bodies, government agencies, and senior Australians, family members and carers, between 15 November – 16 December 2021 via written and virtual consultation. A total of 60 consultation sessions were facilitated and 191 written

---

[1] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

submissions received across both the residential and in-home aged care projects to understand stakeholders views on which areas (domains) of care and associated measures (quality indicators) are most meaningful, useful for quality improvement, and appropriate for collection as part of the QI Program.

Briefing paper structure

This briefing paper is structured in two sections; residential aged care and in-home aged care. Each section contains quality of care domains and proposed quality indicators with key questions for the Technical Expert Group (TEG) to consider and provide response to through a survey issued prior to the TEG meeting. Overleaf is a summary of considerations underpinning the use of the evidence-informed quality indicators.

Technical Expert Group

The purpose of the TEG is to provide technical feedback on the potential quality of care domains and quality indicators identified through the evidence review and consultation process. The TEG includes a range of technical experts (see Appendix A).

TEG advice is sought to refine and better define the identified quality indicators with respect to their technical specifications including definitions, data capture tools, frequency of data collection, exclusion criteria and appropriateness to take forward. Feedback provided by the TEG will help inform the selection of quality indicators by the Department for the pilot.

TEG members are requested to:

1. Review the briefing paper outlining a short list of quality of care domains and quality indicators favoured by stakeholders for inclusion in the QI Program. TEG members are requested to focus feedback on domains aligned to their expertise.
2. Complete the online survey by **10am AEDT on Tuesday 18 January 2022**, allowing individual feedback on some, or all, of the quality indicators presented in this paper. The survey link is available here.
3. Attend the pre-pilot TEG meeting on **Monday 24 January 2022**. This meeting will provide feedback on the survey outcomes, seeking discussion of issues of complexity or where TEG memberships views diverge.

Feedback is requested on domains aligned with each TEG member's area/s of expertise. It is anticipated review of this paper and completion of the survey will take a maximum of two to three hours, if feedback is provided for all domains. This process is intended to focus meeting discussions.

Consumer experience and quality of life

It is important to capture the voices of senior Australian's, their families and representatives by measuring quality of life, consumer experience or consumer satisfaction. The Royal Commission into Aged Care Quality and Safety recommended the implementation of a quality of life assessment tool across in-home aged care.

Quality of life refers to your overall wellbeing and happiness, including access to services and activities as well as good physical and emotional health.

Consumer experience looks at the experience of the person receiving care.

Consumer satisfaction considers a person's happiness with the care and services provided to them.

Two quality of life assessment tools and one consumer experience assessment tool identified through the evidence review were considered suitable by stakeholders during consultation:

Measurement tools	Concepts measured
Quality of life	
Quality of life, Aged care consumers (QOL-ACC)	People's quality of life relevant to mobility, emotional wellbeing, social connections, independence, activities, and pain management.
Good spirit, Good life (GSGL)	Older Aboriginal Australians quality of life relevant to family and friends, country, community, culture, health, respect, elder role, supports and services, safety and security, spirituality, future planning, and basic needs.

s22

[redacted]

Key considerations arising from evidence review and stakeholder consultations

Themes	Key considerations
Attribution and quality improvement	• Strong support was voiced by senior Australians and service providers for consumer experience and quality of life (CEQOL) measures in guiding quality improvement. • Quality of life measures were the most preferred. However, consumer experience and consumer satisfaction were recognised as measures service providers are most likely able to influence. • A number of services are currently using information on care recipient quality of life, experience and satisfaction to guide practice. This includes the use of the quality of life assessment tool QOL-ACC to support services to engage in meaningful conversations with care recipients and to support quality improvement. • Attributing for some concepts of wellbeing measured by CEQOL tools being outside the scope of influence of some in-home aged care services. • Some of the assessment tools measure quality of life and consumer experience across several dimensions that may not be in the control of the in-home aged care service provider. For example, the QOL-ACC tool measures emotional wellbeing which may not be in the control of a service provider who primarily provides the consumer with transport services.

Themes	Key considerations
Definitions, inclusion, and exclusion criteria	• Due to the broad types of services provided across in-home aged care, it may be necessary to tailor assessments to align with the services being provided. • Appropriate risk adjustment or inclusion/exclusion criteria are necessary to ensure services do not avoid accepting senior Australians with higher complexity or clinical care needs. • Some concern was expressed by stakeholders of the definitions of quality of life and the accuracy, validity and reliability of the tools.
Feasibility, data collection and reporting	• Consideration should be given to the most appropriate mode of administration. Self-completion of CEQOL assessment tools is widely recognised as best practice. The use of an alternate workforce could also be considered to assist senior Australians in completing the relevant assessment, noting service providers widely acknowledged the merit in the conversations it prompted. • Clear arrangements are required for proxy administered assessments, with some CEQOL assessment tools, including QOL-ACC, providing clear guidance to support proxy administration. • Frequency of data collection should be carefully considered to limit burden on senior Australians (e.g. some care recipients may not like completing questionnaires or surveys). There were mixed views from stakeholders on the appropriate frequency of data collection. • Assessments should be tailored to support senior Australians. This includes senior Australians with cognitive, visual or physical impairment, or culturally and linguistically diverse needs, including through the use of trusted representatives and/or the availability of assessment tools in different formats, including via tablet, computer or hard copy (pen and paper survey).

Potential quality indicator for TEG consideration

Potential quality indicators for CEQOL have been constructed based on stakeholder views and to support TEG consideration. The quality indicators have been developed for data collection using the QOL-ACC and QCE-ACC tools to meet the objectives of the QI Program.

Potential quality indicator	Definition / assessment tool	Collection method	Technical Specifications		
			Numerator	Denominator	Exclusions
Percentage of care recipients whose quality of life declined	Quality of life measured using the Quality of life, Aged care consumers (QOL-ACC).	Comparison of QOL-ACC score for each care recipient, or their proxy, in relation to their last assessment - taken around the same time last quarter. Collection through online platforms, self-completion and scripted survey are to be considered. Opportunities and disadvantages of known/anonymous reporting must be	Number of care recipients whose scores on the QoL-ACC declined in the last three months.	All care recipients, minus exclusions.	Care recipients who withheld consent to undergo an assessment for quality of life for the entire quarter. Care recipients who have not received in-home aged care services for the entire quarter. Care recipients who are receiving end of life care.

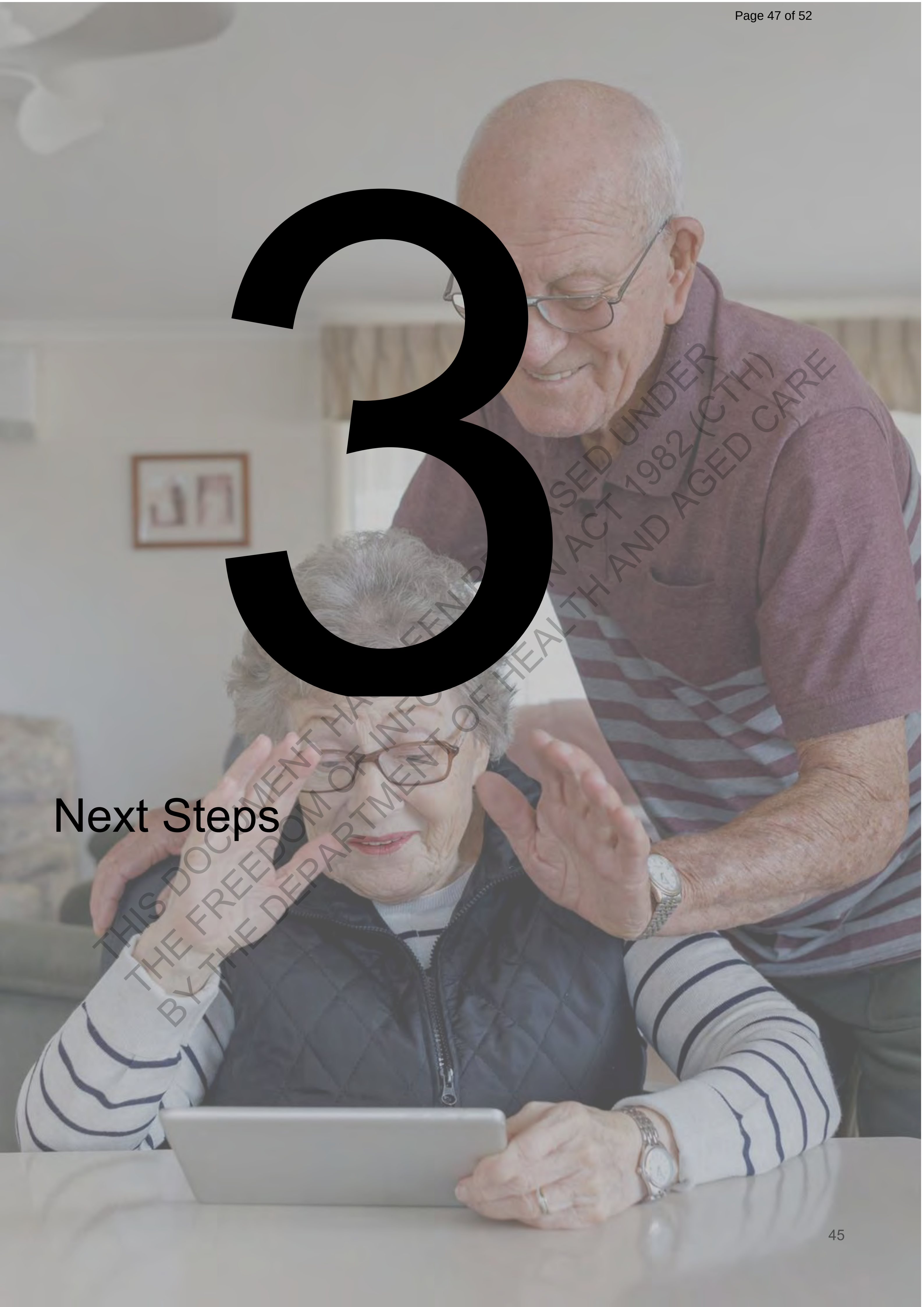
Potential quality indicator	Definition / assessment tool	Collection method	Technical Specifications		
			Numerator	Denominator	Exclusions
		determined to inform collection methods.			

s22

[redacted]

Questions for the TEG

1. Quality indicators measuring decline in quality of life and decline in consumer experience were favoured at consultation. Do these quality indicator constructs support care quality and quality improvement?
2. Do you have a preference on the proposed quality indicators, or should both quality indicators be reported?
3. Which modalities for administration of quality of life or consumer experience tools should be included (e.g. email, tablet, face to face, paper-based)?
4. How can care recipients who are unable to self-report their quality of life or consumer experience (e.g. those with communication or cognitive impairment) be included?
5. Should quality of life data collected from proxies be reported separately?
6. Data is to be collected around the same time each quarter to support quarterly QI Program reporting. Is this an appropriate interval for assessment?
7. Data collection undertaken by the service can support meaningful conversations between care recipients and care providers. Is data collected and reported by services sufficiently reliable to support QI Program objectives? If not, please advise of how data could be practicably collected in a way that reduces potential bias?
8. Every effort is made to ensure all care recipients are included in data reporting however, exclusions are used to ensure feasibility and appropriateness. Are the proposed quality indicator exclusions appropriate? Are there additional care recipients who should be excluded beyond care recipients who withheld consent, were absent from the service or are receiving end of life care?
9. Do you have any other feedback on the consumer experience and quality of life quality indicators?



3

Next Steps

Next steps

TEG next steps

Responses to questions posed in this document are to be submitted by TEG members through an online survey available until 10am AEDT Tuesday 18 January 2022. The survey can be accessed here.

The responses will be analysed with particular emphasis on points of agreement and contention across the TEG membership. This will inform discussion at the meeting around potential quality indicators with a view to seek general consensus where possible.

Project next steps

A 6-week pilot will be conducted in March 2022, with residential and in-home aged care services. The pilot provides an opportunity to test the proposed quality indicators and CEQOL assessment tools in the Australian residential and in-home care context prior to decisions being made about the further expansion of the QI Program. Additional information about the pilot dates and times will be made available over the coming months on both the residential aged care and in-home aged care project websites.

4

Appendices

www.pwc.com.au

www.pwc.com.au

Aged Care Quality Indicator Expansion Project

Briefing document | February 2022

pwc

ROSA

The University of Queensland
Australia

Contents

Purpose of this document

To support selection of quality indicators for pilot, this briefing document reports for each domain the key findings from the:

- evidence review
- aged care stakeholder consultations
- Technical Expert Group consultations.

Disclaimer

This briefing document is not intended to be used by anyone other than Department of Health. We prepared this document solely for the Department of Health's use and benefit in accordance with and for the purpose set out in the Work Order with Department of Health dated 23 September 2021. In doing so, we acted exclusively for Department of Health and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than Department of Health in connection with this summary report
- to Department of Health for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this summary for anyone other than the Department of Health. If anyone other than the Department of Health chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than Department of Health receiving or using this summary report.

Liability limited by a scheme approved under Professional Standards legislation.

1

Project overview

Project overview

Overview

The Australian Government Department of Health (the Department) engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of Senior Australians (ROSA) to assist in the development of quality indicators for residential and in-home aged care. The project is intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

pwc ROSA The University Of Queensland Australia

Objectives

The overall aims of the QI Program are to:

- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation
- provide senior Australians with information about the quality of aged care services when making choices about their care.

The PwC-led consortium has identified, assessed, and will pilot evidence based quality indicators across

- four quality of care domains for residential aged care
- five quality of care domains for in-home aged care

and will examine the use of assessment tools for a consumer experience and quality of life (CEQOL) domain for in-home and residential aged care.

Overview of all project phases

Phase 1
Project plan & initiation
Sep 2021

Phase 2
Review of evidence
Sep – Oct 2021
Stakeholder consultations
Nov – Feb 2021

We are here

Phase 3
Pilot
Mar - Apr 2022

Phase 4
Analysis to inform implementation
Apr – May 2022

Department Presentation (7 Feb)
TEG pre-pilot consultation (24 Jan)
Sector consultations (1 Nov – 16 Dec)

Stages and approach to date

Phases

Activities

Phase 1

Review of evidence
September–October 2021

A review of national and international literature identified 13 quality of care domains for residential aged care and 19 quality of care domains for in-home aged care.

Each quality of care domain was assessed and ranked in terms of:
high quality evidence based indicators identified
- international agreement that the domain is important
- services ability to influence care in this domain
- monitoring this domain is important for high quality care.

Residential care. A total of 13 domains and 175 quality indicators were identified. The top 8 domains contained 165 quality indicators of which 109 had sufficient evidence to inform assessment.

In-home care. A total of 19 domains and 230 quality indicators were identified. The top 10 domains contained 175 indicators of which 110 had sufficient evidence to inform assessment.

Phase 2

Aged care stakeholder consultations
November–December 2021

Feedback was sought from aged care stakeholders through virtual and written consultations. Four dedicated consultation workshops were held for senior Australians, family members and carers.

Residential care. 20 virtual consultations were held across the 8 quality of care domains and 4 workshops focused on the CEQOL tools. Written feedback was submitted by 23 peak bodies, government and other agencies, 30 service providers and 27 senior Australians, their families and representatives.

In-home care. 25 virtual consultations were held across the 10 quality of care domains and 4 workshops focused on the CEQOL tools. Written feedback was submitted by 20 peak bodies, government and other agencies, 49 service providers and 24 senior Australians, their families and representatives.

Nine organisations also provided standalone written submissions outside the survey process.

Technical Expert Group (TEG) consultation (pre-pilot)
January 2022

Quality indicators identified through the evidence review were supported by stakeholders, however it was recognised that technical aspects of the identified indicators would need to be tailored to support the QI Program.

Potential evidence based quality indicators were constructed by the Department based on stakeholder views and presented to the TEG for consideration. Prior to the session, a survey and briefing paper was distributed to TEG members where feedback was requested on the feasibility, validity, data collection tools and methods, and the exclusion criteria specified for each quality indicator.

Residential care. The following domains were taken to TEG: Functions and ADLs, hospitalisations, workforce, continence, pain and Quality of Life.

In-home care: The following domains were taken to TEG: Functions and ADLs, hospitalisations, workforce, service delivery and care planning, weight loss and malnutrition and CEQOL.

2

Residential aged care: Findings from evidence review and stakeholder consultations

Evidence review

Evidence Review and Assessment

Domain theming

13 quality of care domains identified

Domains were included for review if:
- the aims of the domain and quality indicators are to improve/monitor the quality of aged care
- data collection is based on the population
- reporting and quality indicators are current.

Data extraction

175 quality indicators across 13 domains identified

Data about quality indicators from studies and reports **was extracted** through the defined search process **and each quality indicator was documented**.

Domain ranking

Top 10 rated domains identified

All domains were assessed and ranked against four criteria to identify the **top 10 domains** to be included, using a standardised scoring system to determine which domains:

- include evidence based indicators
- are important to improving quality of care
- possess international agreement
- include the ability for outcomes to be influenced by aged care services.

Within these 10 domains, 165 quality indicators were identified. Of these 165 quality indicators, 56 were deemed to have insufficient evidence, leaving 109 quality indicators.

Quality indicator assessment

109 quality indicators assessed against the criteria

A total of **109 quality indicators** within each of the top ten ranked quality of care domains were quantitatively assessed and ranked against criteria using a standardised scoring system.

The quality indicators were ranked using two discrete methods:
1. each quality indicator was assessed against six criteria
2. the scores for the evidence base were plotted against the value to the QI Program to derive a prioritised listing.

109 quality indicators across 10 domains were prioritised to reflect the quality of their evidence base and value to the QI Program.

Following the evidence review of the top 10 prioritised domains, the top 8 domains and 104 associated quality indicators were presented during stakeholder consultations.

Rank	Domain name	No. of quality indicators
1	Function and activities of daily living (ADLs)	24
2	Medication	7
3	Continence	17
4	Infection control	23
5	Depression	9
6	Behavioural symptoms	9
7	Hospitalisations	5
8	Pain	10
	Total presented for consultation	**104**
9	Service Delivery	4
10	Wait times	1
11	Cognition	7
12	Palliative Care	2
13	Mortality	1
	Workforce *	-
	Consumer Experience and Quality of Life (CEQOL) **	8

* Workforce domain identified through stakeholder consultations.

** CEQOL domain and associated assessment tools identified through an independent evidence review undertaken by Flinders University.

Consumer experience and quality of life

Review of evidence

CEQOL domain	# *
s22 [redacted]	[redacted]
Quality of life	3

* Number of assessment tools in the domain

An independent evidence review of quality of life, consumer experience and consumer satisfaction assessment tools was undertaken by Flinders University.

Key considerations

- Tools to measure quality of life, consumer experience or consumer satisfaction are not inter-changeable as they measure different dimensions.
- The assessment comprehensiveness of quality of life, consumer experience and consumer satisfaction tools vary, although it is unclear how often assessment should be completed.

s22 [redacted]

Stakeholder consultations

Key findings

- CEQOL measures were widely considered to support guiding quality improvement, with quality of life measures being preferred.
- A number of services currently use information on care recipient quality of life, experience and satisfaction to guide practice, including the use of QOL-ACC, a tool that is supported for supporting quality improvement. Other tools currently in use in practice include the Adult Social Care Outcomes Too kit (ASCOT) and EQ5D.
- Point in time measurement presents complexities in assessing a person's wellbeing.
- Frequency of data collection should be carefully considered to limit burden on senior Australians. There were mixed views on the appropriate frequency of data collection.
- Self-completion of CEQOL assessment tools is widely recognised as best practice, with clear arrangements for proxy administered assessments with clear guidance.
- The use of an alternate workforce could also be considered to assist senior Australians in completing the relevant assessment, noting service providers widely acknowledged the merit in the conversations prompted during assessment.
- Assessments should be tailored to support senior Australians, including those with cognitive, visual or physical impairment, or culturally and linguistically diverse needs.
- Appropriate risk adjustment or inclusion/exclusion criteria are necessary to reduce the risk of services not accepting senior Australians with higher complexity or clinical care needs. It would also need to reflect potential differences in scores when comparing results from assessments completed by residents themselves versus those completed by proxies.

Favoured assessment tools
Quality of Life - Aged Care Consumers (QOL-ACC)
Dementia Quality of Life tool (DEMQOL)

TEG consultation

Potential quality of life quality indicators were refined based on stakeholder consultation feedback to reflect the objectives of the QI Program.

Potential quality indicator presented to TEG for consideration
Percentage of care recipients whose quality of life declined in the last 3 months

Key findings for quality of life

- Agreement that there is value in measuring quality of life to help identify when care interventions may be required by service providers, and some support for measuring quality of life generally as a point in time, rather than decline.
- It is important that 'decline' is defined and a clinically meaningful change in score is determined.
- Further consideration is required to determine an appropriate time period for data collection that will result in change e.g. 3, 6 or 12 months.
- Challenges identified with the use of proxies to complete tools and the validity of results compared to self-reporting.
- Mixed views on whether all elements of a care recipient's quality of life can be influenced by service providers (e.g. some may be influenced by a care recipient's life circumstances).
- Support for no exclusions.
- Licensing requirements for the selected tool requires consideration, along with the validity of using largely untested tools such as QOL-ACC.

Consumer experience and quality of life

Review of evidence

CEQOL domains	# *
Quality of life	3

s22 [redacted]

* Number of assessment tools in the domain

An independent evidence review of quality of life, consumer experience and consumer satisfaction assessment tools was undertaken by Flinders University.

Key considerations

- There are currently no recommendations on how often assessment should be completed.
- It is preferable for consumers to self-complete assessments; however, consideration should be given around when and how a proxy should be engaged (e.g. when a consumer does not have the cognitive capacity to complete the assessment).
- Assessment tools are available in varying formats, (e.g. tablet, computer or hard copy). Consideration should be given to consumer preference and available resources.
- The presence of 'satisfaction bias' may result in consumer satisfaction tools being unreliable to support quality improvement and consumer choice.
- Consideration and recommendations on collection and reporting of assessment data is required.
- Some assessment tools measure quality of life and consumer experience across dimensions that may not be in the control of in-home aged care services.

Stakeholder consultations

Key findings

- Quality of life measures were the most widely preferred. However, consumer experience and consumer satisfaction were recognised as measures service providers are most likely able to influence.
- Some concern was expressed by stakeholders of the definitions of quality of life and the accuracy, validity and reliability of the tools.
- Many service providers currently capture quality of life, experience, and satisfaction to guide practice to support meaningful conversations and quality improvements.
- Due to the broad types of services provided across in-home aged care, it may be necessary to tailor assessments to align with the services being provided.
- Consideration should be given to the most appropriate mode of administration, including proxy. Self-completion of CEQOL assessment tools is widely recognised as best practice.
- Frequency of data collection should be carefully considered to limit burden on senior Australians. There were mixed views from stakeholders on the appropriate frequency of data collection.
- Assessments should be tailored to support all senior Australians, including those with cognitive, visual or physical impairment, and persons from culturally and linguistically diverse backgrounds.

Favoured assessment tools
Quality of life
Quality of Life – Aged Care Consumers (QOL-ACC)

s22 [redacted]

TEG consultation

Potential quality indicators were refined based on stakeholder consultation feedback to reflect the objectives of the QI Program.

Potential assessment tools presented to TEG for consideration
Quality of life
Percentage of care recipients whose quality of life declined

s22 [redacted]

Key findings for quality of life

- Further consideration is required to define decline and what change in score would be considered meaningful. There were suggestions of an alternative measure that is point in time only.
- Challenges regarding the use of proxies to complete tools and the validity of results compared to self-reporting should be considered further.
- Further consideration is required to determine an appropriate time period for data collection that will identify significant change e.g. 3, 6 or 12 months.
- There were mixed views on whether all elements of a care recipient's quality of life can be influenced by service providers.
- There was support for no exclusions.
- Licensing requirements for the selected tool requires consideration.

s22 [redacted]

4

Next steps

Next steps

Phases

Phase 3

Pilot

7 March 2021–15 Apr 2022

Activities

A six-week pilot will run from 7 March to 14 April 2022 to test the quality indicators selected by the Department.

The six key objectives of the pilot are to understand the:

1. Relevance, appropriateness and usability of the quality indicators for the QI Program
2. Feasibility of data capture and collection processes
3. Accessibility and utility of the support materials, including opportunities for enhancement
4. Data collection preferences
5. Enablers for implementation and lessons for consideration in the further expansion of the QI Program
6. User experience testing to inform IT build for data submission in the My Aged Care Provider Portal environment

Phase 4

Analysis to inform implementation

18 Apr 2022–26 May 2022

Following the completion of the pilot phase, a quantitative and qualitative pilot data analysis will be conducted to inform the implementation of new quality indicators to the QI Program.

In addition to the post-pilot analysis and report, we will undergo user experience testing (QI Program IT design) through focus group sessions to enhance platform functionality and design.

We will reconvene the TEG to obtain expert views on the pilot findings to inform the final report and will deliver a final report containing a succinct and complete summary of all stages of the project.

Appendices

Appendix A: *TEG members*

Name	Organisation	Name	Organisation
s47G [redacted]	[redacted]	[redacted]	[redacted]

Thank you

www.pwc.com.au

www.pwc.com

Expansion of quality indicators for residential aged care

Department presentation summary report

February 2022

pwc

The University Of Queensland Australia

ROSA

Disclaimer

This Department presentation summary report is not intended to be read or used by anyone other than the Department of Health.

We prepared this Department presentation summary report solely for the Department of Health's use and benefit in accordance with and for the purpose set out in our work order with the Department of Health dated 23 September 2021. In doing so, we acted exclusively for the Department of Health and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than the Department of Health in connection with this department presentation summary report
- to the Department of Health for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this Department presentation summary report for anyone other than the Department of Health. If anyone other than the Department of Health chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than the Department of Health receiving or using this department presentation summary report.

Liability limited by a scheme approved under Professional Standards legislation.

Document control

Document status	Draft
Content last updated	14 February 2022
Version	V0.1
Point of contact	s47F [redacted]
Approver	Department of Health, Quality and Assurance Division, Choice and Transparency Branch
Date of approval	TBC

Version control

Version	Date	Summary of changes
V0.1	14 February 2022	First draft

Contents

Attachments

1

Executive summary

Executive summary

Project overview

The Australian Government Department of Health (the Department) engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of Senior Australians (ROSA) to assist in the development of quality indicators for residential aged care. The project is intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The overall aims of the QI Program are to:

- provide older people with information about the quality of aged care services when making choices about their care
- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation.

The consortium has been engaged to identify, assess, and pilot evidence based quality indicators across quality of care domains and examine the use of consumer experience and quality of life (CEQOL) assessment tools. The project commenced in September 2021 and is scheduled to be completed in June 2022.

Department presentation overview

The purpose of the Department presentation was to inform the selection of quality indicators and CEQOL measures for pilot. On 7 February 2022 the PwC consortium presented the findings from the evidence review, aged care stakeholder consultations and Technical Expert Group (TEG) consultation to representatives from the Department, the Aged Care Quality and Safety Commission and the Australian Institute of Health and Welfare. The presentation informed discussions to guide the Department's selection of the pilot quality indicators.

Prior to the presentation, attendees were provided an optional pre-reading briefing document (Attachment B). A detailed list of attendees is provided in Appendix A.

Department presentation summary

A brief summary of the key considerations on quality of care domains emerging from the Department presentation is outlined in the table below. Further discussions points on the quality of care domains are provided in Section 2 of this report.

s22

[redacted]

Quality of care domain	Quality indicators / assessment tools considerations
s22 [redacted]	
Quality of life	- Support was provided for a quality of life quality indicator measuring prevalence rather than decline, with initial reporting to focus on the proportion of care recipients who reported excellent or good quality of life using the QOL-ACC assessment tool.

2

Discussion on presented quality of care domains

Quality of life

The *Royal Commission into Aged Care Quality and Safety* recommended the implementation of a comprehensive qualify of life assessment tool in residential and in-home aged care. Quality of life refers to a person's perception of their position in life taking into consideration their environment and their goals, expectations, standards, and concerns. It includes their emotional, physical, material, and social wellbeing. Regular monitoring of quality of life is an important part of routine care and allows services to tailor and improve care.

Potential quality indicator presented for discussion

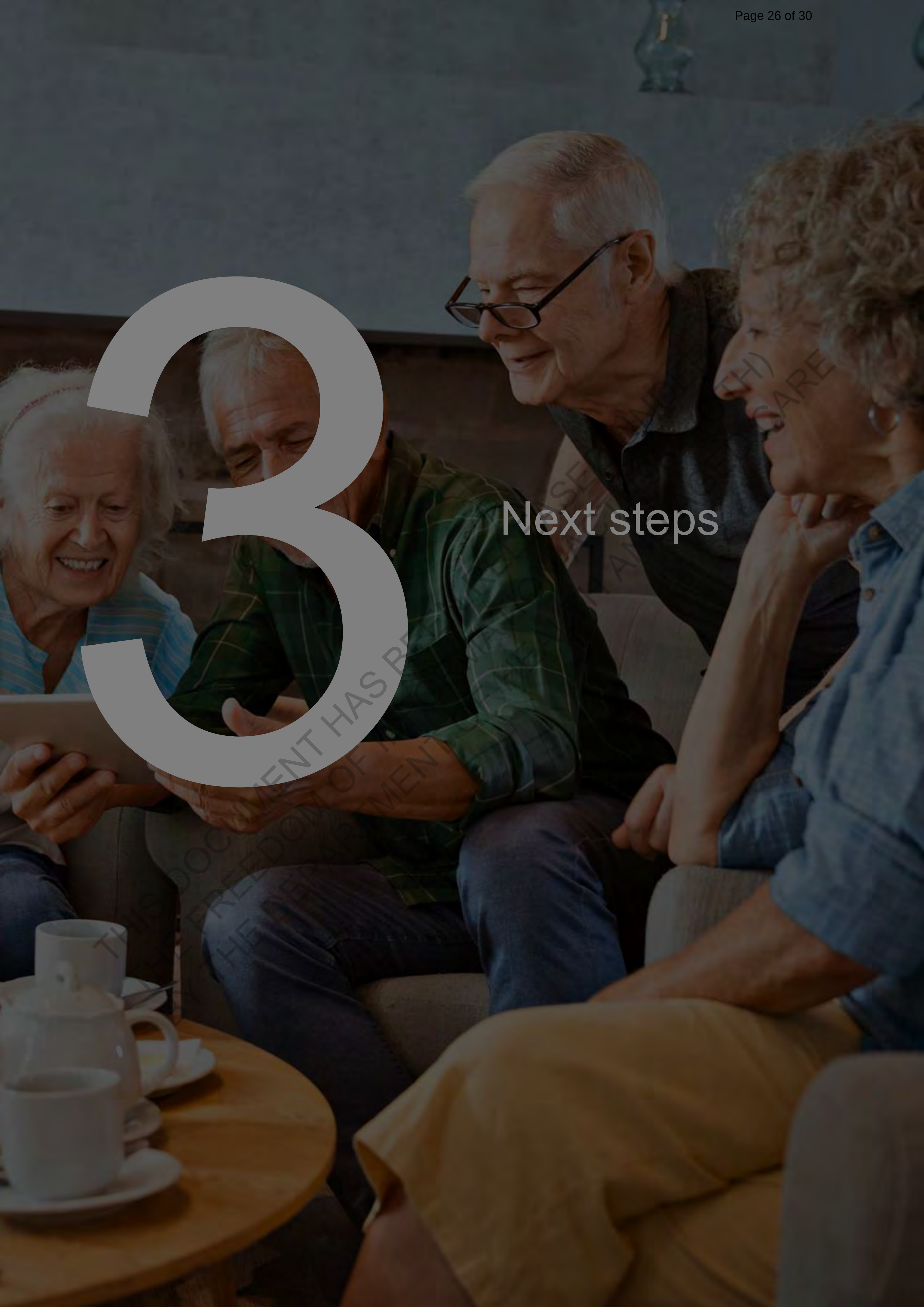
Quality indicator	Percentage of care recipients who report poor or very poor quality of life
Definition	• Very poor quality of life: a care recipient who scores 0–7 on the QOL-ACC instrument • Poor quality of life: a care recipient who scores 8–13 on the QOL-ACC instrument
Tool	Quality of Life – Aged Care Consumers (QOL-ACC) QOL-ACC is scored on 6 domains with a total score ranging from 0 (very poor) – 24 (excellent). A five-category scoring algorithm is available ranging from: • Very poor quality of life (0–7) • Poor quality of life (8–13) • Moderate quality of life (14–18) • Good quality of life (19–21) • Excellent quality of life (22–24) *Note: pending confirmation of license requirements*
Collection frequency	• Quarterly
Collector	• Self-completion for care recipients with nil or minimal cognitive impairment / dementia • Interview administered assessment to be available for care recipients requiring assistance • Scoring by proxy for care recipients with moderate to severe cognitive impairment / dementia according to care records
Numerator	Number of care recipients who report poor or very poor quality of life, and: • self-reported (including through interview) • reported by proxy
Denominator	All care recipients who: • self-reported (including through interview) • reported by proxy
Exclusions	• Nil
Additional reporting	Number of care recipients who: • did not self-report • did not report by proxy

Key considerations presented for discussion

- In the pilot and over the first 12 months post-implementation of the measure in the QI Program, it is recommended:
    - the point prevalence of ‘poor’ or 'very poor' quality of life be recorded
    - consideration be given to whether the point prevalence of all five categories should be reported.
- It is recommended care recipients receiving end of life care or withholding consent are not exclusions. If these are exclusions, is it recommended these figures are reported.
- In the future, the quality indicator could measure a decline in quality of life. A 'decline' may be defined as a downward movement from one category to another (e.g. 'moderate' to 'poor'). However, this may be the consequence of a 1-point change in score. The frequency distribution of scores over the pilot and early implementation period (adopting a prevalence measure) will inform the definition of a clinically meaningful decline in quality of life to support the implementation of an incidence measure (e.g. 3-point decline).

Summary of feedback

Theme	Discussion points
Quality indicator specifications	**Definitions** • Stakeholders supported a quality of life quality indicator using the QOL-ACC tool. • There was support for quality of life measuring prevalence rather than decline, with initial reporting to focus on the proportion of care recipients who report excellent or good quality of life using the QOL-ACC tool. **Collection frequency** • The five QOL-ACC categories have not been piloted at a population level in residential aged care. • Quarterly reporting is reasonable, noting it is important to explore the responsiveness over time and what impact a residential aged care service provider has on care recipient’s quality of life. • It was acknowledged while self- reporting is preferred, facilitating this through the QI Program and to maintain anonymity requires consideration. **Collector** • A proxy for care recipients experiencing cognitive decline or dementia was proposed, stratifying reporting to indicate when results were obtained via self-reporting (including interview) or proxy completion. **Additional reporting** • Collection and reporting of all five QOL-ACC categories would provide important frequency of distribution information to determine meaningful change.
Additional considerations	• Agreement the tool needs to be trialled and refined over time, with further work required to understand appropriate responses by service providers to improve quality of life scores, and to inform benchmarking activities. • The inclusion of quality of life indicator with existing consumer experience data collection was said to not contribute materially to increase data burden, given the simplicity of the QOL-ACC. • There are opportunities to link quality of life measures with other domains (including pain and workforce).



3

Next steps

Next steps for the project

Pilot

Following selection of the quality indicators, a six-week pilot with residential aged care services will commence in March 2022. The pilot provides an opportunity to test, analyse and report on the proposed quality indicators and CEQOL assessment tools in the Australian residential aged care context, prior to Ministerial decision regarding quality indicators for inclusion in the QI Program.

Post-pilot Technical Expert Group meeting

A post-pilot Technical Expert Group meeting will be convened to discuss the quantitative and qualitative results from the residential aged care quality indicator pilot. The TEG will provide technical and clinical expertise in relation to pilot findings discuss potential considerations of the identified quality indicators as relevant to the future expansion of the QI Program.

Reporting

A final report will provide a summary of all stages in the project, including the development process, data analysis, findings and outcomes to support implementation of quality indicators as part of the QI Program.

Appendices

Appendix A: Department presentation attendees

s47G

[redacted]

www.pwc.com.au

To: s22 [redacted]

NATIONAL AGED CARE MANDATORY QUALITY INDICATOR PROGRAM — SELECTION OF QUALITY INDICATORS FOR FURTHER TESTING

Purpose

To seek agreement to the selection of quality indicators, consumer experience and quality of life (CEQOL) measures (detailed at Attachment A) to be further tested in residential aged care, for potential inclusion in the National Aged Care Mandatory Quality Indicator Program (QI Program).

s22 [redacted]

Issues

1. In alignment with the Royal Commission recommendations (22), through the 2021–22 Budget Measure for Residential Aged Care Quality and Safety, *Pillar 3 of the Royal Commission response – Empowering consumers of aged care with information to exercise choice*, Government invested in:

- 4 residential care quality indicators,
- up to 5 home care quality indicators and
- CEQOL measures - across residential and in the home aged care by the end of 2022.

2. The Department of Health (department) engaged a consortium of PricewaterhouseCoopers, the University of Queensland and the Registry of Senior Australians (the consortium) to assist in the development of new quality indicators for residential aged care for the QI Program.

3. Quality indicator development has involved a rigorous process of:

- an evidence-based literature review, which identified and comprehensively assessed potential quality indicators across crucial areas of care,
- national stakeholder consultations, comprising 31 workshops with senior Australians, aged care providers and peak bodies, as well as written public consultations, and
- guidance from a Technical Expert Group, as well as a Consumer Reference Group and Sector Reference Group.

4. The department considered the need for contemporary evidence-based measures with established scientific properties (such as validity and reliability), demonstrated positive impacts on quality of care outcomes for consumers, reduced associated regulatory burden, and quality indicators that are feasible and suitable for use in the QI Program.

5. The department concluded, quality indicators and CEQOL measures (listed in Attachment A), developed through the outlined process, should proceed to pilot for testing in residential aged care.

6. The outcomes of the pilot will inform the department of the relevance, appropriateness and feasibility of the piloted quality indicators and CEQOL measures for the purposes of the QI Program.

7. The department will advise the Minister for Aged Care of the pilot findings, as well as the recommended quality indicators and CEQOL measures for implementation in the QI Program.

s22 [redacted]

s22 [redacted]

Consultation

The recommended quality indicators and CEQOL measures have been selected on the basis of extensive consultation with stakeholders, as outlined at Attachment C.

Recommendation

Approve the proposed quality indicators outlined in Attachment A.

Approved / Not Approved / Please Discuss / Noted

Approve the proposed CEQOL measures outlined in Attachment A.

Approved / Not Approved / Please Discuss / Noted

s47F [redacted]

s22 [redacted]
Acting First Assistant Secretary
23 / 02 / 2022

Attachments:

A: Indicative quality indicators and CEQOL measures for residential aged care
B: Background

C: Consultation events for quality indicator development

s22

[redacted]

Attachment A

Indicative Quality indicators and CEQOL measures for residential aged care

s22

[redacted]

Quality of life

- Percentage of care recipients who report good or excellent quality of life (using the Quality of Life – Aged Care Consumers [QOL-ACC] tool)

www.pwc.com.au

Expansion of quality indicators for residential aged care

Draft post-pilot analysis report

9 June 2022

Disclaimer

This report is not intended to be read or used by anyone other than the Department of Health.

We prepared this report solely for the Department of Health's use and benefit in accordance with and for the purpose set out in our engagement letter with the Department of Health dated 23 September 2021. In doing so, we acted exclusively for the Department of Health and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than the Department of Health in connection with this report
- to the Department of Health for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this report for anyone other than the Department of Health. If anyone other than the Department of Health chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than the Department of Health receiving or using this report.

Liability limited by a scheme approved under Professional Standards legislation.

Contents

1

Project overview

1.1 Project overview

The Australian Government Department of Health (the Department) engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of Senior Australians (ROSA) to assist in the development of quality indicators for residential aged care. The project is intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The overall aims of the QI Program are to:

- provide older people with information about the quality of aged care services when making choices about their care
- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation.

The consortium has been engaged to identify, assess, and pilot evidence based quality indicators across quality of care domains and examine the use of consumer experience and quality of life (CEQOL) assessment tools. The project commenced in September 2021 and is scheduled to be completed in June 2022.

1.2 Purpose of this report

The purpose of the post-pilot analysis report is to summarise the key processes and outcomes of the residential aged care quality indicator pilot. The six-week pilot commenced 21 March 2022, with 131 services across Australia collecting and submitting quality indicator data. Details on the approach to pilot and a summary of the quantitative results and qualitative feedback are summarised by domain in the following sections of this report. Considerations for the QI Program more broadly are provided in the final chapter.

1.3 Overview of pre-pilot activities

1.3.1 Evidence review

A rapid, targeted review of national and international literature was undertaken to identify evidence-based quality of care domains and quality indicators for possible expansion of the QI Program in residential aged care.

The review identified 175 quality indicators across 13 quality of care domains (listed in alphabetical order):

- Behavioural symptoms
- Cognition
- Continence
- Depression
- Function and activities of daily living (ADLs)
- Hospitalisation
- Infection control
- Mortality
- Medications (not already included in QI Program)
- Pain
- Palliative care
- Service delivery and care planning
- Wait times.

Each quality of care domain was ranked based on a quantitative assessment. From the top 10 ranked quality of care domains a total of 165 quality indicators were identified. These quality indicators were assessed against the US National Quality Forum criteria modified for the Australian aged care and quality indicator context, including additional criteria proposed by the consortium and agreed to by the Department on attribution and value to the QI program.

Quality indicators within each domain were then ranked in order of priority based on their evidence and value to the QI Program using a prioritisation matrix.

Consumer experience and quality of life (CEQOL) was excluded from the evidence review due to work completed in this area by a separate Department appointed consortium. This work was led by Flinders University and included a comprehensive evidence review of validated tools to measure quality of life, consumer experience and consumer satisfaction in aged care[1]. The findings from this review were considered throughout the project.

1.3.2 Stakeholder consultations

The purpose of consultation was to seek feedback from relevent staeholders on the preferred quality of care domains, quality indicators and CEQOL assessment tools for inclusion in the QI Program. Senior Australians, their families and representatives, residential aged care service providers, peak bodies, government agencies, individual aged care, and health and medical professionals were invited to contribute through virtual workshops and written submissions.

Consultations were supported by two briefing papers, publicy available on the PwC project website:

- Expansion of the residential aged care quality indicators consultation paper, and
- Expansion of the residential aged care quality indicators consultation paper for senior Australians, representatives, families and carers.

Consultation papers summarised the highest ranked quality of care domains (see Table 1 below) and associated quality indicators, from the evidence review and the Flinder's University led CEQOL evidence review.

Table 1 List of highest ranked quality of care domains

1. Function and activities of daily living (ADLs)	6. Behavioural symptoms
2. Medications (not already included in QI Program)	7. Hospitalisation
3. Continence	8. Pain.
4. Infection control	Consumer experience and quality of life (not ranked)
5. Depression	

Virtual consultation

Stakeholders registered for virtual consultation sessions through the PwC website, with links to the registration form distributed through the residential aged care project email and via the PwC website and the Department's Engagement Hub. Between 1 November and 16 December 2021, a total of 31 residential aged care virtual consultations were conducted with stakeholders:

- 20 workshops across the eight quality of care domains (at least two sessions were held per domain, with additional sessions held where registration numbers were high)
- 4 workshops specifically facilitated for senior Australians, their families and representatives
- 4 workshops focused on the CEQOL assessment tools

---

[1] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

- 3 workshops with aged care peak bodies, the Sector Reference Group and the Consumer Reference Group.

Written consultation

Three Qualitrics surveys were published to seek written stakeholder feedback. Surveys were tailored to senior Australians, their families and representatives; residential aged care service providers; and peak bodies, government and other agencies, respectively. Beteen 24 November and 15 December 2021 a total of 80 written responses were recieved from stakeholders:

- 27 from senior Australians, their families and representatives
- 30 from residential aged care service providers
- 23 from peak bodies, government and other agencies.

In addition, nine organisations provided standalone written submissions outside the survey process.

1.3.3 Pre-pilot Technical Expert Group

The purpose of the Technical Expert Group (TEG) was to seek technical feedback on the quality of care domains and quality indicators for pilot as identified through the evidence review and consultation process. Prior to the TEG meeting, a briefing paper was circulated outlining the short list of quality of care domains and associated quality indicators favoured by stakeholders for inclusion in the QI Program. Feedback was obtained from the TEG via an online survey between 13 – 19 January 2022.

The pre-pilot TEG meeting convened on 24 January 2022 with the objectives of:

- sharing consolidated feedback from the online survey
- focussing discussion on divergent and outstanding issues
- seeking technical advice on the quality of care domains and potential quality indicators to be considered for pilot.

1.3.4 Quality indicator specifications review

Following the pre-pilot TEG meeting, a rapid review of quality indicator specifications was undertaken by the consortium to provide additional information to further inform refinement of the proposed quality indicators and inform the Department's selection of pilot quality indicators. A review was conducted against each of the potential quality indicators, with regard to their:

- relevance to best clinical practice
- likely psychometric properties (face validity, reliability, responsiveness to change, ability of services to influence results)
- feasibility of implementation (availability of existing measures, data collection burden).

1.3.5 Department presentation

The purpose of the presentation was to inform the selection of quality indicators and CEQOL measures for pilot. On 7 February 2022 the PwC consortium presented the findings from the evidence review, aged care stakeholder consultations and the TEG meeting to representatives from the Department, the Aged Care Quality and Safety Commission and the Australian Institute of Health and Welfare. A pre-reading briefing document was provided. Findings from the evidence review, aged care stakeholder consultations and the TEG meeting informed discussions and supported the Department's selection of the pilot quality indicators.

1.3.6 Residential aged care quality indicator pilot

Quality indicators selected for ithe residential aged care pilot

Following the Department presentation, the Department selected the quality indicators for pilot (see Table 2 below).

Table 2: Quality indicators selected for pilot

Domain	Quality indicator
s22 [redacted]	[redacted]
Quality of life	Percentage of care recipients who report 'good or 'excellent' quality of life

Detailed information about the pilot approach is provided in *Section 2: Pilot overview*, while pilot findings are summarised for each domain beginning in *Section 3: Activities of daily living*.

2

Pilot overview

2.1 Pilot approach

A six-week pilot was conducted from 21 March 2022 to 29 April 2022 to test the selected quality indicators across four quality of care domains, and consumer experience and quality of life. The pilot sought to collect data from a nationally representative sample of at least 165 residential aged care services, achieved through recruitment of a diverse range of services across different jurisdictions and geographical distribution areas, and of different types and sizes.

The key objectives of the pilot were to examine the:

- relevance, appropriateness, and usability of the piloted quality indicators for the purposes of the QI Program
- feasibility of data capture and collection processes, including implications for residential aged care services
- accessibility and utility of the support materials, including opportunities for enhancement
- data collection preferences
- enablers for implementation and lessons for consideration in the further expansion of the QI Program.

An additional pilot objective related to user experience (UX) testing to inform the IT build for data submission in the My Aged Care Provider Portal environment. The findings against this objective are captured in the *Expansion of quality indicators for residential aged care - User experience findings report.*

Five key stages in the pilot methodology were developed, which were supported by several activities, including providing participant support, data collection and obtaining feedback. Figure 1 highlights key activities and deliverables for each stage of the pilot.

Pilot overview

Figure 1 Pilot approach

	20 Sept – 24 Dec	24 Jan – 18 Mar	21 Mar – 29 Apr	21 Mar – 11 May	12 May - 10 Jun
Stages	**1. Pilot promotion and recruitment**	**2. Development of materials to support the pilot and onboarding of participants**	**3. Pilot launch and data collection**	**4. Feedback on pilot from participants**	**5. Post pilot activities**
Key activities	The pilot was **promoted** via the PwC website, Department's BIDS notices and newsletter, and available channels A stratification approach was taken to **recruitment**, with a goal of recruiting a nationally representative sample of at least 165 residential aged care services	**Support materials** were developed to assist participants throughout the pilot Designed, tested and built the **data collection platform** Participants were **onboarded** via a webinar where an overview of the pilot objectives and a timeline of activities was provided	The pilot was **launched** on 21 March 2022 Throughout the pilot **ongoing support** was provided via a centrally monitored email and hotline **Clinical enquiries** were escalated according to the Department Pilot data was **uploaded** and submitted by participants using **Data Kit** Ongoing **in-flight analysis** of the subpopulations was conducted	**Ongoing and ad hoc feedback** was obtained from participants via the centrally monitored email and hotline **Formal feedback** was requested through the Pilot Feedback Survey, using Data Kit Three **user experience (UX) focus group sessions** with sector participants were held between 9 – 11 May to discuss UX needs and recommendations (beyond survey response results)	The pilot was **completed** on 29 April A **TEG meeting** was held to brief the group on the results and seek feedback and validation on early findings against the objectives A **post-pilot workshop** was held with the Department to share, test and validate the analysis, outcomes and findings, as well as explore emerging themes Initial findings from the pilot as well as feedback and outcomes from post-pilot consultations were synthesised and provided to the Department in the **post-pilot analysis report** Services that participated in the pilot were provided with service **reports,** to view their results and compare their data with other pilot participants
Deliverables	• Promotional materials/comms • Set up PwC website	• Hotline number and email • Pilot handbook • Frequently Asked Questions • Data Collection Templates • Training materials • Onboarding webinar • Data Kit	• In flight analysis update during weekly status meeting	• Post pilot feedback survey questions • UX focus group sessions • UX summary report	• Post pilot feedback • Post-pilot consultation summary report • Draft and final post-pilot analysis report • Service reports

2.2 Pilot roles and responsibilies

There were three key stakeholder groups with pilot roles and responsibilities.

2.2.1 The Department of Health

- The Department selected the pilot quality indicators, determined the overall parameters of the pilot, including the pilot duration, and provided ongoing input and approval of the pilot methodology plan and pilot support materials.
- The Department and the PwC consortium convened regularly throughout pilot planning and delivery to provide ongoing oversight and review of pilot processes, operations and development of pilot support materials.
- The Department also supported pilot recruitment by distributing pilot communication materials through Department channels (e.g. the Aged Care Provider Newsletter, Bulk Information Distribution emails and notifications via the Engagement Hub).

2.2.2 PwC consortium

- PwC was responsible for leading pilot planning, delivery and post-pilot analysis of results. This included pilot recruitment, development of support functions, pilot support materials and the design and implementation of pilot infrastructure, including the data reporting portal.
- UQ CHSR and ROSA provided ongoing subject matter expertise, reviewing pilot deliverables, attending key project meetings to support pilot delivery and technical input to support pilot data analysis and findings.

2.2.3 Residential aged care services

- Services voluntarily registered for the pilot and were responsible for understanding the pilot support materials, collecting quality indicator data through the pilot and entering and submitting quality indicator this data using the pilot data reporting.
- In addition to providing quantitative data, services were responsible for submitting qualitative feedback through the data reporting portal or by contacting the pilot support team.

2.3 Pilot parameters

The Department set the overall parameters for the pilot. These included:

- setting out the pilot objectives (outlined in Section 2.1)
- selecting the pilot quality indicators
- setting the pilot duration of six weeks
- allowing services to participate in the collection and reporting of a subset of pilot quality indicators or care recipients at their service (where services were unable to participate fully by submitting data for all pilot quality indicators and all care recipients)
- recording and reporting aggregate service level to ensure pilot data could not be attributed to individual care recipients or linked to an individual service.

2.4 Pilot preparation

Pilot preparation commenced in September 2021 with planning activities supporting recruitment of a diverse range of residential aged care services. This included:

- the development of pilot communication materials to advertise the pilot to the aged care sector, support recruitment and provide ongoing information to services as required before, during and after the pilot
- the design of a sampling approach to support pilot recruitment and ensure a diverse range of residential aged care service participated in the pilot
- the establishment of an ongoing pilot support function via a dedicated telephone hotline and mailbox
- the creation of pilot support materials and resources
- set up of pilot infrastructure, including:
    - an online web-based data submission platform (the data reporting portal) to allow services to submit their pilot data
    - service reports to summarise each service's quantitative pilot results alongside the results of all pilot participants (embedded in the data reporting portal)
    - pilot feedback surveys to capture qualitative feedback (embedded in the data reporting portal).

2.5 Pilot support materials

A range of support materials were developed to provide ongoing support and facilitate pilot participation. Table 3 provides an overview of the support materials that were developed.

Table 3 Pilot support materials

Material	Purpose of the materials	Visual example of material
Pilot handbook	Provided detailed information for the pilot, including detailed quality indicator specifications, definitions, and data collection and reporting methods. This handbook followed a similar structure to the existing manual for the QI Program.	
Pilot frequently asked questions	Provided answers to frequently asked questions (FAQs) about the quality indicators, the pilot, data reporting portal, and the QI Program more broadly. FAQs were continually updated as the hotline and mailbox received enquiries throughout the pilot, to ensure all participants had access to the same information.	

Material	Purpose of the materials	Visual example of material
Data collection templates	A printable excel template and set of instructions were developed for each quality indicator in the pilot. The templates were designed to auto calculate summary information to allow services to enter and submit in the data reporting portal.	
Webinar orientation session	A webinar was held on 17 March 2022 as an induction to help participants prepare for the pilot. The session introduced participants to the PwC pilot support team and provided an in-depth overview of the pilot quality indicators, data collection requirements and support materials. Case examples were used to demonstrate how the quality indicator pilot data should be collected and reported. Attendee questions were incorporated into the frequently asked questions document supporting the pilot.	
Training materials and information resources	The webinar session was recorded and made available to all participants on the data reporting portal as a key resource for understanding and implementing the quality indicators in the pilot. Quick reference guides were developed to provide digestible summaries of the quality indicator specifications, definitions, and data collection and reporting methods, as well as case studies for each quality indicator.	
Pilot hotline and mailbox	A pilot enquiry hotline and mailbox were established to coach services and provide ongoing support before, during and after the pilot.	02 8266 1017 qipilotresidentialcare@au.pwc.com
Data reporting portal user guide	The data reporting portal user guide was developed to provide services with an overview of the data reporting portal, including instructions on how to access the portal, navigate pages, and enter and submit pilot data.	

2.6 Pilot support functions

A dedicated residential aged care pilot support telephone hotline and mailbox was established to provide participant assistance before, during and after the pilot. The telephone hotline and mailbox were accessible to the PwC pilot support team and were used for all inbound and outbound communication with pilot participants. These services operated from Monday to Friday between 08:30am – 5:00pm AEDT/AEST, with extended hours during key points in the pilot. The telephone hotline and mailbox were principally staffed by three full-time PwC pilot support team members across the duration of the project, ensuring services had familiar points of contact from recruitment and onboarding all the way through to pilot data submission. The telephone hotline had a voicemail service and was linked to team members' mobile devices to minimise instances where phone calls were unanswered.

2.7 Pilot sampling

A nationally representative sample was critical to the project's success to enable diverse and representative feedback and insights on the potential implementation of the quality indicators. A purposive sample stratification approach was developed and agreed by the Department with the selected sampling frame based on targets informed by the national distribution of residential aged care service demographic groups, derived using Australian Institute of Health and Welfare GEN Aged Care Data.

The target pilot recruitment sample was comprised of at least 165 residential aged care services, reflecting approximately 4-6 per cent of the 2,700 residential aged care services nationally. Targets incorporated geographic classification (e.g. metropolitan, rural or remote), location (e.g. New South Wales, Victoria, Tasmania), provider size (e.g. number of places, number of employees), service type and structure (e.g. not for profit, private, government based), and prior involvement in QI Program pilots. This enabled findings from the pilot to be abstracted more appropriately to the total sample of services in Australia, including those with diverse characteristics.

2.8 Pilot promotion and recruitment

Pilot promotion commenced in October 2021 with a range of planned recruitment activities to ensure all residential aged care services in Australia had an opportuinty to partcipate in the pilot. Activities built stakeholder awareness of the pilot, with advertising materials desseminiated through various communications channels, including:

- a dedicated PwC pilot website
- the Department's aged care sector newsletter
- the Department's Engagement Hub
- direct email to Aged Care Engagement Database subscribers
- direct email to services who submitted an expression of interest to participate in the 2019 residential aged care quality indicator pilot
- PwC consortium networks (e.g. direct email and LinkedIn posts).

2.8.1 Expressions of interest

Services interested in pilot participation were initially invited to submit a short online expression of interest (EOI), capturing key details about services, including points of contact for further communications and additional information on the pilot when available.

A total of 123 services submitted an EOI. While the majority were completed at the individual service level, some providers withheld service nomination until information on pilot timeframes and quality indicators became available. It was anticipated some services who submitted an EOI form may not go on to participate in the pilot.

Please refer to Appendix C for screenshots of the pilot EOI form.

2.8.2 Pilot registration

Formal pilot recruitment commenced in February 2022 following the Department's selection of the pilot quality indicators. Services who completed an EOI were invited to submit a registration form, collecting service demographic information to support appropriate sampling.

A number of services submitted an EOI form however did not register to participate in the pilot. The common reasons provided by services included:

- workforce challenges caused by the COVID-19 Omicron outbreak in early 2022
- the number of quality indicators selected for pilot, with services indicating the data collection and reporting burden was more significant than anticipated
- the nature of the pilot quality indicators, including the need to collect data throughout the pilot (e.g. ADLs quality indicator assessment required at the start and at the end of the pilot) and the requirement to use assessment tools across a number of quality indicators (e.g. continence, activities of daily living, and consumer experience and quality of life).

Broader recruitment activities continued throughout the pilot registration process. Information on pilot timeframes and quality indicators was disseminated to the aged care sector through the mass and targeted communications channels identified above.

To further increase pilot participation, targeted phone calls and emails were made to:

- larger service providers to encourage them to register multiple services in the pilot
- services who completed an EOI form but did not submit a pilot registration form
- services who participated in the 2020 residential aged care pilot.

On pilot commencement, a total of 185 services had formally registered in the pilot.

Please refer to Appendix C for screenshots of the pilot registration form.

2.8.3 Risks to pilot recruitment

A number of risks impacting pilot participation were identified throughout pilot recruitment including:

- the ongoing workforce challenges associated with the COVID-19 pandemic, noting approximately 50 per cent of registered services withdrew from the 2020 residential aged care pilot due to COVID-19 challenges
- participant withdrawal due to the perceived burden of data collection and reporting requirements following the announcement of pilot quality indicators
- failure to meet sampling frame targets due to participant withdrawals.

2.9 Pilot participation

2.9.1 Pilot sample size

At the conclusion of the pilot, 131 residential aged care services submitted pilot quality indicator data. Participation levels were continuously monitored by in-flight analysis examining services engagement with the data reporting portal. Proactive communications via the telephone hotline and mailbox targeted services with limited engagement with the portal.

During the pilot a number of services were not be able to collect and report data for all pilot quality indicators. The breakdown of quality indicator data submissions received is outlined below.

Summary of quantitative pilot data

- 55 services submitted quantitative data for all pilot quality indicators.
- 76 services submitted quantitative data for a subset of pilot quality indicators.
- Listed below are the number of submissions for each of the pilot quality of care domains:

s22 [redacted]

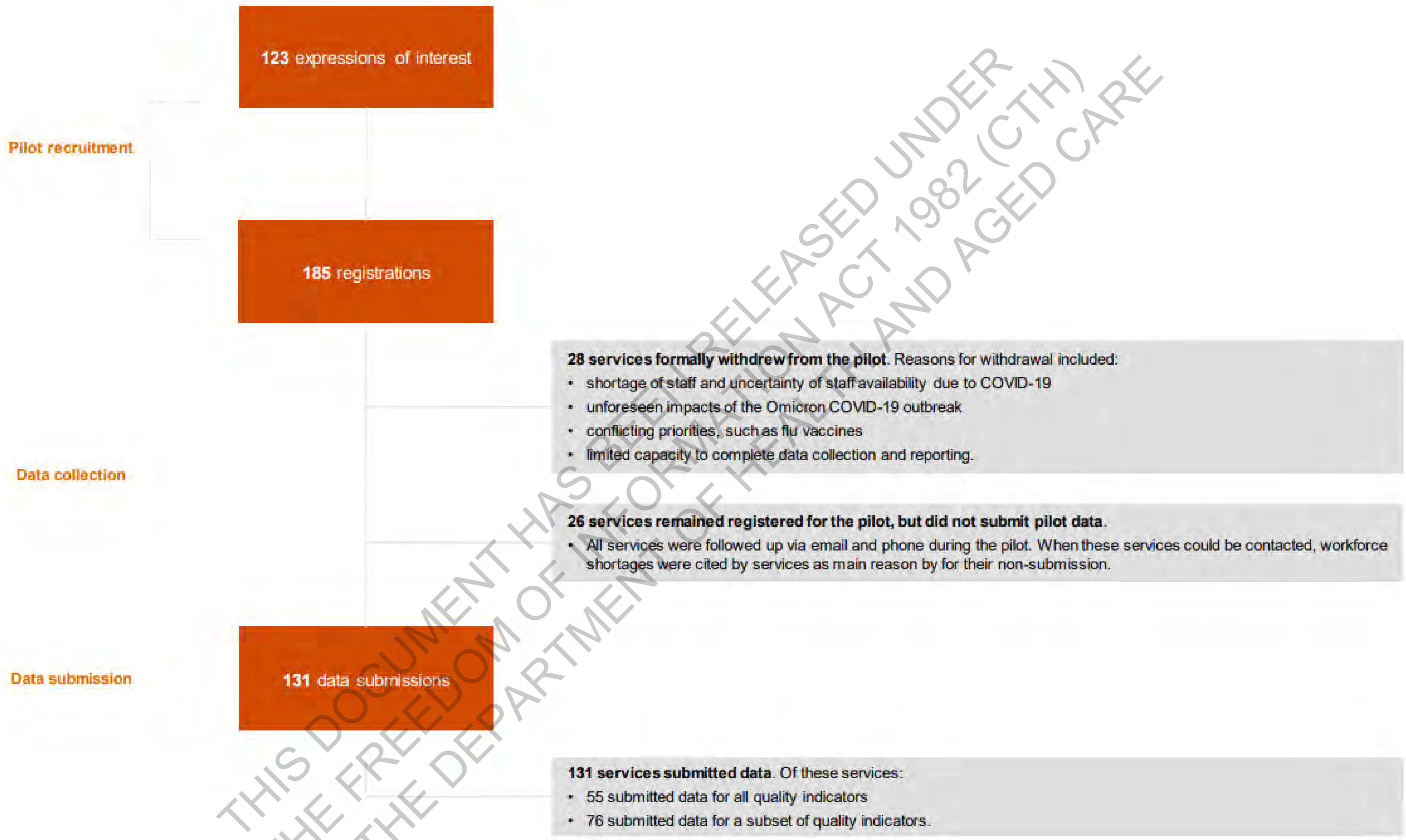
  - Quality of life: 74

Pilot withdrawals and non-submissions

Despite regular contact to provide ongoing coaching and support, 28 services formally withdrew from the pilot. The majority of services cited the impacts of the COVID-19 pandemic as the reason for withdrawal. The remaining services cited staff turnover and conflicting priorities as key reasons for withdrawal.

In addition, 26 services remained registered in the pilot but did not submit any data. The final number of registered services, formal withdrawals, and complete and partial data submissions is shown in Figure 2.

Figure 2 Overview of pilot participation



Pilot recruitment

123 expressions of interest

185 registrations

Data collection

28 services formally withdrew from the pilot. Reasons for withdrawal included:

- shortage of staff and uncertainty of staff availability due to COVID-19
- unforeseen impacts of the Omicron COVID-19 outbreak
- conflicting priorities, such as flu vaccines
- limited capacity to complete data collection and reporting.

26 services remained registered for the pilot, but did not submit pilot data.

- All services were followed up via email and phone during the pilot. When these services could be contacted, workforce shortages were cited by services as main reason by for their non-submission.

Data submission

131 data submissions

131 services submitted data. Of these services:

- 55 submitted data for all quality indicators
- 76 submitted data for a subset of quality indicators.

2.9.2 Pilot demographics

All services registered for the pilot answered demographic questions when first accessing the data reporting portal. Questions collected information relevant to the demographic groups in the sampling frame. All demographic groups in the sampling frame were represented in the pilot sample, as summarised below.

Jurisdiction:

- All states and territories were represented in the pilot.
- There was an underrepresentation of services from Queensland and Western Australia by approximately 6 per cent and 5 per cent, respectively.
- Representation across other state and territories broadly aligned to the demographic targets.

Geographical classification:

- There was an overrepresentation of around 8 per cent in rural services and an underrepresentation of around 13 per cent in metropolitan services.
- The number of remote services was low; however, the target number of services for remote population was exceeded by 4 per cent.

Service type:

- There was an underrepresentation of around 24 per cent in private services.
- There was an overrepresentation of around 22 per cent in not for profit services.

Service size (number of staff and care recipient places):

- There was an underrepresentation for services with 75-99 care recipients and <25 care recipients by around 16 per cent and 10 percent respectively.
- Representation of service size by number of employees at the service was broadly aligned with the target percentages, except for 50+ FTE where an underrepresentation of approximately 8 per cent was observed.

Figure 3 shows the location of each of the 131 pilot participants by State and Territory. The number shown in each jurisdiction corresponds to the number of pilot participants located in each State and Territory.

Figure 3 Number of pilot participants who submitted data by State and Territory (n = 131)

The distribution of services submitting pilot data, broken down by the demographic groups and targets agreed in the sampling frame is outlined in the following tables.

Table 4: Pilot registrants and participants by State and Territory

	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	Total
Total registrants	18	71	4	43	7	23	8	11	**185**
Total submissions	14	55	4	31	2	13	7	5	**131**
Submissions as percentage of total sample	11%	42%	3%	24%	2%	10%	5%	4%	**100%**
Sampling frame target percentage	17%	32%	1%	28%	3%	9%	1%	9%	**100%**
Population distribution (approx.)	459	864	27	756	81	243	27	243	**2,700**
Submissions as a percentage of the population	3%	6%	15%	4%	3%	5%	3%	2%	**5%**

Table 5: Pilot registrants and participants by geographical classification

	Metropolitan	Rural	Remote	Total
Total registrants	97	77	11	**185**
Total submissions	66	57	8	**131**
Submissions as percentage of total sample	50%	44%	6%	**100%**
Sampling frame target percentage	63%	36%	2%	**101% ***
Population distribution (approx.)	1,701	972	54	**2,727 ***
Submissions as a percentage of the population	4%	6%	15%	**5%**

* Note: Total percentage exceeds 100% due to rounding error, total number of services does not equal 2,700 due to rounding error.

Table 6: Pilot registrants and participants by service type ^

	Government	Not for Profit (NFP)	Private	Total
Total registrants	19	143	42	**185**
Total submissions	15	103	13	**131**
Submissions as percentage of total sample	12%	79%	10%	**101% ***
Sampling frame target percentage	9%	57%	34%	**100%**
Population distribution (approx.)	243	1,539	918	**2,700**
Submissions as a percentage of the population	6%	7%	1%	**51%**

^ Note: Government services include: Local government, and State government. Not for profit (NFP) services include: religious, religious/charitable, charitable, and community-based services. Private services include: private, and private incorporated body services.

* Note: Total percentage exceeds 100% due to rounding.

Table 7: Pilot registrants and participants by number of residential aged care places

	< 25 places	25 – 49 places	50 – 74 places	75 – 99 places	100+ places	Total
Total registrants	20	50	47	31	37	**185**
Total submissions	15	39	34	18	25	**131**
Submissions as percentage of total sample	11%	31%	25%	14%	19%	**100%**
Sampling frame target percentage	21%	24%	18%	30%	6%	**99% ***
Population distribution (approx.)	567	648	489	810	162	**2,676 ***
Submissions as a percentage of the population	3%	6%	7%	2%	2%	**5%**

* Note: Total percentage exceeds 100% due to rounding error, total number of services does not equal 2,700 due to rounding error.

Table 8: Pilot registrants and participants by number of employees

	< 10 employees	10 – 19 employees	20 – 29 employees	30 – 39 employees	40 – 49 employees	50 + employees	Total
Total registrants	14	22	23	19	20	87	**185**
Total submissions	12	20	15	13	16	55	**131**
Submissions as percentage of total sample	9%	15%	12%	10%	12%	42%	**100%**
Sampling frame target percentage	5%	10%	10%	10%	15%	50%	**100%**
Population distribution (approx.)	135	270	270	270	405	1,350	**2,700**
Submissions as a percentage of the population	9%	7%	6%	5%	4%	4%	**5%**

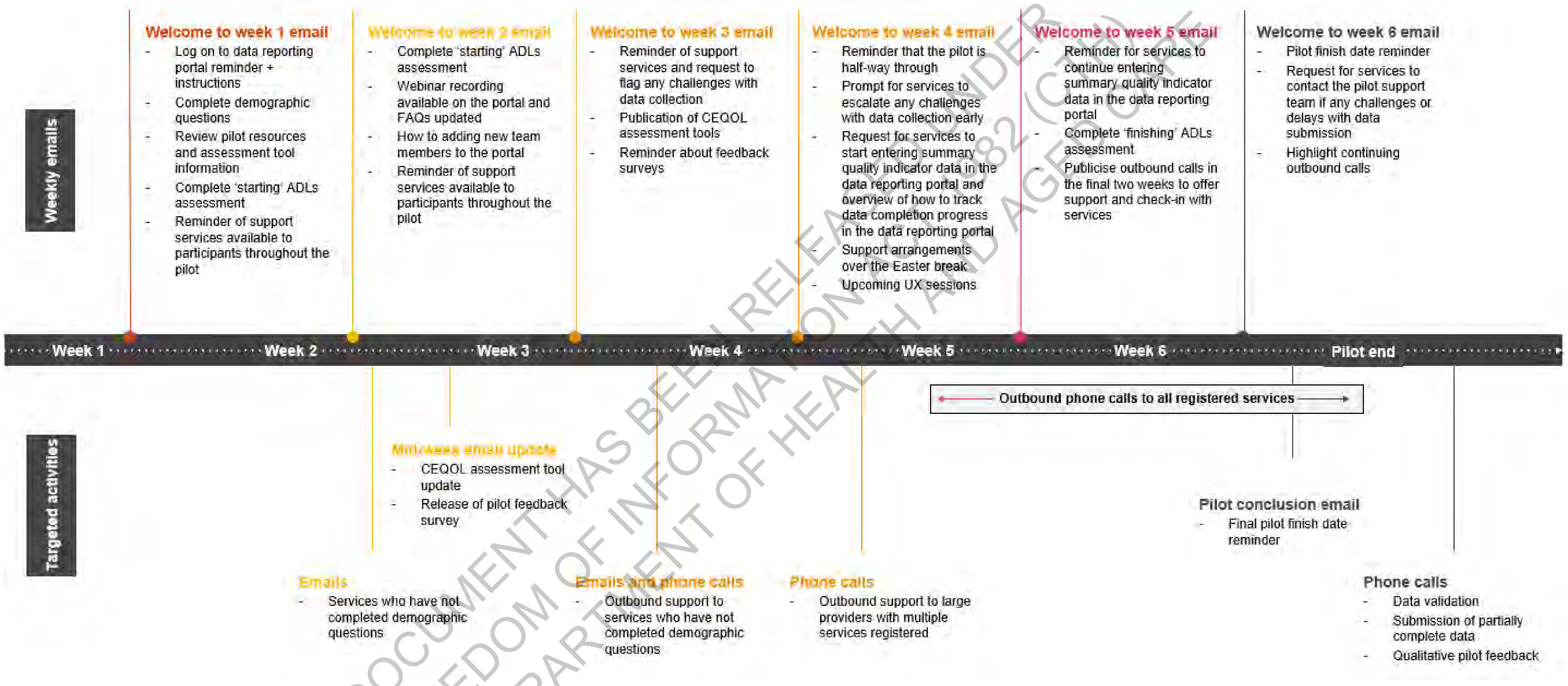
2.10 Pilot onboarding and ongoing support

Participants received support through a number of resources and activities overseen by the PwC pilot support team. The key pilot support materials (see Table 3) were provided to services by email and made available via the data reporting portal.

To support services with data collection, proactive weekly emails provided key reminders and prompt for services to contact the pilot support team when experiencing challenges with data collection and reporting. Participants requiring further support with questions or issues were encouraged to contact the pilot support team through the dedicated telephone hotline and mailbox.

A timeline and description of key communication activities with pilot participants is outlined in Figure 4.

Figure 4 Pilot communication activities



Weekly emails

Welcome to week 1 email
- Log on to data reporting portal reminder + instructions
- Complete demographic questions
- Review pilot resources and assessment tool information
- Complete 'starting' ADLs assessment
- Reminder of support services available to participants throughout the pilot

Welcome to week 2 email
- Complete 'starting' ADLs assessment
- Webinar recording available on the portal and FAQs updated
- How to adding new team members to the portal
- Reminder of support services available to participants throughout the pilot

Welcome to week 3 email
- Reminder of support services and request to flag any challenges with data collection
- Publication of CEQOL assessment tools
- Reminder about feedback surveys

Welcome to week 4 email
- Reminder that the pilot is half-way through
- Prompt for services to escalate any challenges with data collection early
- Request for services to start entering summary quality indicator data in the data reporting portal and overview of how to track data completion progress in the data reporting portal
- Support arrangements over the Easter break
- Upcoming UX sessions

Welcome to week 5 email
- Reminder for services to continue entering summary quality indicator data in the data reporting portal
- Complete 'finishing' ADLs assessment
- Publicise outbound calls in the final two weeks to offer support and check-in with services

Welcome to week 6 email
- Pilot finish date reminder
- Request for services to contact the pilot support team if any challenges or delays with data submission
- Highlight continuing outbound calls

Targeted activities

Mid-week email update
- CEQOL assessment tool update
- Release of pilot feedback survey

Emails
- Services who have not completed demographic questions

Emails and phone calls
- Outbound support to services who have not completed demographic questions

Phone calls
- Outbound support to large providers with multiple services registered

Pilot conclusion email
- Final pilot finish date reminder

Phone calls
- Data validation
- Submission of partially complete data
- Qualitative pilot feedback

Snapshot of key communications with pilot participants:

- Approximately 510 emails were sent by services to the mailbox throughout pilot recruitment, during the pilot and in the period after the pilot. The most common queries related to pilot registration, access to and navigating the data reporting portal, and understanding the quality indicator data collection requirements.
- Approximately 100 inbound phone calls were received by the telephone hotline. Calls ranged from less than a minute to up to 30 minutes. Short phone calls generally related to access to the data reporting portal, while longer phone calls usually related to questions on technical specifications of a quality indicators or coaching services to enter and submit data into the data reporting portal.
- Approximately 350 proactive outbound calls were made to services to offer ongoing support and to gauge potential for unforeseen challenges with data collection and reporting. In weeks 5 and 6, all pilot participants were contacted via the telephone hotline to check on progress and to help with early identification of issues prior to the conclusion of pilot.

2.11 Pilot escalation framework

A pilot escalation framework was developed to identify pilot enquiries for escalation for expert clinical review and input by the selected clinical expert (Professor Len Gray from UQ CHSR). The following situations were escalated for consideration:

- perceived or actual care recipient safety risk
- brand reputational risk for the Department or the QI Program
- questions relating to the QI Program but not specific to the pilot
- technical queries including data collection interpretations and quality indicator definitions that could not be answered by reference to the pilot handbook or the selected clinical expert
- clinical queries relating to the care or treatment of care recipients
- complaints relating to the PwC consortium, Department, pilot participants.

Where possible, pilot resources were used verbatim to communicate how pilot data should be collected and reported.

2.12 Pilot data submission

The online data reporting portal was developed for services to enter and submit pilot data and access a repository of pilot support materials. The data reporting portal was built using the PwC web-based platform Data Kit and replicated as close as possible the format and functionality used by services for QI Program reporting on the My Aged Care Provider Portal.

Each service registered for the pilot had a unique page on the data reporting portal. Services nominated at least two pilot point of contacts, and each contact had a unique log on to the data reporting portal and their service page. Services were able to contact the pilot support team to request access for additional team members. Where providers registered more than one service, linkage within the portal supported users to view all associated records through their account.

Please refer to Appendix C for screenshots of the data reporting portal.

Data submission process

The data reporting portal was available for data submission for the duration of the pilot, noting:

- The earliest services could finalise and submit all their quality indicator data was in week 6, with the requirement for services to conduct a second activities of daily living assessment at the end of the pilot and record hospital presentations between week 1 and week 5.
- Data submissions were monitored in the final week of the pilot, with targeted reminders sent mid-week to services who had not submitted pilot data.
- The majority of data submissions were received in the final 48 hours of the pilot, with most services finalising quality indicator data offline, and then entering and submitting quality indicator data in one sitting at the end of the pilot.
- 55 services requested the pilot support team to enter and submit data in the data reporting portal on their behalf.
- Five services requested and received an extension of 24-72 hours to finalise and submit quality indicator data.
- Services received an automated email thanking them for participating and providing information about the release of the service reports following submission of data through the reporting portal.

Quality assurance

The data reporting portal was designed with a number of quality assurance checks to support data quality:

- Quality indicator data pages were inaccessible until the service had completed and submitted their demographic questions. This ensured quality indicator data could not be entered and submitted without being linked to demographic information (which would be required to analyse the representativeness of the pilot sample and pilot results across demographic groups). Services who were slow to complete their demographic questions in the data reporting portal were contacted individually to provide additional coaching.
- The data reporting portal contained a number of mandatory data fields to support calculation of values for the pilot quality indicators. Services who had not completed all mandatory data fields were unable to formally lock and submit their data. The data reporting portal had a number of visual prompts to indicate which mandatory data fields were missing and to provide users with an indication of their progress in each domain and overall.
- Services who submitted data for specific quality indicators during the pilot had to validate and confirm zero responses were intentional and to ensure that negative responses could not be submitted.
- A summary page displayed the calculated quality indicator values based on the data entered in each of the quality indicator pages in the data reporting portal. On this page services were asked to check their data entries and confirm accuracy before finalising their submission. On the summary page, any missing mandatory data fields were highlighted, as well as any instances where a data entry error existed because the calculated quality indicator values were greater than 100 per cent.
- After services submitted their pilot data, the data entry fields were locked to ensure data was not adjusted without a service first contacting the pilot support team.

In addition, the PwC consortium conducted in-flight pilot analysis by examining data entered into the data reporting portal for early identification of any challenges with data collection and reporting.

Privacy of information

Data submitted through the reporting portal was collected at the aggregated service-level, ensuring individual care recipients could not be identified. Confidentiality of services and care recipient data was important to encourage participation and for compliance with privacy of information requirements. Participating services were notified pilot data would be used to inform the PwC consortium's findings, but raw data and subsequent analysis would be de-identified and not be attributable to an individual care recipient or service.

Please refer to Appendix D for an extract of the raw quantitative data received through the data reporting portal.

2.13 Pilot feedback survey submissions

Feedback surveys were made available to all participants in the data reporting portal, encouraging qualitative feedback on the:

- relevance, appropriateness, and usability of the piloted quality indicators
- nature and implications of required data collection
- usefulness of pilot support materials
- usability of the data reporting portal
- QI Program more broadly
- usefulness of the service reports.

The breakdown of qualitative data submissions received is outlined below.

Summary of qualitative pilot data

- 86 services who submitted qualitative data by answering one or more of the pilot feedback surveys.
- The breakdown of the number of responses for each of the individual feedback surveys is outlined below:
    s22
    - Quality of life: 78

    s22

Please refer to Appendix C for screenshots of the pilot feedback surveys

2.14 Service reports

Service reports were made accessible via the data reporting portal on 9 May 2022, accompanied by a user guide to support interpretation of pilot quality indicator data. The format of these reports was intentionally simple, using graphical illustrations where possible, and provided a snapshot of pilot quality indicator results at an individual service and de-identified averages across all pilot participants and service demographic groups. To maintain the confidentiality of pilot participants, filtering by demographic groups could not be applied to a cohort of less than five services.

Services were invited to provide feedback on the usefulness of the service reports by completing a survey in the data reporting portal.

Please refer to Appendix C for screenshots of the service reports.

2.15 Pilot data analysis

During the pilot, feedback was collected from participants on their experience and the extent to which the overarching QI Program objectives and pilot objectives were met.

2.15.1 Quantitative analysis

Participants generated quantitative data through the submission of quality indicator data and through submission of the feedback survey. Quality assurance was undertaken on the raw quantitative data submitted by participants, including:

- identifying transcription errors (e.g. negative numbers, key mis-strokes)
- manually validating unusual or 'suspect' data entries against comments and data submitted in other quality indicators (e.g. significant variation in the number of care recipients assessed between quality indicators)
- identifying reporting errors (e.g. instances where services reported a larger numerator than denominator or a larger number of care recipients assessed for the additional reporting measure)
- identification of any remaining outlier data that was not amended through previous quality assurance processes

verbal confirmation with the service to verify outliers and possible data entry errors, prior to making any adjustments to raw data. Following the quality assurance process, the following analysis was completed for each quality indicator:

- calculation of summary statistics (e.g. pilot averages, median, range, and standard deviations)
- analysis of quality indicator values based on demographics
- graphical representation of relevant data for each quality indicator
- analysis of emerging key insights for each quality indicator.

2.15.2 Qualitative analysis

Qualitative data was primarily gathered through the pilot feedback surveys, with a smaller volume of data generated through the mailbox and telephone hotline support processes. The process for analysing this information included:

- quantification of responses for each binary survey question
- thematic coding of free text responses related to individual quality indicators
- a review of ad hoc feedback received through the hotline and mailbox; cross checked against themes identified in the responses to the pilot feedback surveys

- manual verification with services where further clarity was needed on qualitative data provided
- a selection of illustrative qualitative data for key insights, including identification of quotes from services in free text responses
- an analysis of emerging key insights from the data for each quality indicator.

2.15.3 Synthesis of pilot data

Key insights from quantitative and qualitative data were synthesised for each quality indicator. Discrepancies between insights generated through qualitative and quantitative methods were identified and causes were considered. Where causes could not be verified through other means, limitations or need for further investigation were identified. Triangulated results were categorised against the pilot objectives. The following should be noted when considering the pilot data results:

- the quantitative findings for each quality indicator have been calculated using all data submissions received during the pilot
- variations in the sample composition from demographic targets were considered during analysis, and where variation in performance on a quality indicator by sample demographics was observed, this was identified in analysis and implications were considered (however no statistical weighting was applied)
- the quantitative data was interpreted as an approximation of the range of results that may be received against each quality indicator to indicate whether this has the potential to support the QI Program objectives, namely:
    - enabling services to monitor their performance and engage in continuous quality improvement
    - providing consumers with comparable information about quality in aged care
- quantitative data was analysed alongside the qualitative results to assist in the evaluation of whether each pilot quality indicator may be appropriate for future inclusion in the QI Program.

2.16 Pilot limitations

2.16.1 Participation rates due to the COVID-19 Omicron wave in early 2022

- Participation rates were impacted by the rapid escalation of the COVID-19 Omicron wave in early 2022 and the associated workforce challenges experienced by the aged care sector. A significant proportion of care recipients and staff in residential aged care services were affected by COVID-19, either through illness or quarantine and isolation requirements. This resulted in increased demands on services to manage outbreaks and widespread staff shortages across the sector.

2.16.2 Data collection immaturity

- Data collection immaturity results in limitations in:
    - determining whether variation in quality indicator results is due to actual differences in quality of services, or the influence of contextual information about the service (e.g. case mix, or measurement errors due to lack of familiarity with the quality indicators and data collection requirements).
    - establishing reference ranges for quality indicators or as a baseline to measure continuous improvement or conduct trend analysis.

  - drawing conclusions on the relative performance of services or subpopulations with caution to be exercised when considering the raw differences in values of quality indicators between services and by service demographics.

2.16.3 The constraints of a single six-week pilot

- The pilot construct allowed for only one opportunity for services to collect data against each of the pilot quality indicators (except for activities of daily living which required two assessments for each care recipient). As a result, it was not possible to test if quality indicator results changed when pilot participants became more familiar with the quality indicator specifications and the assessment tools through repeat measurements.
- The quality indicators for pilot were selected with quarterly data collection and reporting in mind, however the data collection requirements were adapted to suit a six-week pilot. This affects the ability to accurately test the frequency of distribution for some quality indicators.

2.16.4 Voluntary pilot participation

- The pilot sought to recruit a diverse sample of services; however, all pilot participants self-nominated. There are inherent limitations in a sample selected on a volunteer basis, known as volunteer bias. It is possible pilot participants represented a cohort of services with organisational characteristics different from the broader cohort of services who chose not to participate.
- Approximately 20 per cent of registered services reported they participated in the 2020 residential aged care quality indicator pilot, reducing any potential bias or over-weighting of services who have previous experience with a pilot.

8

Pilot findings: Quality of life

8.1 Overview of quality of life quality indicator

The Royal Commission into Aged Care Quality and Safety recommended a quality of life assessment tool be implemented in residential aged care to capture the consumer voice. Quality of life refers to a person's perception of their position in life taking into consideration their environment and their goals, expectations, standards, and concerns. It includes their emotional, physical, material, and social wellbeing.

The Quality of Life – Aged Care Consumers (QoL-ACC) tool was codesigned with senior Australians to assess important aspects of quality of life. The QoL-ACC is comprised of six questions focused on six key attributes of quality of life (independence, mobility, pain management, emotional well-being, social relationships, and leisure activities/hobbies).

Table 16 outlines the quality of life quality indicator technical specifications taken to pilot.

Table 16: Quality of life quality indicator overview

 **Percentage of care recipients who report 'good' or 'excellent' quality of life**	**Collection** • One quality of life assessment for each care recipient during the assessment period.
	Quality indicator reporting • Care recipients who reported 'Good' or 'Excellent' quality of life using the Quality of Life – Aged Care Consumers (QoL-ACC).
	Additional reporting • Care recipients assessed for the quality of life quality indicator • Care recipients who reported quality of life through self-completion of the QoL-ACC six question survey: o 'Excellent' (care recipients who score between 22–24) o 'Good' (care recipients who score between 19–21) o 'Moderate' (care recipients who score between 14–18) o 'Poor' (care recipients who score between 8–13) o 'Very poor' (care recipients who score between 0–7). • Care recipients who reported quality of life through interviewer administered of the QoL-ACC six question survey: o 'Excellent' (care recipients who score between 22–24) o 'Good' (care recipients who score between 19–21) o 'Moderate' (care recipients who score between 14–18) o 'Poor' (care recipients who score between 8–13) o 'Very poor' (care recipients who score between 0–7). • Care recipients who reported quality of life through proxy-completion of the QoL-ACC six question survey: o 'Excellent' (care recipients who score between 22–24) o 'Good' (care recipients who score between 19–21) o 'Moderate' (care recipients who score between 14–18) o 'Poor' (care recipients who score between 8–13) o 'Very poor' (care recipients who score between 0–7).

Exclusions

- Care recipients who withheld consent to complete a quality of life assessment during the entire assessment period.
- Care recipients who were absent from the service for the entire assessment period.

8.2 Pilot data analysis (quantitative)

From the 74 data submissions received for the quality of life quality indicator:

Pilot average quality indicator value

- The average reported percentage of care recipients who reported 'good' or 'excellent' quality of life was 71.41 per cent, and the median was 74.33 per cent.

Summary totals

- 2,441 care recipients were assessed for the quality of life quality indicator.
- 1,712 care recipients reported 'good' or 'excellent' quality of life.

Exclusions

- 1,346 care recipients were excluded because they withheld consent to complete a quality of life assessment.
- 41 care recipients were excluded because they were absent from the service.

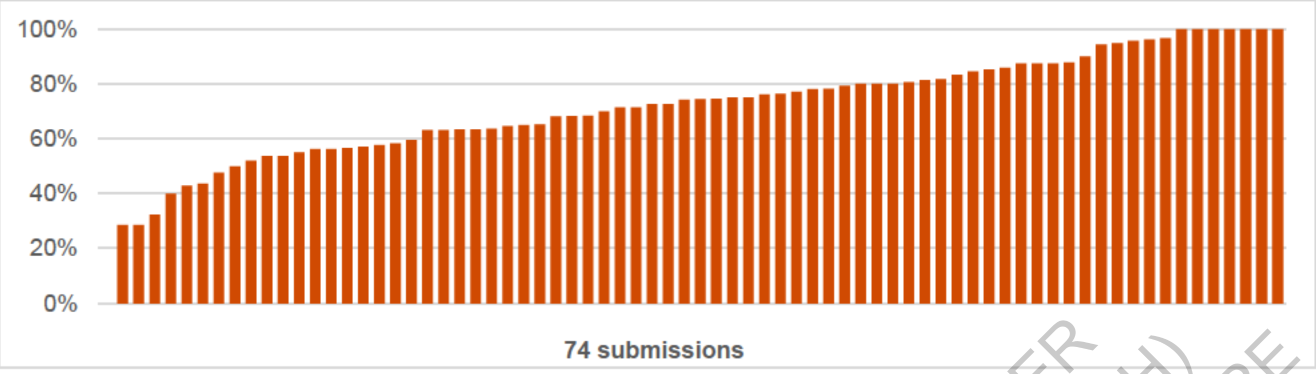
Additional reporting

Method of administration	Scoring category					
	Excellent	Good	Moderate	Poor	Very poor	Total
Self-reported	261	180	101	17	3	562
Interview administered	545	442	357	88	9	1441
Proxy completion	181	103	103	47	4	438

8.2.1 Pilot average and frequency of distribution

Overall, services reported a pilot average of 71.41 per cent of care recipients who reported 'good' or 'excellent' quality of life. Figure 48 shows the range of service responses for care recipients who reported 'good' or 'excellent' quality of life was between 28.57 per cent and 100.00 percent. The majority of service responses were high, with only four services reporting a prevalence of less than 40.00 per cent.

Figure 48 Percentage of care recipients who report ‘good’ or ‘excellent’ quality of life (n=74)



The majority of care recipients reported quality of life through interview completion of the QoL-ACC survey (64.33 per cent). Several services reported due to the short timeframe for completing the quality of life quality indicator, many individuals were unable to complete proxy surveys on time. The low number of proxy completion may explain the large number of care recipients excluded because they (of their proxy) withheld consent to complete a quality of life assessment.

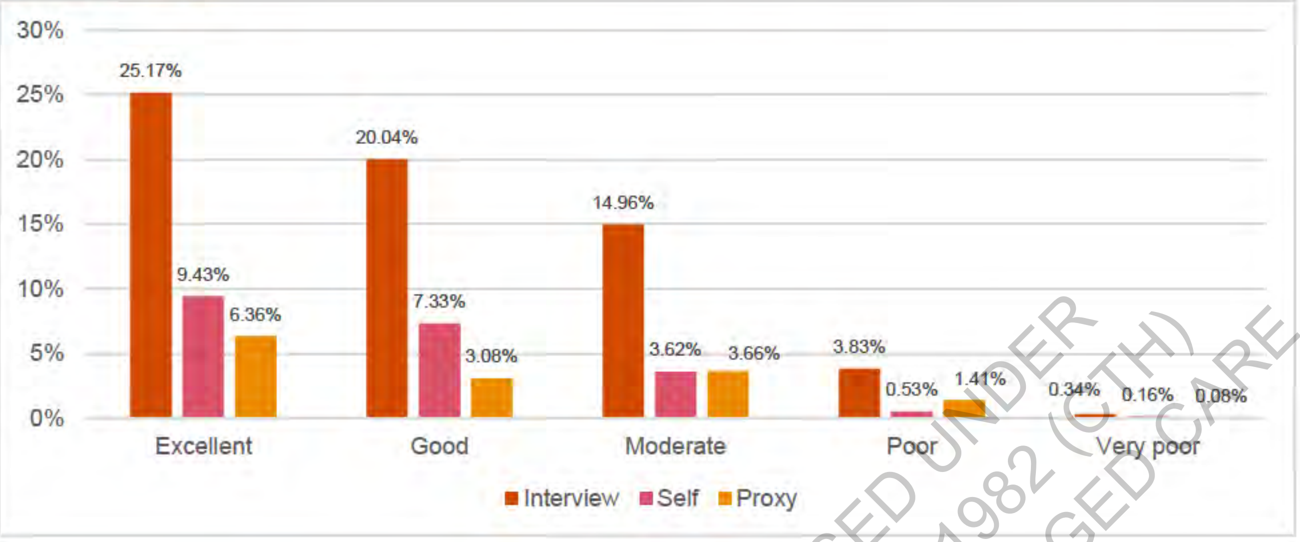
The breakdown of survey responses across the three methods of completion is shown in Table 17.

Table 17: Percentage of care recipients who reported quality of life, reported against three methods of completion (n=74)

	Method of completion
Self-completion	21.07%
Interview administered	64.33%
Proxy-completion	14.59%

On average, 6.34 per cent of care recipients at a service reported a ‘poor’ or ‘very poor’ quality of life while 41.00 per cent of care recipients reported an ’excellent’ quality of life. The breakdown of average scores against the five QoL-ACC scoring categories is shown in Figure 49. These results indicate the percentage of care recipients who reported ‘good’ or ‘excellent’ quality of life was consistently higher for interview administered completion than for self-completion. Similarly, the percentage of care recipients who reported ‘good’ or ‘excellent’ quality of life via proxy completion was typically lower than via self-completion.

Figure 49 Percentage of care recipients who report quality of life against each of the scoring categories and methods of administration (n=74)

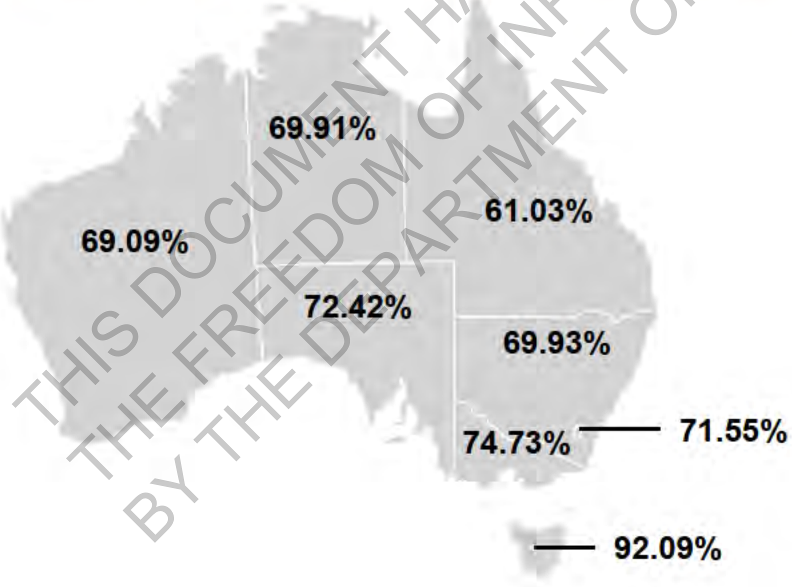


8.2.2 Demographic groups

Service jurisdiction

There was variation in pilot results when comparing results across different jurisdictions (as shown in Figure 50). The percentage of care recipients who report 'good' or 'excellent' quality of life ranged from 61.03 per cent (in Queensland) to 92.09 per cent (in Tasmania).

Figure 50 Percentage of care recipients who report 'good' or 'excellent' quality of life by State and Territory (n=74)



Service geographical classification

Variation was observed across pilot results when comparing services located in different geographical classifications. The percentage of care recipients who report ‘good’ or ‘excellent’ quality of life ranged from 69.38 per cent to 73.60 per cent for metropolitan, rural and remote services (as shown in Figure 51).

Figure 51 Percentage of care recipients who report ‘good’ or ‘excellent’ quality of life by geographical classification (n=74)

69.38% care recipients who report ‘good’ or ‘excellent’ quality of life in **metropolitan services**

72.62% care recipients who report ‘good’ or ‘excellent’ quality of life in **rural services**

73.60% care recipients who report ‘good’ or ‘excellent’ quality of life in **remote services**

Service size

Variation was observed when comparing the reported quality of life quality indicator values with the size of the service – measured by the number of residential aged care places and number of employees (FTE). This is illustrated in Figure 52 and Figure 53 respectively.

Figure 52 Average percentage of care recipients who report ‘good’ or ‘excellent’ quality of life by number of residential aged care places (n=74)

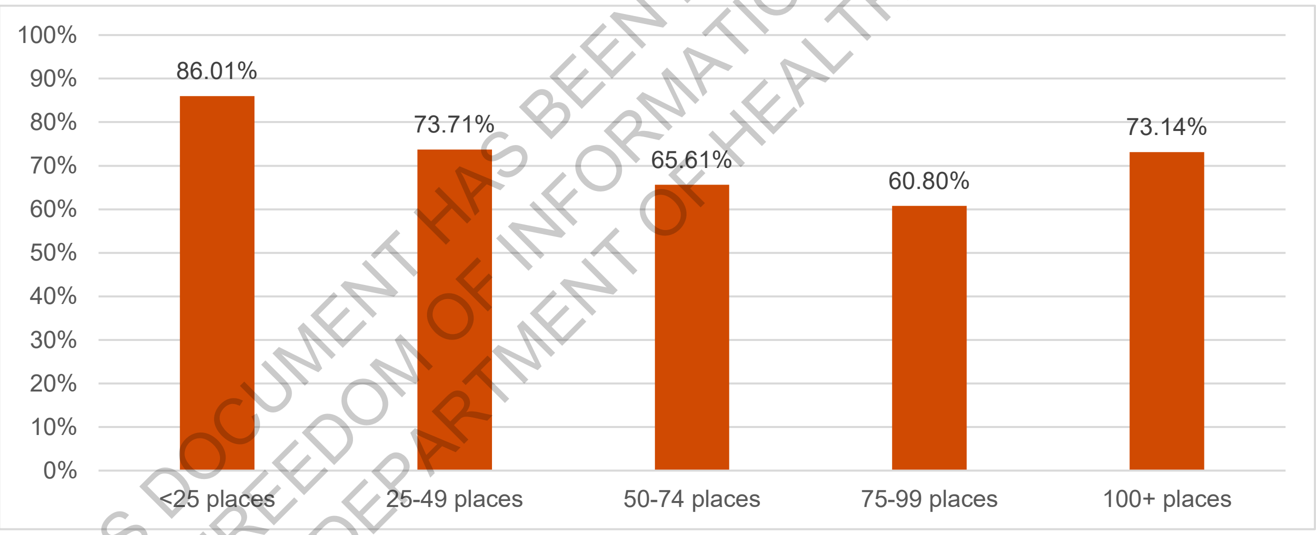
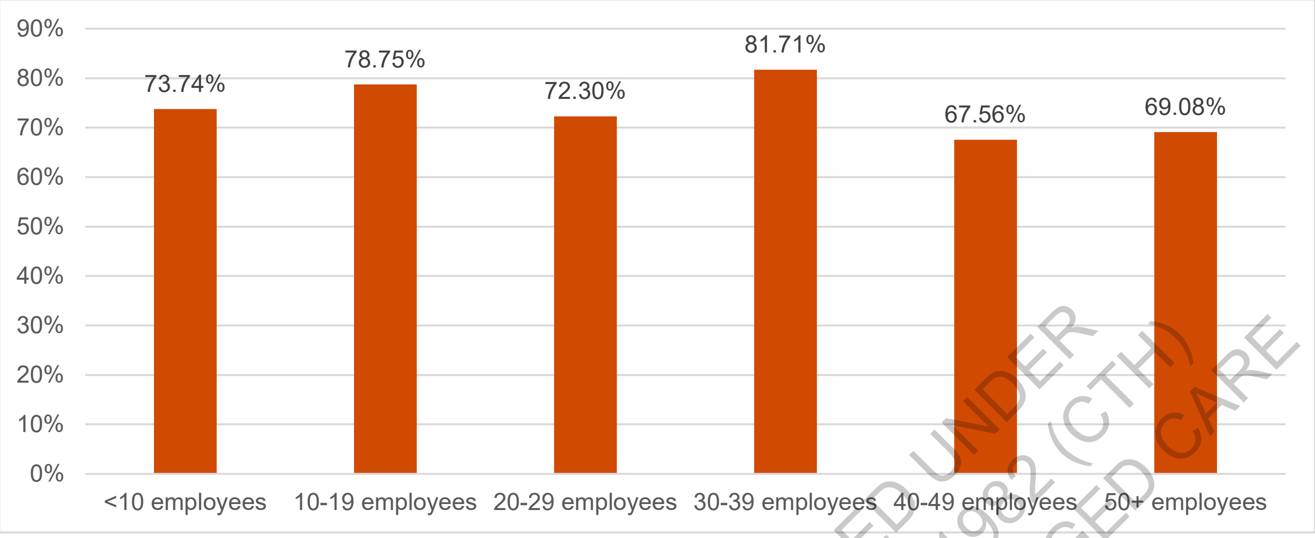


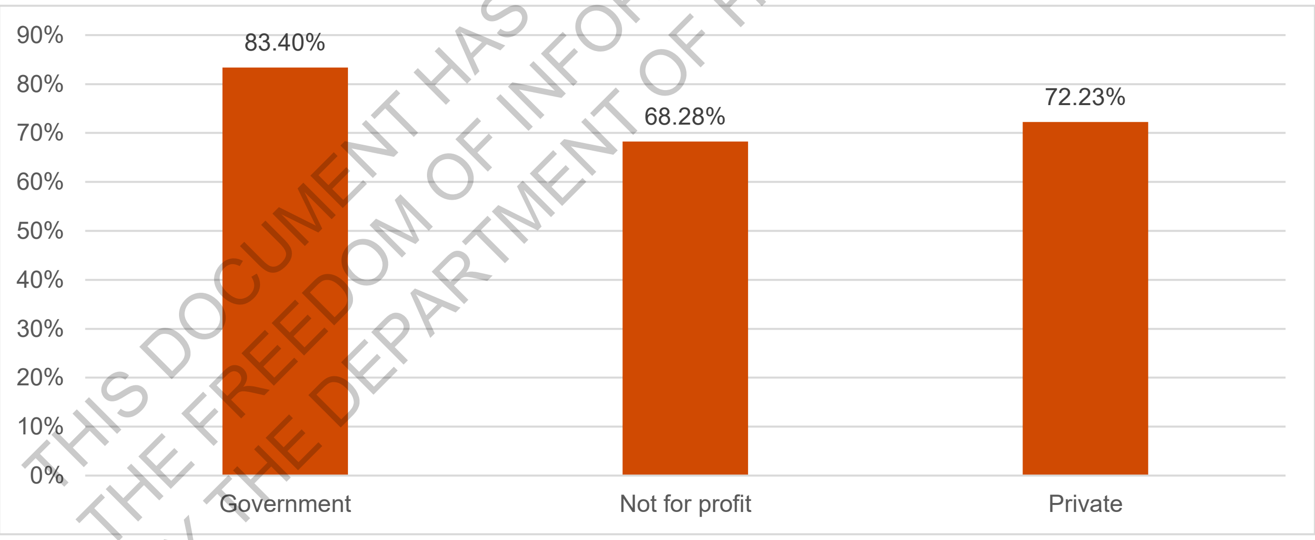
Figure 53 Average percentage of care recipients who report ‘good’ or ‘excellent’ quality of life by number of employees (FTE) (n=74)



Service type

The percentage of care recipients who report ‘good’ or ‘excellent’ quality of life showed slight variance across services types. As shown in Figure 55, the percentage of care recipients who report ‘good’ or ‘excellent’ quality of life in Government services was the largest at 83.40 per cent when compared to other service types which reported values between 72.23 per cent (private services) and 68.28 (not for profit).

Figure 54 Average percentage of care recipients who report ‘good’ or ‘excellent’ quality of life by service type (n=74)



8.3 Pilot data analysis (qualitative)

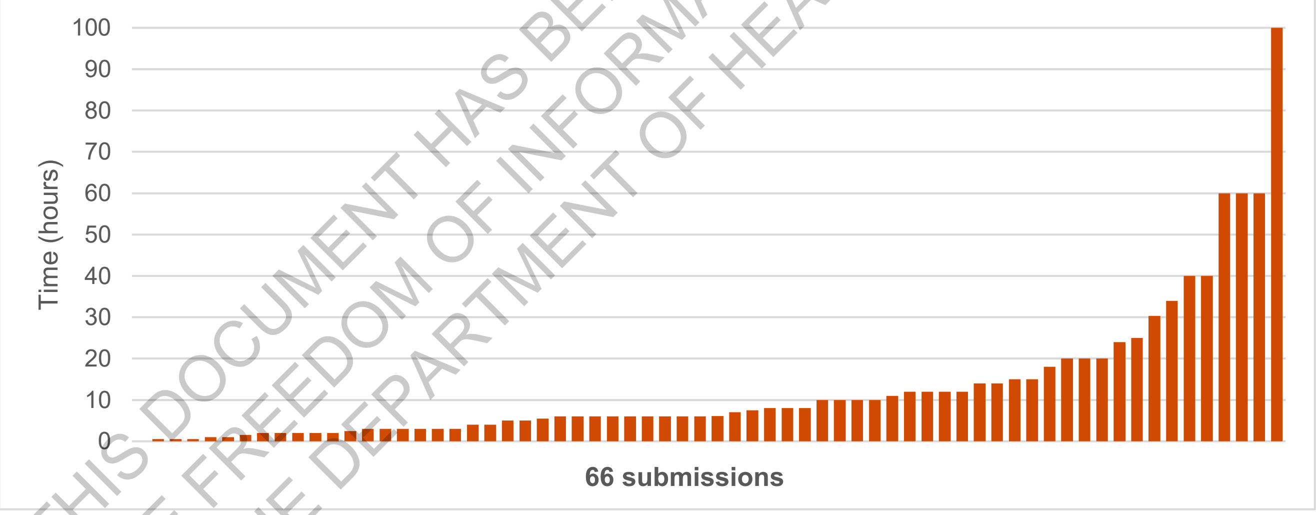
8.3.1 Collection of quality indicator data

- Some services (26 per cent) used multiple roles within their workforce for the collection and reporting of this quality indicator.
- The most common roles for data collation included governance team members (35 per cent), nursing staff (34 per cent), lifestyle and wellbeing staff (26 per cent), and directors/managers (25 per cent). A small number of service

providers used care staff (4 per cent), administration staff (3 per cent) and volunteers (3 per cent). One service provider used an occupational therapist and one used student nurses (supported by nursing staff).

- Reported completion time ranged between 30 minutes to 100 hours (see Figure 55). On average services approximated collection and reporting took 24 minutes per care recipient or 13.1 hours per service, with a median of 6.1 hours. Self-completed surveys on average took less time.
- 92 per cent of services reported the supporting materials for the quality of life quality indicator provided clear instructions for collecting and reporting data.
- 84 per cent of services used the data recording template to support data collection.
- Nearly a quarter of service providers reported they did not believe amendments were required to assist with data collection. The remaining three-quarters suggested enhancements could include:
    - improvements to supporting materials (e.g. score sheets included with interview questions)
    - consideration to a sampling methodology rather than assessing all care recipients
    - a simplified assessment tool with fewer questions for care recipients, incorporated into daily operations
    - distinguishing between consent withheld by the care recipient versus consent withheld by their proxy in the quality indicator specifications
    - three services advocated for additional staff resources to assist with data collection and reporting.

Figure 55 Time taken (hours) to collect and report on the quality of life quality indicator (n = 66)



8.3.2 Feasibility of quality indicator collection and reporting

- 69 per cent of services reported they were collecting and monitoring quality of life data prior to the pilot. Some services noted this meant the collection of data for this quality indicator was duplicative and added additional burden to both staff and care recipients.
- 27 per cent of services reported the data collected for the quality of life quality indicator was available through care records or systems, while 64 per cent noted it was not.
- 71 per cent of services reported the quality of life quality indicator provided meaningful information could inform service-level quality improvement.

- 70 per cent of services reported the quality of life quality indicator provided actionable insights to improve an individual's care. Some services commented it would be difficult to link actionable improvements to the questions in the survey as they were too general in nature.
- 50 per cent of services reported quarterly reporting of this quality of life quality indicator was feasible for their organisation. Others suggested consideration should be given to bi-annual collection rather than quarterly due to the resource demands and willingness of care recipients to complete the survey.
- 49 per cent of services report additional resources and support were required to make quarterly reporting of this quality of life quality indicator feasible.

8.3.3 Quality of life assessment tool

- 87 per cent of service providers reported the QoL-ACC assessment tool was easy to understand and complete:
- Additional feedback from services on the QoL-ACC assessment tool notes:
    - some services suggested the tool was not culturally appropriate for Aboriginal and Torres Strait Islander care recipients (e.g. difficulties gaining proxy feedback from individuals located in regional and remote regions)
    - concerns regarding the subjectivity of proxy completion of the survey
    - the format of the form was not user friendly (e.g. there was no contextual information provided around the purpose of the survey and the font was too small for older people).
- 19 per cent of services reported their service was using the QoL-ACC assessment tool to complete quality of life assessments prior to the pilot. Services who reported they were not using the QoL-ACC assessment tool prior to the pilot said they were using the following tools:
    - Internally developed survey
    - Long-term care quality of life scale (LTC-QoL)
    - Adult Social Care Outcomes Toolkit (ASCOT)
    - Personal Wellbeing Index (PWI) survey.
- 14 per cent of services reported specific training was required to familiarise staff with the QoL-ACC assessment tool.

8.4 Next steps

A post-pilot TEG meeting was held to seek technical expertise in relation to pilot results for each of the quality indicators to support the presentation of findings in the final report.

The following guiding questions were provided to members to support consideration of the pilot quality indicators and their potential inclusion in the QI Program:

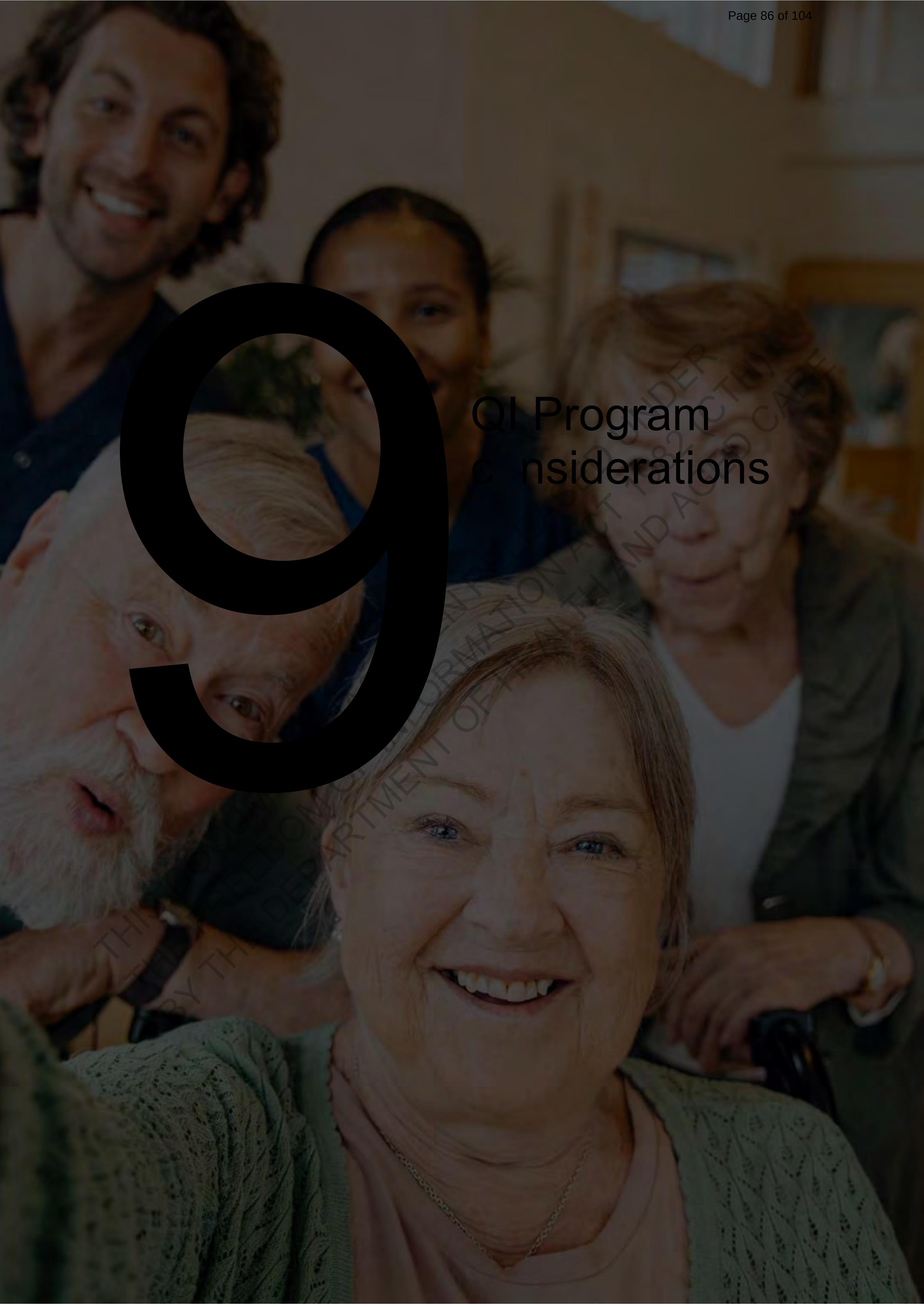
1. Are the pilot results as expected (e.g. considering reported frequency of distribution and variation in results)?
2. Do you think the results support the inclusion of the quality indicator in the QI Program?
3. What, if any, changes should be considered if the quality indicator is to be included in the QI Program?
4. What else is needed to support services with understanding and quality improvement for these quality indicators?

5. Are there any other comments about this quality indicator domain?

The Technical Expert Group was also invited to consider technical questions in relation to quality of life, including:

- Are the scoring brackets correct or should these be adjusted?
- Should all three groups (self, interview and proxy administered) still be collected? If so, is consideration required for adjusting proxy administered scores? Is this better addressed through the methodology?
- What recommendations should be provided for interview administered assessments to decrease collection bias?
- Should quarterly collection remain? Or should bi-annual collection be considered?
- Could implementing a sampling methodology rather than surveying all care support initial implementation? How could collection of a random sample be ensured?
- How can we ensure the quality indicator is relevant for specific cohorts, including culturally diverse groups?
- Should both quality of life and consumer experience quality indicators be considered for implementation?

Findings from the post-pilot Technical Expert Group meeting are summarised in the *Expansion of quality indicators for residential aged care – Technical Expert Group post-pilot summary*.



9

QI Program considerations

s22

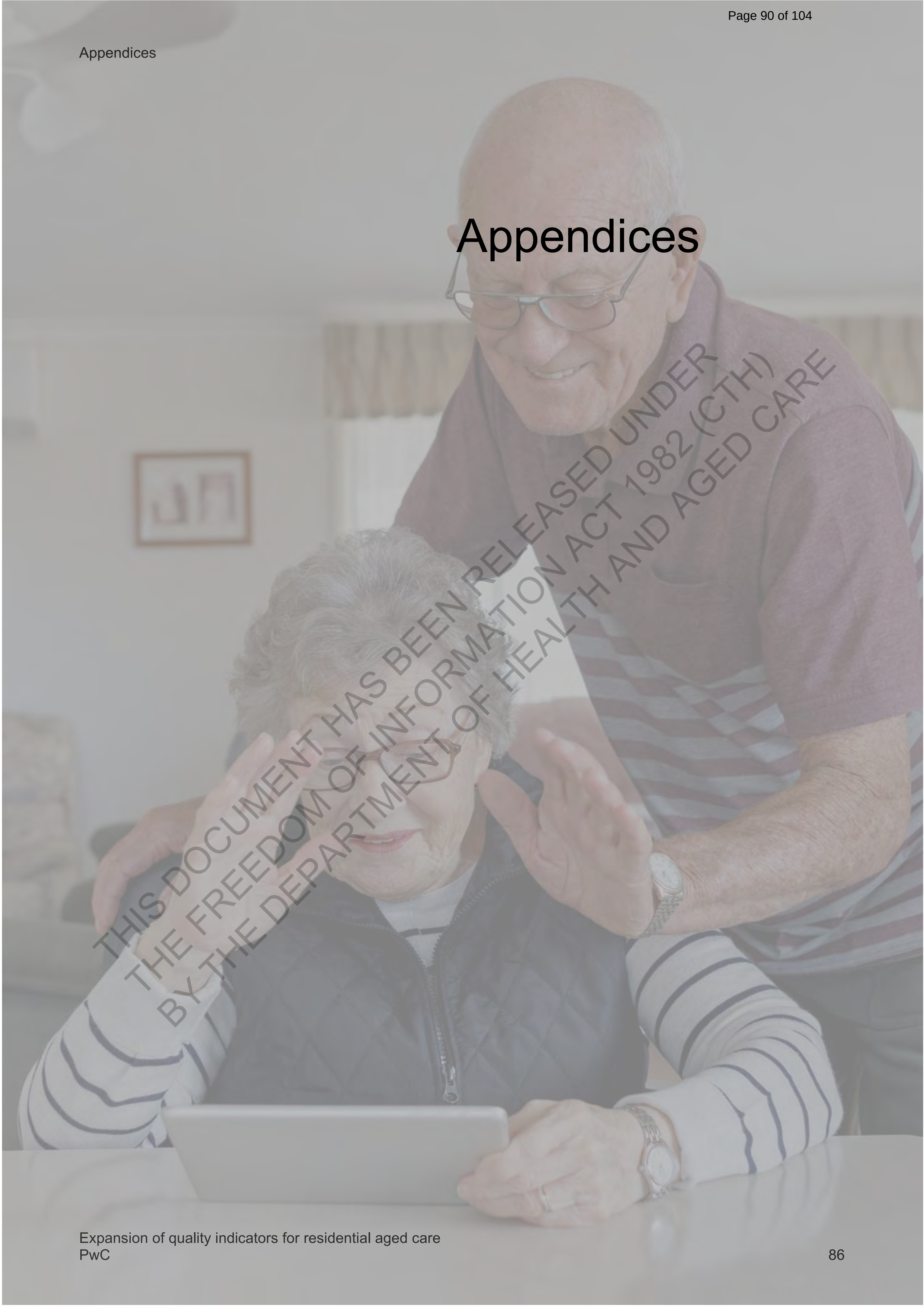
[redacted]

- When asked what additional material could be provided to support quality indicator reporting under the QI Program, services suggested the following:
  s22
  [redacted]
  - further information to provide to proxies to support proxy completion of QCE-ACC and QoL-ACC

s22 [redacted]

- When asked what made the quality indicators difficult to implement, services reported the following:
    - s22 [redacted]
    - the time-consuming nature of some selected assessment tools (e.g. Modified Barthel Index and the QoL-ACC and QCE-ACC)
    - s22 [redacted]
    - care recipients' refusal to participate in some quality indicators (e.g. consumer experience and quality of life).

s22 [redacted]



Appendices

Appendix D: Raw quantitative pilot results

Table 18: Raw quantitative results from 131 pilot submissions

	s22	Quality of life
Services	[redacted]	Percentage of care recipients who report 'good' or 'excellent' quality of life
Service 1	[redacted]	56.25%
Service 2	[redacted]	53.66%
Service 3	[redacted]	28.57%
Service 4	[redacted]	55.00%
Service 5	[redacted]	-
Service 6	[redacted]	53.73%
Service 7	[redacted]	95.65%
Service 8	[redacted]	78.05%
Service 9	[redacted]	65.22%
Service 10	[redacted]	96.67%
Service 11	[redacted]	90.00%
Service 12	[redacted]	0.00%
Service 13	[redacted]	84.62%

s22

Service 14	[redacted]	71.43%
Service 15	[redacted]	100.00%
Service 16	[redacted]	56.25%
Service 17	[redacted]	72.73%
Service 18	[redacted]	68.42%
Service 19	[redacted]	80.00%
Service 20	[redacted]	68.29%
Service 21	[redacted]	28.57%
Service 22	[redacted]	64.71%
Service 23	[redacted]	76.47%
Service 24	[redacted]	100.00%
Service 25	[redacted]	80.00%
Service 26	[redacted]	74.60%
Service 27	[redacted]	63.33%
Service 28	[redacted]	-
Service 29	[redacted]	40.00%
Service 30	[redacted]	100.00%
Service 31	[redacted]	43.75%
Service 32	[redacted]	70.00%
Service 33	[redacted]	87.50%
Service 34	[redacted]	100.00%
Service 35	[redacted]	74.47%
Service 36	[redacted]	68.18%
Service 37	[redacted]	-
Service 38	[redacted]	-

s22

Service 39	[redacted]	80.00%
Service 40	[redacted]	32.43%
Service 41	[redacted]	71.43%
Service 42	[redacted]	85.29%
Service 43	[redacted]	-
Service 44	[redacted]	87.50%
Service 45	[redacted]	72.73%
Service 46	[redacted]	-
Service 47	[redacted]	100.00%
Service 48	[redacted]	63.16%
Service 49	[redacted]	-
Service 50	[redacted]	42.86%
Service 51	[redacted]	94.34%
Service 52	[redacted]	-
Service 53	[redacted]	52.00%
Service 54	[redacted]	-
Service 55	[redacted]	77.14%
Service 56	[redacted]	59.57%
Service 57	[redacted]	-
Service 58	[redacted]	50.00%
Service 59	[redacted]	57.69%
Service 60	[redacted]	-
Service 61	[redacted]	85.92%
Service 62	[redacted]	-
Service 63	[redacted]	-

s22

Service 64	[redacted]	83.33%
Service 65	[redacted]	-
Service 66	[redacted]	56.67%
Service 67	[redacted]	80.65%
Service 68	[redacted]	75.00%
Service 69	[redacted]	87.50%
Service 70	[redacted]	100.00%
Service 71	[redacted]	63.33%
Service 72	[redacted]	78.13%
Service 73	[redacted]	-
Service 74	[redacted]	-
Service 75	[redacted]	76.19%
Service 76	[redacted]	-
Service 77	[redacted]	-
Service 78	[redacted]	65.00%
Service 79	[redacted]	-
Service 80	[redacted]	58.33%
Service 81	[redacted]	87.88%
Service 82	[redacted]	94.87%
Service 83	[redacted]	-
Service 84	[redacted]	-
Service 85	[redacted]	96.25%
Service 86	[redacted]	-
Service 87	[redacted]	-
Service 88	[redacted]	63.64%

s22

Service 89	[redacted]	-
Service 90	[redacted]	47.62%
Service 91	[redacted]	81.82%
Service 92	[redacted]	63.20%
Service 93	[redacted]	79.31%
Service 94	[redacted]	-
Service 95	[redacted]	75.00%
Service 96	[redacted]	100.00%
Service 97	[redacted]	-
Service 98	[redacted]	-
Service 99	[redacted]	81.40%
Service 100	[redacted]	-
Service 101	[redacted]	-
Service 102	[redacted]	-
Service 103	[redacted]	-
Service 104	[redacted]	-
Service 105	[redacted]	-
Service 106	[redacted]	-
Service 107	[redacted]	-
Service 108	[redacted]	-
Service 109	[redacted]	57.14%
Service 110	[redacted]	-
Service 111	[redacted]	-
Service 112	[redacted]	74.19%
Service 113	[redacted]	-

s22

Service 114	[redacted]	-
Service 115	[redacted]	-
Service 116	[redacted]	-
Service 117	[redacted]	-
Service 118	[redacted]	-
Service 119	[redacted]	-
Service 120	[redacted]	-
Service 121	[redacted]	-
Service 122	[redacted]	-
Service 123	[redacted]	-
Service 124	[redacted]	-
Service 125	[redacted]	-
Service 126	[redacted]	-
Service 127	[redacted]	-
Service 128	[redacted]	-
Service 129	[redacted]	-
Service 130	[redacted]	-
Service 131	[redacted]	-
Mean	[redacted]	**71.41%**
Median	[redacted]	**74.33%**
Standard deviation	[redacted]	**19.78%**

www.pwc.com.au

www.pwc.com.au

Expansion of quality indicators for residential aged care

Technical Expert Group post-pilot meeting

20 May 2022

pwc

ROSA

The University Of Queensland
AUSTRALIA

Contents

Meeting purpose and structure

Meeting purpose

The purpose of the Technical Expert Group (TEG) meeting is to share consolidated results from the pilot, focus on outstanding issues, and seek feedback on the technical aspects of potential quality indicators to be considered for implementation in the QI Program.

Meeting structure

The detailed information and analysis from the pilot, contained within this briefing paper, will be used to support a discussion. The meeting will cover project context first, followed by a deep dive into each of the piloted quality of care domains. Within each domain the following three criteria and actions will be covered:

1. **Quantitative findings:** An overview of the quantitative analysis of the data submitted by pilot participants.
2. **Qualitative findings:** An overview of the qualitative analysis from pilot feedback survey submissions and direct feedback from conversations with services through the pilot support functions (hotline and mailbox).
3. **Questions for discussion:** Key questions for TEG consideration and advice.

Decisions made earlier in the project will not be revisited with discussion focusing on pilot results and consideration of the quantitative and qualitative findings relating to the QI Program more broadly.

A detailed meeting agenda is available in Appendix A and a list of TEG members in Appendix B. A copy of the Pilot handbook was provided separately to support the findings and analysis included in this briefing paper, please note this is not required reading. If you require any further information in advance of the meeting on the 20 May 2022, please email s47F

1

Context setting

Project update

Key activities since the pre-pilot Technical Expert Group meeting

Following the pre-pilot TEG meeting on 24 January 2022, a rapid review of quality indicator specifications was undertaken by the consortium. The review provided additional information to further refine the potential quality indicators and support the Department's selection of measures to take to pilot. The review considered the each of the potential quality indicators with respect to:

- relevance to best clinical practice
- likely psychometric properties (face validity, reliability, responsiveness to change, ability of services to influence results)
- feasibility of implementation (availability of existing measures, data collection burden).

Following the review, the following evidence informed quality indicators were selected for pilot:

Pilot quality indicators

Domain	Pilot quality indicators
s22 [redacted]	[redacted]
Quality of life	Percentage of care recipients who report 'good' or 'excellent' quality of life

Pilot approach

A **six-week pilot was held between** 21 March to 29 April 2022, with a total of **131 services** submitting pilot data. To support pilot analysis:

- Quantitative data was **aggregated** to calculate the results across all participants, as well as disaggregated results by demographic groups (e.g. service location and size).
- A **pilot feedback survey** was available to services throughout the pilot to encourage service feedback on the pilot quality indicators.
- Services were provided with **service reports**, summarising individual quality indicator results, allowing comparison of results across pilot averages and by demographic groups.

A figure outlining the detailed activities by phase in the pilot is available in Appendix C.

Pilot limitations

- **The COVID-19 Omicron wave** in early 2022 impacted participation rates given the associated workforce challenges experienced by the aged care sector.
- **Data collection immaturity** results in limitations in:
    - determining whether variation in quality indicator results is due to actual differences in quality of services, or the influence of contextual information about the service (e.g. case mix, measurement errors due to lack of familiarity with the quality indicators and data collection requirements).
    - establishing reference ranges for quality indicators or baseline to measure continuous improvement or conduct trend analysis.
- **Constraints of a six-week pilot** meant it was not possible to test whether results changed when pilot participants became more familiar with the quality indicator specifications and the assessment tools through repeat measurements.
- **Voluntary pilot participation** may result in a cohort of services with organisational characteristics that are different from the broader cohort of services who chose not to participate. For example, the pilot sample may have a bias towards higher performing or larger, well-resourced services with the capacity better absorb workforce shortages.

Pilot objectives and approach

Pilot objectives

The key objectives of the pilot were to examine the:

- relevance, appropriateness, and usability of the piloted quality indicators for the purposes of the QI Program
- feasibility of data capture and collection processes, including implications for residential aged care services
- accessibility and utility of the support materials, including opportunities for enhancement
- data collection preferences
- enablers for implementation and lessons for consideration in the further expansion of the QI Program.

An additional pilot objective related to user experience (Ux) testing to inform the IT build for data submission in the My Aged Care Provider Portal environment.

Pilot data analysis approach

Quantitative analysis

Quality assurance was undertaken on the raw quantitative data submitted by participants, including:

- identifying transcription errors (e.g. negative numbers, key mistakes)
- manually validating unusual or ‘suspect’ data entries against comments and data submitted in other quality indicators (e.g. significant variation in the number of care recipients assessed between quality indicators)
- identifying reporting errors (e.g. instances where services reported a larger numerator than denominator or a larger number of care recipients assessed for the additional reporting measure)
- identification of any remaining outlier data that was not amended through previous quality assurance processes

Pilot data analysis approach (continued)

- verbal confirmation with the service to verify outliers and possible data entry errors, prior to making adjustments to raw data.

The following analysis was completed for each quality indicator:

- calculation of summary statistics (e.g. pilot averages, median, range, and standard deviations)
- analysis of quality indicator data based on participant demographics
- graphical representation of relevant data for each quality indicator
- analysis of emerging key insights for each quality indicator.

Qualitative analysis

Qualitative data was primarily gathered through the pilot feedback surveys, with the following analysis undertaken:

- quantification of responses for each binary survey question
- thematic coding of free text responses related to individual quality indicators
- a review of ad hoc feedback received through the hotline and mailbox; cross checked against themes identified in the pilot feedback surveys
- manual verification with services where further clarity was needed on qualitative data provided
- a selection of illustrative qualitative data for key insights, including identification of quotes from services in free text responses
- an analysis of emerging key insights from the data for each quality indicator.

Synthesis of pilot data and insights

Key insights from quantitative and qualitative data were analysed for each quality indicator and results categorised against the objectives of the pilot.

Pilot participants

Pilot sampling

- The sample was a self-selected convenience sample of Australian residential aged care services.
- Interested services completed a set of profile questions for the purposes of demographic analysis during pilot recruitment.
- Regular monitoring of pilot registrations guided targeted recruitment, with the objective of achieving participation from a diverse range of services, such that aggregate results could be considered nationally representative and inferences could be made with confidence in relation to the national population of providers.
- The final pilot sample size (131 services) was lower than originally anticipated (165 services). Over the six weeks, 54 services withdrew from the pilot and did not engage with the data reporting portal or respond to follow up phone calls and emails. The overwhelming majority of services reported the key reason for withdrawal as challenges associated with the COVID-19 Omicron outbreak, including impacts of staff (workforce shortages) and care recipients.
- The final sample can be considered broadly representative of services across Australia, with participation across all state and territories, and geographic classifications (metropolitan, rural and remote). A breakdown of participant demographics compared to the national breakdown is shown in Appendix D.

Location of participants (n = 131)

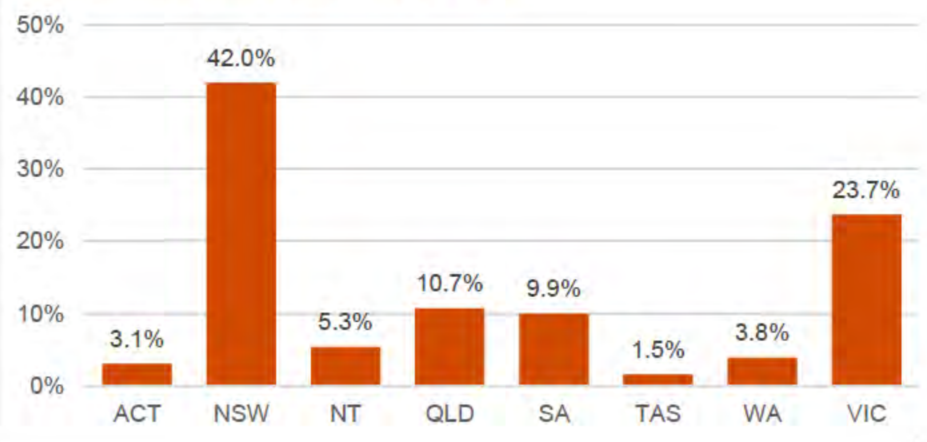
Overview of pilot participation

Number of pilot expression of interests received	#
Number of services who registered for the pilot	185
Number of formal withdrawals	28
Number of inactive services	26
Number of complete data submissions (all domains)	76
Number of partial data submissions (some domains)	55
Number of pilot feedback surveys submitted	85

Data submissions for each quality indicator

Quality indicator	Submissions
s22 [redacted]	
Quality of life	74

Participants by State and Territory (n = 131)

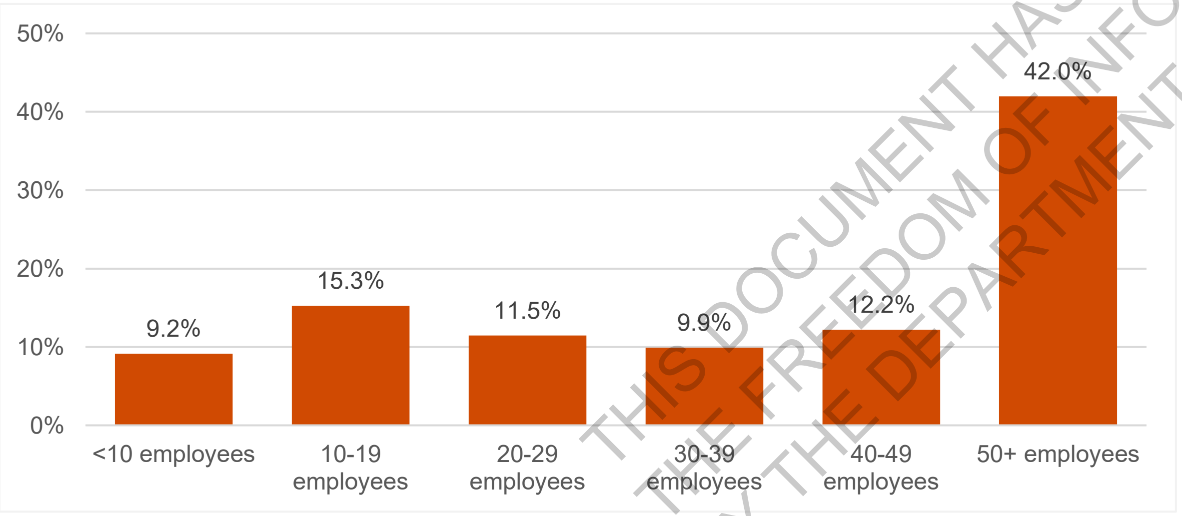


Pilot participants

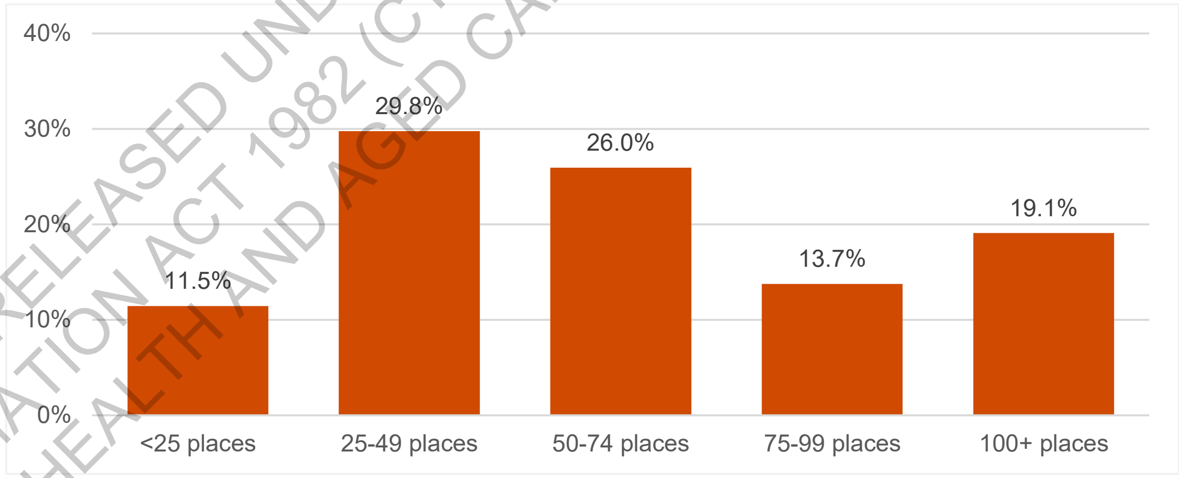
Pilot sampling (continued)

- At least one residential aged care service from each state and territory participated in the pilot.
- The target number of services for remote population was exceeded by 4 per cent. The participation target for the remote population reflects the geographic spread and population density in Australia.
- The participation of private residential aged care providers was 24 per cent lower than the target percentage.
- Services were broadly diverse in size, measured by the number of residential aged care places and the number of employees (FTE).

Participants by number of employees (FTE) (n=131)



Participants by number of residential aged care places (beds) (n = 131)



Service geographic classification (n = 131)

- **50.4 per cent** of pilot participants were **metropolitan services**
- **43.5 per cent** of pilot participants were **rural services**
- **6.1 per cent** of pilot participants were **remote services**

Service type (n = 131)

- **9.9 per cent** of pilot participants were **private services**
- **78.6 per cent** of pilot participants were **not-for-profit services**
- **11.5 per cent** of pilot participants were **government services**

7

Quality of life

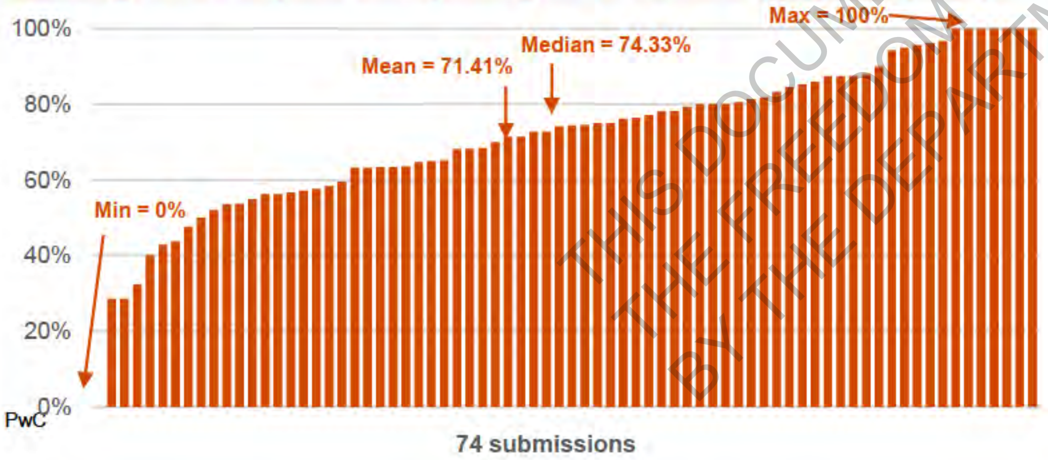
Quality of life – Quantitative findings (1 of 2)

Pilot quality indicator: Percentage of care recipients who report 'good' or 'excellent' quality of life

Key findings from the pilot data

Quality indicator measure	Average
Percentage of care recipients who report 'good' or 'excellent' quality of life.	71.41%
Additional reporting measure (across all three modes of administration)	**Average**
Percentage of care recipients who report 'excellent' quality of life.	40.96%
Percentage of care recipients who report 'good' quality of life.	30.45%
Percentage of care recipients who report 'moderate' quality of life.	22.24%
Percentage of care recipients who report 'poor' quality of life.	5.77%
Percentage of care recipients who report 'very poor' quality of life.	0.57%

Percentage of care recipients who reported 'good' or 'excellent' quality of life (n = 74)



Quality indicator results

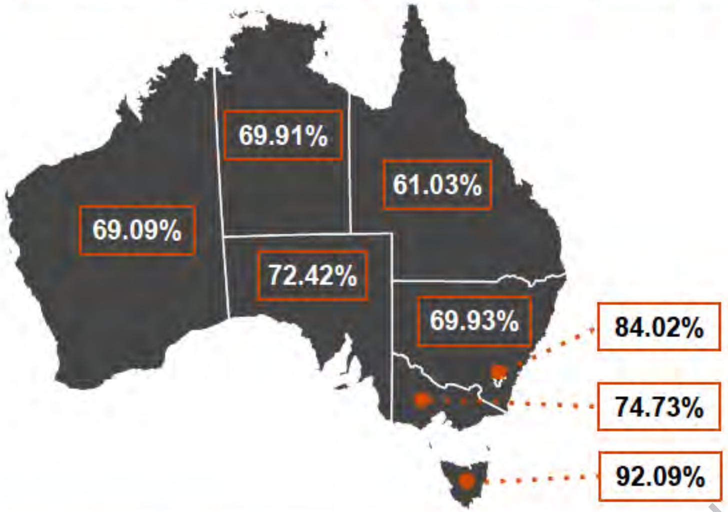
- 74 services submitted quantitative pilot data for the quality of life quality indicator.
- 2,441 care recipients were assessed for the quality of life quality indicator.
- Of all care recipients assessed, 71.41 per cent reported 'good' or 'excellent' quality of life.
- The range of service responses for care recipients who reported 'good' or 'excellent' quality of life was between 0 per cent and 100 per cent.
- The prevalence of care recipients reporting 'good' or 'excellent' quality of life was broadly similar across pilot participants when comparing geographic classifications, services types and size.
- The percentage of care recipients who reported 'excellent' quality of life was 9.43 per cent for self-completion, 25.17 per cent for interview administered and 6.36 per cent for proxy-completion.
- The percentage of care recipients who reported 'good' quality of life was 20.04 per cent for self-completed, 16.57 per cent for proxy-completion, and 3.08 per cent for interview administered.
- Based on pilot results, the quality of life quality indicator has a higher than expected prevalence with only 5 services reporting a prevalence of less than 40.00 per cent. It is unclear if this quality indicator has the potential to produce data to allow services to monitor performance and support continuous quality improvement over the long term.

Additional reporting measures

- Of all care recipients assessed:
  - 21.07 per cent reported their quality of life through self-completion
  - 64.33 per cent reported their quality of life through interview
  - 14.59 per cent reported their quality of life via a proxy.
- Of all care recipients assessed:
  - 22.24 per cent reported 'moderate' quality of life
  - 5.77 per cent reported 'poor' quality of life
  - 0.57 per cent reported 'very poor' quality of life

Quality of life – Quantitative findings (2 of 2)

Average percentage of care recipients who reported 'good' or 'excellent' quality of life (n=74)



Service geographic classification (n = 74)

On average:

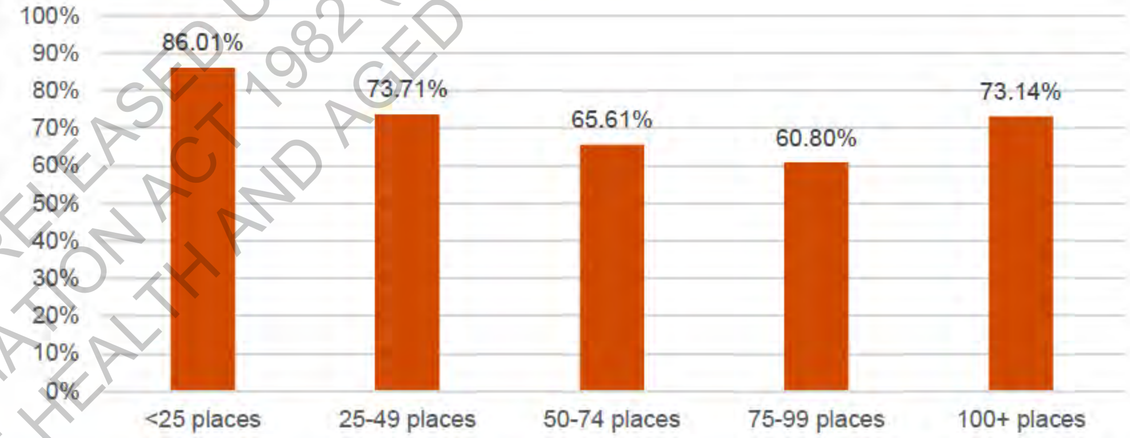
- **69.38 per cent** of care recipients reported 'good' or 'excellent' quality of life in **metropolitan services**
- **72.62 per cent** of care recipients reported 'good' or 'excellent' quality of life in **rural services**
- **73.60 per cent** of care recipients reported 'good' or 'excellent' quality of life in **remote services**

Service type (n = 74)

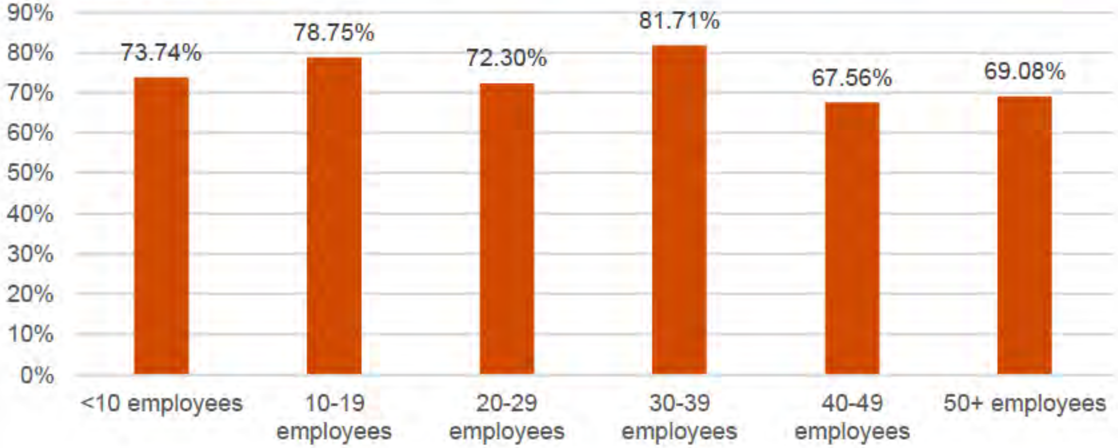
On average:

- **72.23 per cent** of care recipients reported 'good' or 'excellent' quality of life in **private services**
- **68.28 per cent** of care recipients reported 'good' or 'excellent' quality of life in **not-for-profit services**
- **83.40 per cent** of care recipients reported 'good' or 'excellent' quality of life in **government services**

Average percentage of care recipients who reported 'good' or 'excellent' quality of life by number of residential aged care places (n=74)



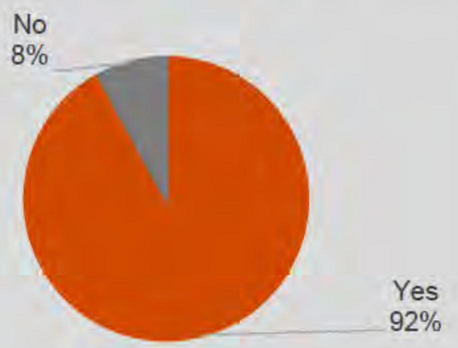
Average percentage of care recipients who reported 'good' or 'excellent' quality of life by number of employees (FTE) (n=74)



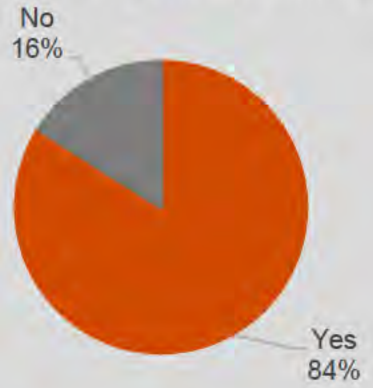
Quality of life – Qualitative findings (1 of 3)

1. Collection	n	Key findings from pilot participant feedback
Who was primarily responsible for collecting and reporting data on this quality indicator (e.g. facility manager, nurse, care assistant, admin)?	68	• Some service providers (26 per cent) used multiple roles within their workforce for the collection and reporting of this quality indicator. • The most commonly roles included governance team members (35 per cent), nursing staff (34 per cent), lifestyle and wellbeing staff (26 per cent), and directors/managers (25 per cent). • A small number of service providers used care staff (4 per cent), administration staff (3 per cent) and volunteers (3 per cent). • One service provider used an occupational therapist and one used student nurses (supported by nursing staff).
Approximately how many hours (e.g. nurse time, administration time) did your service require to collect and report data for this quality indicator?	66	• Reported completion time ranged between 30 minutes to 100 hours. • On average services approximated collection and reporting took 24 minutes per care recipient and 13.1 hours per service each quarter, with a median of 6.1 hours. • Self-completed surveys on average took less time.
What would make data collection for this quality indicator easier?	31	• Nearly a quarter of service providers reported they did not believe amendments were required to assist with data collection. • The remaining three-quarters suggested enhancements could including: o improvements to supporting materials (e.g. score sheets included with interview questions) o consideration to a sampling methodology rather than current approach to assess all current residents o three service providers advocated for additional staff resources to assist with data collection and reporting.

Do the supporting materials provide clear instructions for collecting and reporting data on this quality indicator? (n=77)



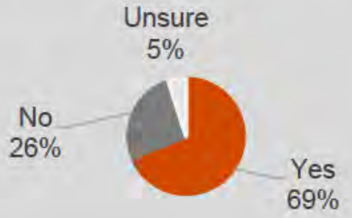
Did you use the data recording template? (n=77)



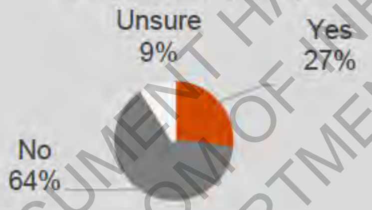
Quality of life – Qualitative findings (2 of 3)

2. Feasibility	n	Key findings from pilot participant feedback
Do you have any other comments on this quality indicator:	27	• Concerns were raised regarding the subjectivity of quality of life and proxy completion. • Service providers (22 percent) already collect consumer feedback data and considered the collection of this measure to be duplicative and an additional burden to both resources and care recipients. • Consideration should be given to bi-annual collection rather than quarterly due to resource demands and care recipient willingness to complete. • Some service providers were uncertain how monitoring this quality indicator could be used to drive quality improvement. • QOL-ACC assessment tool: o was not culturally appropriate for Aboriginal and Torres Strait Islanders (ATSI) care recipients (e.g. difficulties gaining proxy feedback from individuals located in regional and remote regions) o actionable improvements could not be linked to questions as they were too general in nature o format of the form is not user friendly (e.g. font was too small and does not provide any context as to the purpose of the survey). • It would be helpful to distinguish between consent withheld by the care recipient versus consent withheld by their proxy.

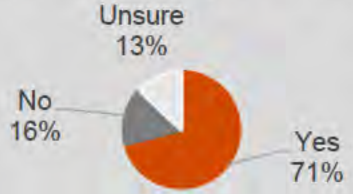
Was your service collecting and monitoring this data prior to the pilot? (n=77)



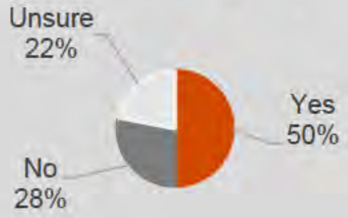
Was the data collected on this quality indicator available through care records or systems? (n=77)



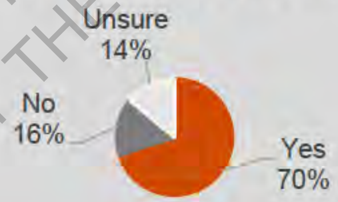
Did this quality indicator provide meaningful information that could inform service-level quality improvement? (n=76)



Would quarterly reporting of this quality indicator be feasible for your organisation? (n=76)



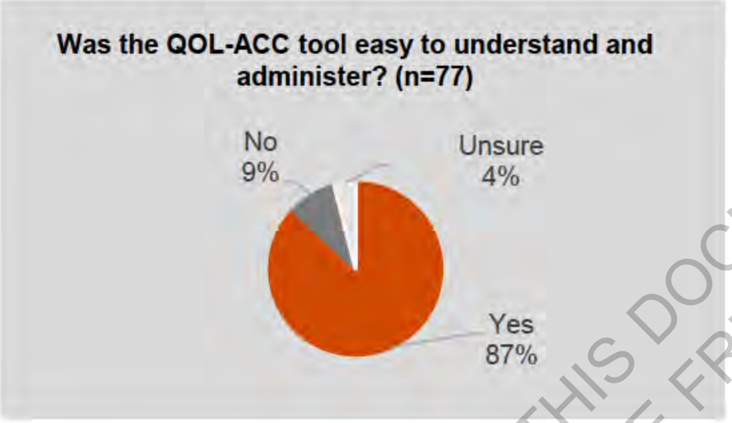
Did this quality indicator provide actionable insights that could be used to improve an individual's care? (n=76)

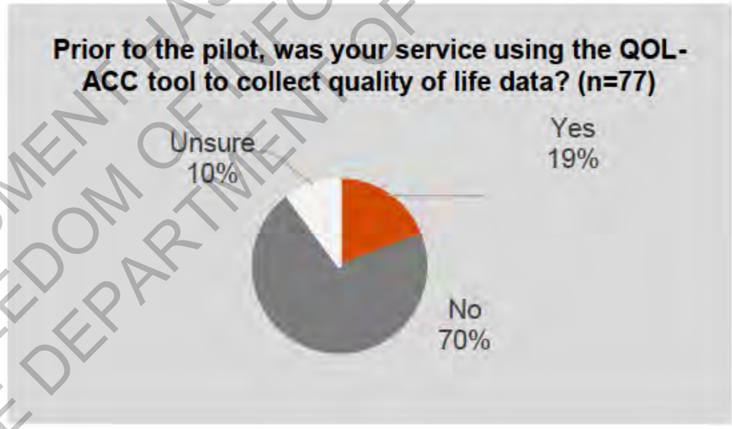


Would additional resources and support be required to make quarterly reporting of this quality indicator feasible? (n=76)

Quality of life– Qualitative findings (3 of 3)

3. QoO-ACC tool	n	Key findings from pilot participant feedback
What was your experience with the QOL-ACC assessment tool?	77	• 87 per cent of all service providers reported the QOL-ACC assessment tool was easy to understand and complete.
	77	• Few services (19 per cent) reported their service was using the QOL-ACC assessment tool to complete consumer experience assessments prior to the pilot. • Some services who reported they were not using the QOL-ACC assessment tool prior to the pilot reported they were using the following tools: o Internally developed survey o Long-term care quality of life scale (LTC-QoL) o Adult Social Care Outcomes Toolkit (ASCOT) o Personal Wellbeing Index (PWI) survey
	77	• Only 14 per cent of services reported specific training was required to familiarise staff with the QOL-ACC assessment tool.


Was the QOL-ACC tool easy to understand and administer? (n=77)


Prior to the pilot, was your service using the QOL-ACC tool to collect quality of life data? (n=77)


Was specific training required to familiarise staff with the QOL-ACC assessment tool? (n=77)

Quality of life

Key considerations for the TEG

- **Are the scoring brackets correct or should these be adjusted?**
- **Should all three groups (self, interview and proxy administered) still be collected? If so, is consideration required for adjusting proxy administered scores? Is this better addressed through the methodology?**
- **What recommendations should be provided for interview administered assessments to decrease collection bias?**
- **Should quarterly collection remain? Or should bi-annual collection be considered?**
- **Could implementing a sampling methodology rather than surveying all care support initial implementation? How could collection of a random sample be ensured?**
- **How can we ensure the quality indicator is relevant for specific cohorts, including culturally diverse groups?**
- **Should both consumer experience and quality of life quality indicators be considered for implementation?**

Questions for discussion

1. ***Are the pilot results as expected (e.g. considering reported frequency of distribution and variation in results)?***
2. ***Do you think the results support the inclusion of the quality indicator in the QI Program?***
3. ***What, if any, changes should be considered if the quality indicator is to be included in the QI Program?***
4. ***What else is needed to support services with understanding and quality improvement for these quality indicators?***
5. ***Are there any other comments about this quality indicator domain?***

8

Appendices

Appendix C: Pilot approach

	20 Sept – 24 Dec	24 Jan – 18 Mar	21 Mar – 29 Apr	21 Mar – 11 May	12 May - 10 Jun
Stages	**1. Pilot promotion and recruitment**	**2. Development of materials to support the pilot and onboarding of participants**	**3. Pilot launch and data collection**	**4. Feedback on pilot from participants**	**5. Post pilot activities**
Key activities	The pilot was **promoted** via the PwC website, Department's BIDS notices and newsletter, and available channels A stratification approach was taken to **recruitment**, with a goal of recruiting a nationally representative sample of at least 165 residential aged care services	**Support materials** were developed to assist participants throughout the pilot Designed, tested and built the **data collection platform** Participants were **onboarded** via a webinar where an overview of the pilot objectives and a timeline of activities was provided	The pilot was **launched** on 21 March 2022 Throughout the pilot **ongoing support** was provided via a centrally monitored email and hotline **Clinical enquiries** were escalated according to the Department Pilot data was uploaded and submitted by participants using **Data Kit** Ongoing **in-flight analysis** of the subpopulations was conducted	**Ongoing and ad hoc feedback** was obtained from participants via the centrally monitored email and hotline **Formal feedback** was requested through the Pilot Feedback Survey, using Data Kit Three **user experience (UX) focus group sessions** with sector participants were held between 9 – 11 May to discuss UX needs and recommendations (beyond survey response results)	The pilot was **completed** on 29 April A **TEG meeting** will be held to brief the group on the results and seek feedback and validation on early findings against the objectives A **post-pilot workshop** will be held with the Department to share, test and validate the analysis, outcomes and findings, as well as explore emerging themes Initial findings from the pilot as well as feedback and outcomes from post-pilot consultations were synthesised and will be provided to the Department in the **post-pilot analysis report** Services that participated in the pilot were provided with service **reports**, to view their results and compare their data with other pilot participants
Deliverables	• Promotional materials/comms • Set up PwC website	• Hotline number and email • Pilot handbook • Frequently Asked Questions • Data Collection Templates • Training materials • Onboarding webinar • Data Kit	• In flight analysis update during weekly status meeting	• Post pilot feedback survey questions • UX focus group sessions • UX summary report	• Post pilot feedback • Post-pilot consultation summary report • Draft and final post-pilot analysis report • Service reports

Appendix D: Service demographics (1 of 2)

Pilot sampling

The eligible cohort for the pilot was all services in Australia that provide residential aged care services. The target pilot recruitment sample was comprised of 165 services, reflecting approximately 4-6 per cent of the approx. 2,700 residential aged care services nationally. Targets for demographic characteristics of the 165 services were set with the aim of recruiting services that could be considered broadly reflective of the characteristics of the total service population across Australia. This enabled findings from the pilot to be abstracted more appropriately to the total sample of services in Australia, including those with diverse characteristics.

The selected sampling frame was based on targets informed by the national distribution of service demographic groups, derived using Australian Institute of Health and Welfare GEN Aged Care Data (*Aged care service list*). These targets included geographic classification (e.g. metropolitan, rural or remote), location (e.g. New South Wales, Victoria, Tasmania), provider size (e.g. number of places, number of employees), service type and structure (e.g. not for profit, private, government based).

Pilot participants by location

States & Territories	QLD	NSW	ACT	VIC	TAS	SA	NT	WA	Total
Total registrants	18	71	4	43	7	23	8	11	185
Total submissions	14	55	4	31	2	13	7	5	131
Submissions as percentage of total sample	11%	42%	3%	24%	2%	10%	5%	4%	100%
Sampling frame target percentage	17%	32%	1%	28%	3%	9%	1%	9%	100%
Population distribution (approx.)	459	864	27	756	81	243	27	243	2700
Submissions as a percentage of the population	3%	6%	15%	4%	3%	5%	3%	2%	5%

Pilot participants by geographic classification

Geographical classification	Metropolitan	Rural	Remote	Total
Total registrants	97	77	11	185
Total submissions	66	57	8	131
Submissions as percentage of total sample	50%	44%	6%	100
Sampling frame target percentage	63%	36%	2%	101%*
Population distribution (approx.)	1,701	972	54	2,727*
Submissions as a percentage of the population	4%	6%	15%	5%

** NOTE: due to rounding, some figures do not add up to 100% and total population does not add to 2,700*

Appendix D: Service demographics (2 of 2)

Pilot participants by service type

Type of providers	Government	Not for Profit	Private	Total
Total registrants	19	143	42	185
Total submissions	15	103	13	131
Submissions as percentage of total sample	12%	79%	10%	101% *
Sampling frame target percentage	9%	57%	34%	100%
Population distribution (approx.)	243	1,539	918	2,700
Submissions as a percentage of the population	6%	7%	1%	5%

** NOTE: due to rounding, some figures do not add up to 100% and total population does not add to 2,700*

Pilot participants by number of residential aged care places (residents)

Number of places	< 25	25 – 49	50 – 74	75 – 99	100+	Total
Total registrants	20	50	47	31	37	185
Total submissions	15	39	34	18	25	131
Submissions as percentage of total sample	11%	31%	25%	14%	19%	100%
Sampling frame target percentage	21%	24%	18%	30%	6%	99%*
Population distribution (approx.)	567	648	489	810	162	2,676*
Submissions as a percentage of the population	3%	6%	7%	2%	2%	5%

Pilot participants by number of employees (FTE)

Number of employees	< 10	10 – 19	20 – 29	30 – 39	40 – 49	50 +	Total
Total registrants	14	22	23	19	20	87	185
Total submissions	12	20	15	13	16	55	131
Submissions as percentage of total sample	9%	15%	12%	10%	12%	42%	100%
Sampling frame target percentage	5%	10%	10%	10%	15%	50%	100%
Population distribution (approx.)	135	270	270	270	405	1350	2,700
Submissions as a percentage of the population	9%	7%	6%	5%	4%	4%	5%

Thank you

www.pwc.com.au

www.pwc.com

Expansion of quality indicators for residential aged care

Technical Expert Group post-pilot summary

May 2022

Disclaimer

This Technical Expert Group post-pilot summary report is not intended to be used by anyone other than the Department of Health.

We prepared this document solely for the Department of Health's use and benefit in accordance with and for the purpose set out in the Work Order with the Department of Health dated 23 September 2021. In doing so, we acted exclusively for Department of Health and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than the Department of Health in connection with this summary report
- to Department of Health for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this summary for anyone other than the Department of Health. If anyone other than the Department of Health chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than the Department of Health receiving or using this summary report.

Liability limited by a scheme approved under Professional Standards legislation.

Contents

1. Overview and context

1.1 Project overview

The Australian Government Department of Health (the Department) engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of Senior Australians (ROSA) to assist in the development of quality indicators for residential aged care. The project is intended to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The overall aims of the QI Program are to:

- provide older people with information about the quality of aged care services when making choices about their care
- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation.

The consortium has been engaged to identify, assess, and pilot evidence based quality indicators across five quality of care domains and examine the use of consumer experience and quality of life (CEQOL) assessment tools. The project commenced in September 2021 and is scheduled to be completed in June 2022.

1.2 Purpose of this report

A final Technical Expert Group (TEG) meeting was held on Friday 20 May 2022 (see Appendix A for membership details). The purpose of the meeting was to seek technical expertise in relation to findings from the residential aged care quality indicator pilot to inform expansion of the QI Program.

The Pilot handbook and meeting slide deck was provided to members as pre-reading to members. This outlined detailed information on the quality indicators selected for pilot, including the technical specifications, data collection methods and a summary of the quantitiative and qualitative pilot findings. The following guiding questions were provided to members to support consideration of the pilot quality indicators for potential inclusion in the QI Program:

1. Are the pilot results as expected for each quality indicator (e.g. considering reported frequency of distribution and variation in results)?
2. Do the results support the inclusion of the quality indicator in the QI Program?
3. What, if any, changes should be considered if the quality indicator is to be included in the QI Program?
4. What else is needed to support services with understanding and quality improvement for these quality indicators?
5. Are there any other comments about this quality indicator domain?

The feedback from the TEG on each of the piloted quality indicators is summarised in this report under each quality of care domain.

1.3 Overview of project stages completed prior to the Post-pilot Technical Expert Group meeting

1.3.1 Evidence review

A review of national and international literature identified 13 quality of care domains (not already included in the QI Program) and 175 quality indicators for consideration in the expansion of the QI Program in residential aged care. Each quality of care domain was ranked based on a quantitative assessment. The quality indicators within the top 10 ranked domains were assessed against the US National Quality Forum criteria modified for the Australian aged care and quality indicator context, including two additional criteria proposed by the consortium and agreed to by the Department on attribution and value to the QI Program.

CEQOL was excluded from the evidence review due to work completed in this area by a separate Department appointed consortium. Flinders University conducted a comprehensive evidence review of validated tools to measure quality of life, consumer experience and consumer satisfaction in aged care[1].

1.3.2 Stakeholder consultations

The purpose of consultation was to seek feedback from relevant stakeholders on the preferred quality of care domains, quality indicators and CEQOL assessment tools for inclusion in the QI Program. Senior Australians, their families and representatives, residential aged care service providers, peak bodies, government agencies, individual aged care, and health and medical professionals were invited to contibute through virtual workshops and written submissions.

Stakeholder consultations were supported by two consultation papers, publicly available on the PwC project website:

- Expansion of the residential aged care quality indicators consultation paper, and
- Expansion of the residential aged care quality indicators consultation paper for senior Australians, representatives, families and carers.

Consultation papers summarised the highest ranked quality of care domains (see Table 1 below) and associated quality indicators, from the evidence review and the Flinder's University led CEQOL evidence review.

Table 1 List of highest ranked quality of care domains

s22

[redacted]	[redacted]
	Consumer experience and quality of life (not ranked)

---

[1] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

Virtual consultation

Stakeholders registered for virtual consultation sessions via PwC website, with links to the registration form distributed through the residential aged care project email and via the Department's Engagement Hub. A total of 31 residential aged care virtual consultations were conducted with stakeholders:

- 20 workshops across the eight quality of care domains (at least two sessions were held per domain, with additional sessions held where registration numbers were high)
- 4 workshops for senior Australians, their families and representatives
- 4 workshops focused on the CEQOL assessment tools
- 3 workshops held with the aged care peaks, the Sector Reference Group and the Consumer Reference Group.

In each virtual consultation, attendees were asked to complete a short poll to provide feedback on the quality of care domains and presented quality indicators most important to them.

Written consultation

Three targeted consultation surveys were published to seek written stakeholder feedback. Surveys were tailored to the audiences, senior Australians, their families and representatives; residential aged care services; and peak bodies, government and other agencies. 80 written responses were recieved from stakeholders:

- 27 from senior Australians, their families and representatives
- 30 from residential aged care services
- 23 from peak bodies, government and other agencies.

In addition, 9 organisations provided standalone written submissions outside the survey process.

1.3.3 Pre-pilot Technical Expert Group

The purpose of the pre-pilot TEG meeting was to seek technical feedback on the quality of care indicators for pilot as identified through the evidence review and consultation process. Prior to the TEG meeting, a briefing paper was circulated outlining the short list of quality of care domains and associated quality indicators favoured by stakeholders for inclusion in the QI Program. Feedback was obtained from the TEG via an online survey between 13 – 19 January 2022.

The pre-pilot TEG meeting convened on 24 January 2022 with the objectives of:

- sharing consolidated feedback from the online survey
- focussing discussion on divergent and outstanding issues
- seeking technical advice on the quality of care domains and potential quality indicators to be considered for pilot.

1.3.4 Quality indicator specifications review

Following the pre-pilot TEG meeting, a rapid review of quality indicator specifications was undertaken by the consortium to provide additional information to refine the proposed quality indicators and inform the Department's selection of pilot quality indicators. A review was conducted against each of the potential quality indicators, with regard to:

- relevance to best clinical practice
- likely psychometric properties (face validity, reliability, responsiveness to change, ability of services to influence results)
- feasibility of implementation (availability of existing measures, data collection burden)

1.3.5 Department presentation

The purpose of the Department presentation was to inform the selection of quality indicators and CEQOL measures for pilot. On 7 February 2022 PwC presented the findings from the evidence review, aged care stakeholder consultations and the TEG consultation to representatives from the Department, the Aged Care Quality and Safety Commission, the Australian Institute of Health and Welfare, as well as the PwC consortium. The presentation informed discussions to guide the Department's selection of the pilot quality indicators.

1.3.6 Selection of pilot quality indicators

Following the Department presentation, quality indicators, as outlined in Table 2, were selected for pilot.

Table 2 Quality indicators selected for pilot

Domain	Quality indicator
s22 [redacted]	[redacted]
Quality of life	Percentage of care recipients who report 'good or 'excellent' quality of life

1.3.7 Pilot

A six-week pilot was conducted from 21 March 2022 to 29 April 2022 to test the selected quality indicators across four quality of care domains, and consumer experience and quality of life. The pilot sought to collect data from a nationally representative sample of at least 165 residential aged care services, achieved through recruitment of a diverse range of services across different jurisdictions and geographical distrbiution areas, and of different types and sizes.

During the pilot, participating services were asked to collect data for each eligible care recipient at their service for all pilot quality indicators. In addition to collecting quantitative data, participants were also asked to provide written feedback on their experiences to support the key objectives of the pilot including examining:

- relevance, appropriateness, and usability of the piloted quality indicators for the purposes of the QI Program
- feasibility of data capture and collection processes, including implications for residential aged care services
- accessibility and utility of the support materials, including opportunities for enhancement
- data collection preferences
- enablers for implementation and lessons for consideration in the further expansion of the QI Program.

An additional pilot objective related to conducting user experience (Ux) testing to inform the IT build for data submission in the My Aged Care Provider Portal environment.

7. Quality of life

7.1 Overview of quality of life quality indicator piloted

The Royal Commission into Aged Care Quality and Safety recommended a quality of life assessment tool be implemented in residential aged care to capture the consumer voice. Quality of life refers to a person's perception of their position in life taking into consideration their environment and their goals, expectations, standards, and concerns. It includes their emotional, physical, material, and social wellbeing.

The Quality of Life – Aged Care Consumers (QoL-ACC) tool was codesigned with senior Australians to assess important aspects of quality of life. The QoL-ACC is comprised of six questions focused on six key attributes of quality of life (independence, mobility, pain management, emotional well-being, social relationships, and leisure activities/hobbies).

The quality of life quality indicator technical specifications taken to pilot are outlined in Table 13.

Table 13 Quality of life quality indicator overview

Percentage of care recipients who report 'good' or 'excellent' quality of life

Collection

- One quality of life assessment for each care recipient during the assessment period.

Quality indicator reporting

- Care recipients who reported 'Good' or 'Excellent' quality of life using the Quality of Life – Aged Care Consumers (QoL-ACC).

Additional reporting

- Care recipients assessed for the quality of life quality indicator
- Care recipients who reported quality of life through self-completion of the QoL-ACC six question survey:
    - 'Excellent' (care recipients who score between 22–24)
    - 'Good' (care recipients who score between 19–21)
    - 'Moderate' (care recipients who score between 14–18)
    - 'Poor' (care recipients who score between 8–13)
    - 'Very poor' (care recipients who score between 0–7).
- Care recipients who reported quality of life through interviewer administered of the QoL-ACC six question survey:
    - 'Excellent' (care recipients who score between 22–24)
    - 'Good' (care recipients who score between 19–21)
    - 'Moderate' (care recipients who score between 14–18)
    - 'Poor' (care recipients who score between 8–13)

  - ‘Very poor’ (care recipients who score between 0–7).

- Care recipients who reported quality of life through proxy-completion of the QoL-ACC six question survey:
  - ‘Excellent’ (care recipients who score between 22–24)
  - ‘Good’ (care recipients who score between 19–21)
  - ‘Moderate’ (care recipients who score between 14–18)
  - ‘Poor’ (care recipients who score between 8–13)
  - ‘Very poor’ (care recipients who score between 0–7).

Exclusions

- Care recipients who withheld consent to complete a quality of life assessment during the entire assessment period.
- Care recipients who were absent from the service for the entire assessment period.

7.2. Summary of pilot results

A summary of the quality of life results and feedback obtained through the pilot and post-pilot surveys is outlined in Figure 11 and Figure 12.

Figure 11 Summary of quality of life quantitative pilot results

From the 74 data submissions received for the quality of life quality indicator:

Pilot average quality indicator value

- The average reported percentage of care recipients who reported ‘good’ or ‘excellent’ quality of life was 71.41 per cent, and the median was 74.33 per cent.

Summary totals

- 2,441 care recipients were assessed for the quality of life quality indicator.
- 1,712 care recipients reported ‘good’ or ‘excellent’ quality of life.

Exclusions

- 1,346 care recipients were excluded because they withheld consent to complete a quality of life assessment.
- 41 care recipients were excluded because they were absent from the service.

Additional reporting

Method of administration	Scoring category					
	Excellent	Good	Moderate	Poor	Very poor	Total

Self-reported	261	180	101	17	3	562
Interview administered	545	442	357	88	9	1441
Proxy completion	181	103	103	47	4	438

Figure 12 Summary of quality of life qualitative pilot results

From the 74 data submissions received for the quality of life quality indicator:

- 69 per cent of services reported data was being collected on quality of life prior to the pilot, with 19 per cent already using the QoL-ACC tool. Other quality of life assessment tools in use included internally developed surveys, Long Term Care Quality of Life Scale, the Adult Social Care Outcomes Toolkit, the Personal Wellbeing Index, World Health Organisation Quality of Life assessment, and the Quality of Life in Late-Stage Dementia scale.
- 26 per cent of services used multiple staff roles to collect data, with the most common staff roles being governance team members, nursing staff, lifestyle / wellbeing staff, and directors / managers, while a small number used administrative staff and volunteers.
- Average time to collect and report on quality of life was 13.1 hours (median of 6.1 hours) per service, which equated to approximately 24 minutes per care recipient.
- Feedback on the QoL-ACC tool suggested it was not culturally appropriate for Aboriginal and Torres Strait Islander care recipients or suitable for people with cognitive impairment where capacity is not retained for self-report; improvements would be required to make it more user-friendly (i.e. larger font) and further resources would support quality improvement.
- Some services advocated for a sampling methodology and bi-annual reporting.

7.3 Technical Expert Group feedback on the quality of life quality indicator

In addition to the broad questions posed to the TEG in the briefing paper, the following quality of life quality indicator specific questions were provided to members for consideration.

- Are the scoring brackets correct or should these be adjusted?
- Should all three groups (self, interview and proxy administered) still be collected? If so, is consideration required for adjusting proxy administered scores? Is this better addressed through the methodology?
- What recommendations should be provided for interview administered assessments to decrease collection bias?
- Should quarterly collection remain? Or should bi-annual collection be considered?
- Could implementing a sampling methodology rather than surveying all care support initial implementation? How could collection of a random sample be ensured?

- How can we ensure the quality indicator is relevant for specific cohorts, including culturally diverse groups?
- Should both quality of life and consumer experience quality indicators be considered for implementation?

A summary of TEG feedback is detailed in Table 14.

Table 14 Summary of Technical Expert Group feedback on quality of life

Technical Expert Group feedback
• The prevalence of care recipients who reported 'good' or 'excellent' quality of life was higher than anticipated, with limited variation in results across services. • The higher than expected scores may reflect sample bias and the recruitment of higher performing services. • The five QoL-ACC scoring categories for quality of life require further consideration to ensure the frequency of distribution provides scope for services to improve over time and for consumers to compare and contrast services. • Results across the three modes of administration (self-completion, interview administered and proxy-completion) indicate potential collection bias. The testing instrument needs to be accompanied by appropriate information to support administration and be reported separately across three categories for accurate comparison and interpretation. • Training and supporting materials are important, particularly for interviewers and proxies to reduce collection bias and inconsistencies between reported values across the three modes of administration. • Online survey collection and digitised tools could support improved response rates and allow care recipients' to provide more truthful answers; however, there are practical challenges with digital methods of collection for senior Australians and their proxies. • There is a preference for independent assessment and an alternative workforce should be considered, particularly prior to future publication of data. A TEG member suggested pharmacists soon to be embedded in residential aged care could provide support. It was acknowledged this would increase the costs of data collection and may take away from alternative uses of expertise.

7.4 Conclusion

The TEG considered the pilot results, noting reported quality indicator values of ‘good’ or ‘excellent’ quality of life were higher than expected, the variation in results across services was lower than expected, and the results may reflect sample bias. There was discussion that the QoL-ACC scoring categories tested in the pilot require further assessment, to ensure they support services to monitor performance in quality of life and provide consumers with useful information over the long term. TEG members agreed the pilot results also suggest inconsistencies in the reported quality of life values across the modes of administration (self-completed, interview administered and proxy-completed).

Overall, there was agreement the pilot results provided some supporting evidence a quality of life quality indicator with modifications, and accompanied by appropriate resources, could produce meaningful data to support quality improvement across the sector, and as a result may be appropriate for inclusion in the QI Program.

www.pwc.com.au

Australian Government
Department of Health

Ministerial Submission – Standard
s22
Version (1)
Date sent to MO: 22 August 2022

RECEIVED
01 SEP 2022
Parliamentary Section

To: **Minister Wells**

cc: **Minister Butler, Assistant Minister Kearney**

Subject: Expansion of the National Aged Care Mandatory Quality Indicator Program

s22

Recommendations:			
s22			
2.	**Agree** to the additional quality indicators for inclusion in the National Aged Care Mandatory Quality Indicator Program (QI Program) for residential aged care.		**2. [✓ Agreed]/Not agreed/Please discuss**
Signature	s47F		Date: ~~22~~ 31 / 8 / 22
Media Release required? YES/ NO Comments:			
Contact Officer:	*Michael Lye*	*Deputy Secretary, Ageing and Aged Care Group*	s22
Clearance Officer:	*Brendan Murphy*	*Secretary*	s22

Issues:

1. Recommendation 22 of the Royal Commission into Aged Care Quality and Safety (Royal Commission) recommended enhanced provider reporting across crucial areas of care by 1 July 2023, including:
    a. expanding the quality indicators for care in residential aged care
    b. developing quality indicators for care at home, and
    c. implementing a comprehensive quality of life assessment tool for people receiving aged care in residential care and at home.

2. The previous Government committed to this expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program) by October 2022, under the *2021–22 Budget Measure Empowering consumers of aged care with information to exercise choice.*

s22

[redacted]

Implementation Timeframes

s22

[redacted]

6. Commencement of the new quality indicators must coincide with the QI Program's quarterly collection periods (based on the Financial Year), which are reported to the department in the 21 days after each quarter.

The Quality Indicators

7. The development of four new quality indicators across crucial areas of care, as well as consumer experience and quality of life (CEQOL) measures has involved a process of:
    - research – that identified and assessed existing aged care quality indicators from internationally well-established systems;
    - stakeholder consultation – to identify the most important quality measures for older Australians and the appropriateness of the measures for providers, through 60 workshops with over 922 older Australians, provider and peak organisations, as well as 191 written submissions (outlined in Attachment B);
    - technical expert input – on quality indicator scientific properties and alignment with best practice guidelines, by 21 specialist organisations (outlined in Attachment B); and
    - a national pilot – to test the relevance, appropriateness and feasibility of the quality indicators over a six-week process with 130 residential care services.
8. The national pilot confirmed the potential quality indicators and associated guidance materials were broadly relevant, appropriate and feasible for implementation in residential care, with minor refinements. Services acknowledged the utility of the measures in quality improvement, but expressed concern regarding increased reporting requirements (detailed in Attachment C).
9. The department has considered the need for contemporary evidence-based measures with established scientific properties (such as validity and reliability), demonstrated positive impacts on quality of care outcomes for consumers and reduced associated regulatory burden, that are feasible and suitable for use in the QI Program.
10. The department concluded that the following quality indicators and CEQOL measures for residential care should be included in the QI Program, detailed in Attachment A:

    s22 [redacted]

    - Quality of life.
11. The department seeks your agreement to include these quality indictors in the QI Program.
12. Following agreement to the expanded quality indicators and timeframe, the department will draft and seek your approval to legislative amendments, in the Accountability Principles 2014 and Record Principles 2014 under the *Aged Care Act 1997*, necessary to expand mandatory reporting for the QI Program.

s22 [redacted]

s22

[redacted]

s47G

[redacted]

Attachments:

A: Quality indicators and CEQOL measures recommended for implementation in the QI Program for residential care

B: Consultation events for quality indicator development

C: Summary of stakeholder feedback on quality indicators recommended for implementation in the QI Program for residential care

Consultations:

The recommended quality indicators and CEQOL measures have been selected on the basis of extensive consultation with stakeholders (outlined in Attachment B).

s22

[redacted]

Quality of life	
Quality indicator	**Percentage of care recipients who report 'good' or 'excellent' quality of life.**
Collection	A single quality of life assessment must be offered to each care recipient for completion, around the same time every quarter.
Reporting	Care recipients who report good or excellent quality of life (using the *Quality of Life Aged Care Consumers* [QOL-ACC] tool), excluding: • care recipients who did not choose to complete the quality of life assessment for the entire quarter • care recipients who were absent from the service for the entire quarter.
Data elements	• care recipients who were offered a quality of life assessment for completion • care recipients who reported quality of life through self-completion of the QOL-ACC, scored against the five categories • care recipients who reported quality of life through interviewer facilitated completion of the QOL-ACC, scored against the five categories • care recipients who reported quality of life through proxy-completion of the QOL-ACC, scored against the five scoring categories.

**Subject to minor technical adjustment based on expert advice.*

www.pwc.com.au

Expansion of quality indicators for residential aged care

Final report

September 2022

Disclaimer

This final report (this document) is not intended to be read or used by anyone other than the Department of Health and Aged Care (the department).

We prepared this document solely for the department's use and benefit in accordance with and for the purpose set out in our engagement letter with the department dated 23 September 2021. In doing so, we acted exclusively for the department and considered no-one else's interests.

We make no representation concerning the appropriateness of this document for anyone other than the department. If anyone other than the department chooses to use or rely on it, they do so at their own risk.

Liability limited by a scheme approved under Professional Standards legislation.

Executive summary: Project overview

Background

This project

The Australian Government Department of Health and Aged Care (the department) engaged a consortium consisting of PricewaterhouseCoopers Australia (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of Senior Australians (ROSA) to assist in the development of quality indicators for residential aged care. The project intends to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The project commenced in September 2021 and concluded in June 2022.

Project objectives

The consortium were engaged to:

- identify, assess, consult on, and pilot quality indicators across four quality of care domains and examine the use of assessment tools for consumer experience and quality of life (CEQOL)
- provide a high quality and reliable basis to guide further expansion of the QI Program
- support the development of materials for implementation of additional quality indicators within the QI Program.

QI Program

The overall aims of the QI Program are to:

- provide older people with information about the quality of aged care services when making choices about their care
- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation.

Expansion of the QI Program is supported by recommendations from the Royal Commission into Aged Care Quality and Safety.

Overview of project phases

	Activities & timing	Objective of the phase
Phase 1	**Project plan and initiation** *Sep 2021 – Oct 2021*	Development of a project plan detailing the project approach and scope, including governance arrangements and detailed project phasing.
Phase 2	**Review of evidence** *Sep 2021 – Oct 2021*	A rapid targeted review of national and international literature to identify quality of care domains and associated quality indicators for assessment and ranking by the consortium.
	Consultation *Nov 2021 – Feb 2022*	Stakeholder consultations to determine the preferred quality of care domains and quality indicators, followed by technical expert input to refine the preferred quality indicators.
Phase 3	**Pilot** *Jan 2022 – Apr 2022*	Recruitment of a nationally representative sample and development of supporting resources to conduct a six-week pilot to test the selected quality indicators.
Phase 4	**Analysis to inform implementation** *May 2022 – Jun 2022*	Pilot data analysis, user experience testing and technical expert input to inform the implementation of potential quality indicators in the QI Program.

Executive summary: Summary of project phases (1 of 3)

Evidence review

A rapid, targeted review of national and international literature was undertaken to identify evidence-based quality of care domains and quality indicators. The review identified 175 quality indicators across 13 quality of care domains, including:

Behavioural symptoms	**Mortality**
Cognition	**Medications (not already included)**
Continence	**Pain**
Depression	**Palliative care**
Function and activities of daily living	**Service delivery and care planning**
Hospitalisation	**Wait times**
Infection control	

Each quality of care domain was ranked based on feasibility, scientific acceptability, importance, usability, attribution and value to the QI Program.

CEQOL was excluded from this phase due to work previously completed by Flinders University which identified validated CEQOL tools in aged care.

The methodology, analysis and findings of the evidence review are synthesised in the *Expansion of quality indicators for residential aged care – Evidence review summary report.*

Aged care stakeholder consultations

Consultation sought feedback on the top 8 quality of care domains (highlighted in orange) from a range of stakeholders including older Australians, their families and representatives; residential aged care service providers; peak bodies; government agencies; and individual aged care, health and medical professionals.

Between 1 November and 16 December 2021:

- 31 virtual workshops with 412 participants were conducted
- 80 written submissions were received.

Stakeholder feedback informed the selection of quality of care domains, quality indicators and CEQOL assessment tools for pilot.

Stakeholder consultations findings are summarised in the *Expansion of quality indicators for residential aged care – Consultation summary report.*

TEG consultation

The pre-pilot Technical Expert Group (TEG) meeting obtained technical feedback on the preferred quality of care domains and quality indicators identified through the evidence review and stakeholder consultation, including functions and activities of daily living, continence, hospitalisation, pain, workforce and consumer experience and quality of life.

The pre-pilot TEG meeting convened on 24 January 2022 to refine and better define the preferred quality indicators with respect to their technical specifications, including definitions, data capture tools, frequency of data collection, exclusion criteria, and appropriateness to take forward.

The TEG consisted of 23 individual clinical experts and representatives of health and medical professional organisations as well as from the department.

Pre-pilot TEG consultation findings are summarised in the *Expansion of quality indicators for residential aged care – TEG pre-pilot meeting summary report.*

Department presentation

The consortium presented a summary of the findings from the evidence review and stakeholder and TEG consultation to the department on 7 February 2022.

The Department presentation informed the selection of potential quality indicators and CEQOL measure for pilot.

The session included representatives from the department, the Aged Care Quality and Safety Commission, the Australian Institute of Health and Welfare, as well as the PwC consortium.

Department presentation findings are summarised in the *Expansion of quality indicators for residential aged care – department presentation summary report.*

Executive summary: Summary of project phases (2 of 3)

Pilot

Pilot overview

A six-week pilot was held between 21 March to 29 April 2022 with a nationally representative sample of 131 residential aged care services.

The key objectives of the pilot were to examine:

- relevance, appropriateness and usability of the quality indicators for the purposes of the QI Program
- feasibility of data capture and collection processes, including implications for residential aged care services
- accessibility and utility of the support resources, and opportunities for enhancement
- data collection preferences
- enablers for implementation and lessons for consideration in the further expansion of the QI Program.

Sampling approach

The purposive sampling stratification approach supported the recruitment of representative participants from the population of approximately 2,700 services in Australia, including those with diverse characteristics (e.g. geography, state, provider size, service type and structure, and prior involvement in QI Program pilots).

Pilot promotion and recruitment

A range of recruitment activities to build awareness of the pilot were advertised through channels, including:

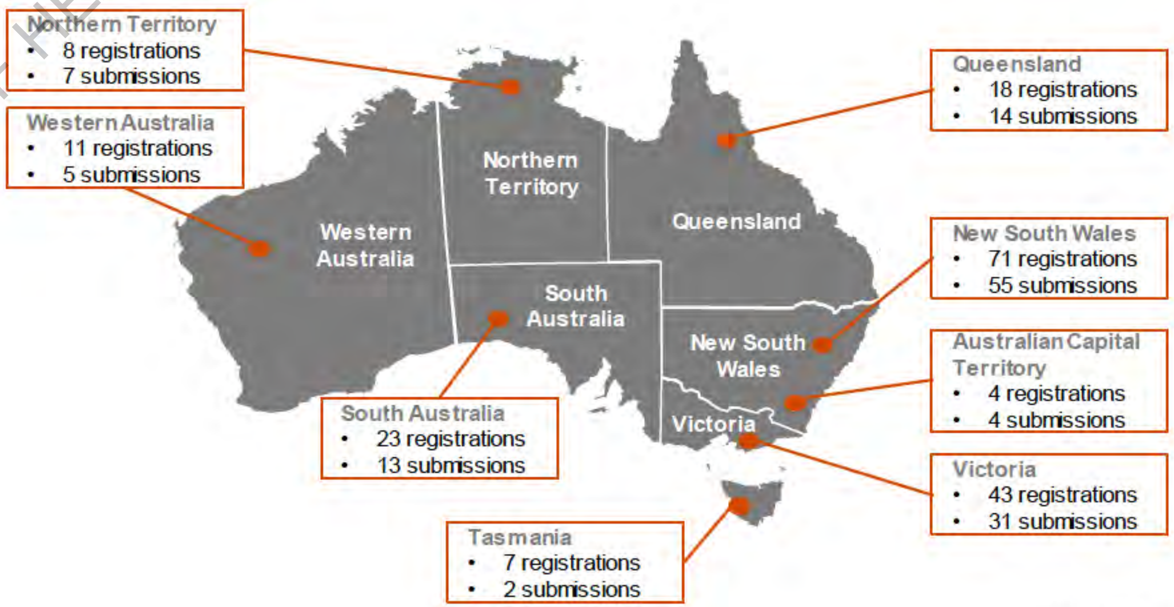
- a dedicated PwC pilot website
- the department's aged care sector newsletter and Engagement Hub
- direct email to Aged Care Engagement Database subscribers and services who previously submitted an expression of interest for the pilot
- direct and targeted contacts with underrepresented subpopulation groups
- PwC consortium networks (e.g. direct email and LinkedIn posts).

Pilot participation

There were 185 services who registered to participate in the residential aged care quality indicator pilot. Despite regular contact to provide ongoing coaching and support, 28 services formally withdrew from the pilot. The majority of services cited the impacts of the COVID-19 pandemic as the reason for withdrawal. The remaining services noted staff turnover and conflicting priorities as key reasons for withdrawal. In addition, 26 services remained registered in the pilot but did not submit any data.

A total of 131 services submitted quantitative pilot data. 86 services submitted qualitative pilot data by answering one or more of the pilot feedback surveys.

Location of pilot participants



Executive summary: Summary of project phases (3 of 3)

Pilot (continued)

Pilot analysis

The pilot generated quantitative data (quality indicator data) and qualitative data (pilot feedback surveys, and insights from the mailbox and telephone hotline support processes). Following data quality assurance processes, key insights from quantitative and qualitative data were analysed for each quality indicator.

Synthesis of pilot data

Quantitative and qualitative data was then synthesised for each quality indicator, with discrepancies between quantitative and qualitative methods identified and causes considered. Where causes could not be verified through other means, limitations or the need for further investigation were identified.

Quantitative data was interpreted as an approximation of the range of results that may be received against each quality indicator to determine utility in supporting the QI Program objectives. The data was analysed alongside the qualitative results to assist evaluation of each pilot quality indicator with respect to future inclusion in the QI Program.

Pilot limitations

- **The COVID-19 Omicron wave in early 2022 and the associated aged care workforce challenges** resulting in increased demands on staff to manage outbreaks and widespread staff shortages across the sector impacting pilot participation rates.
- **Data collection immaturity** limits analysis of distribution variation, establishment of reference ranges and drawing conclusions on the relative performance of demographic groups.
- **The constraints of a single six-week pilot** mean it was not possible to test if quality indicator results changed when pilot participants became more familiar with quality indicator specifications and assessment tools.
- **Voluntary pilot participation** may contribute to recruitment of participants with characteristics different from the broader cohort of services who chose not to participate. Approximately 20 per cent of registered services reported they participated in the 2020 residential aged care quality indicator pilot, reducing any potential bias or over-weighting of services who have previous experience with a pilot.

Post-pilot TEG consultation

The TEG reconvened post-pilot on 20 May 2022. The meeting sought technical expertise on the pilot findings and considerations on the piloted quality indicators for inclusion in expansion of the QI Program.

The TEG provided broad support for the piloted quality indicators and guided further refinement of select quality indicators to ensure meaningful data collection and quality improvement.

Consolidation process and quality indicator assessment

A consortium-led consolidation workshop was held with the department on 31 May 2022 to discuss the outcomes and key considerations highlighted during the pilot and post-pilot TEG meeting. Potential iterations to the technical specifications of the pilot quality indicators were discussed, identifying enablers and barriers to support future QI Program implementation.

Following the consolidation and further input from technical experts, each quality indicator was assessed for its ability to support the objectives of the QI Program and its readiness for implementation, using the following ratings:

➜	**The quality indicator is suitable to support the QI Program's objectives and is ready to move into the implementation phase**
✗	**The quality indicator is not suitable to support the QI Program's objectives or requires substantial additional work for it to be ready to move into the implementation phase**

Several preparatory activities were also recommended to support implementation of these quality indicators into the QI Program.

Executive summary: Key findings - Quality of life

Review of evidence

- An evidence review of validated tools to measure quality of life in aged care, examining appropriateness for residential aged care for incorporation in the QI Program was commissioned by the department and led by Flinders University.
- The top three quality of life assessment tools identified included:
  - Quality of Life–Aged Care Consumers (QOL-ACC)
  - Good Spirit, Good life tool (GSGL)
  - Dementia Quality of Life tool (DEMQOL).

Aged care stakeholder consultation

- Stakeholders provided strong support for an assessment tool measuring quality of life.
- The QOL-ACC assessment tool was most favoured.
- A number of services are currently collecting care recipient quality of life data to guide practice.
- There were mixed views on the appropriate frequency of data collection.
- Consideration should be given to the most appropriate mode of administration, with self-completion widely recognised as best practice.
- Assessments should be tailored to support a range of older Australians.

Technical Expert Group

- Acknowledgment of the Royal Commission recommendation to implement a comprehensive quality of life assessment tool.
- Quality of life can be influenced by various factors outside the control of service providers.
- Further consideration is required to define decline in quality of life and what change in score would be considered meaningful.
- Self-completion of quality of life assessments is widely recognised as best practice to minimise reporting bias.
- Clear arrangements and guidance for proxy administered assessment is required.
- Support to focus measure on single point prevalence to reduce data collection burden.
- Further consideration is required to determine an appropriate time period for data collection.
- Concerns were raised that service provider bias may emerge if quality of life reporting was published publicly.

Department presentation

- Support provided for a quality of life quality indicator using the QOL-ACC tool.
- Agreement to initially focus on prevalence rather than decline.
- Discussion on adjustments to collect and report the number of care recipients with excellent or good quality of life.
- Over time, collection and reporting will provide frequency of distribution information, which can inform future refinement of the tool.
- A proxy for care recipients experiencing cognitive decline or dementia was suggested.
- The inclusion of quality of life with existing consumer experience data collection was said to not contribute materially to increased data burden.

Pilot

- 2,441 care recipients were assessed for the quality of life quality indicator.
- An average of 71.41 per cent of care recipients reported 'good' or 'excellent' quality of life.
- 69 per cent of services were collecting and monitoring quality of life data prior to the pilot, with 50 per cent suggesting quarterly reporting of this quality indicator was feasible for their organisation (22 per cent were unsure).
- Most pilot survey respondents agreed the quality indicator provided meaningful information to guide service-level improvement (80 per cent agreed, 11 per cent unsure) and actionable insights to improve an individual's care (72 per cent agreed, 9 per cent unsure).

Implementation considerations

- Current collection methods of interview, proxy, and self-complete should remain, be accompanied by resources to guide assessment and reported separately.
- Data collection and reporting should capture total number of care recipients offered a QOL-ACC assessment and the responses received to reduce collection burden on services and care recipients.
- Current QOL-ACC scoring categories may need to be revised based on future analysis of cumulative results.
- Consideration should be given to working with indigenous communities in order to determine to determine how they would best like to be heard and whether the introduction of other tools would be beneficial.
- Licensing for use of assessment tools may be required.
- Consideration should be given in future for independent assessors to reduce potential bias and support public reporting.

Summary statistics of pilot responses (74 data submissions for quality of life)

MIN: 28.57%

MEAN: 71.41%

MEDIAN: 74.33%

ST DEV: 19.78%

MAX: 100%

Assessment of the proposed quality indicator against QI Program objectives and readiness to move to the implementation phase

Quality of life quality indicator	Assessment
Percentage of care recipients who report 'good' or 'excellent' quality of life	➔

Contents

Formal attachments

Attachment A: Expansion of quality indicators for residential aged care – Evidence review summary report

Attachment B: Expansion of quality indicators for residential aged care – Consultation paper

Attachment C: Expansion of quality indicators for residential aged care – Consultation paper for senior Australians, representatives, families and carers

Attachment D: Expansion of quality indicators for residential aged care – Consultation summary report

Attachment E: Expansion of quality indicators for residential aged care – Pre-pilot Technical Expert Group briefing paper

Attachment F: Expansion of quality indicators for residential aged care – Pre-pilot Technical Expert Group summary report

Attachment G: Quality indicator specifications review

Attachment H: Expansion of quality indicators for residential aged care – Department presentation briefing paper

Attachment I: Expansion of quality indicators for residential aged care – Department presentation summary report

Attachment J: Expansion of quality indicators for residential aged care – User experience summary

Attachment K: Expansion of quality indicators for residential aged care – Post-pilot analysis report

Attachment L: Expansion of quality indicators for residential aged care – Pilot handbook

Attachment M: Expansion of quality indicators for residential aged care – Post-pilot Technical Expert Group briefing paper

Attachment N: Expansion of quality indicators for residential aged care – Post-pilot Technical Expert Group summary report

Overview

1.1 Project overview

The Australian Government Department of Health and Aged Care (the department) engaged a consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland (UQ CHSR) and the Registry of Senior Australians (ROSA) to assist in the development of quality indicators for residential aged care. The project intends to guide the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

The overall aims of the QI Program are to:

- provide older people with information about the quality of aged care services when making choices about their care
- support aged care services to measure, monitor, compare and improve the quality of their services
- provide the government with system-level measures of quality in aged care and an evidence-base to inform policy and regulation.

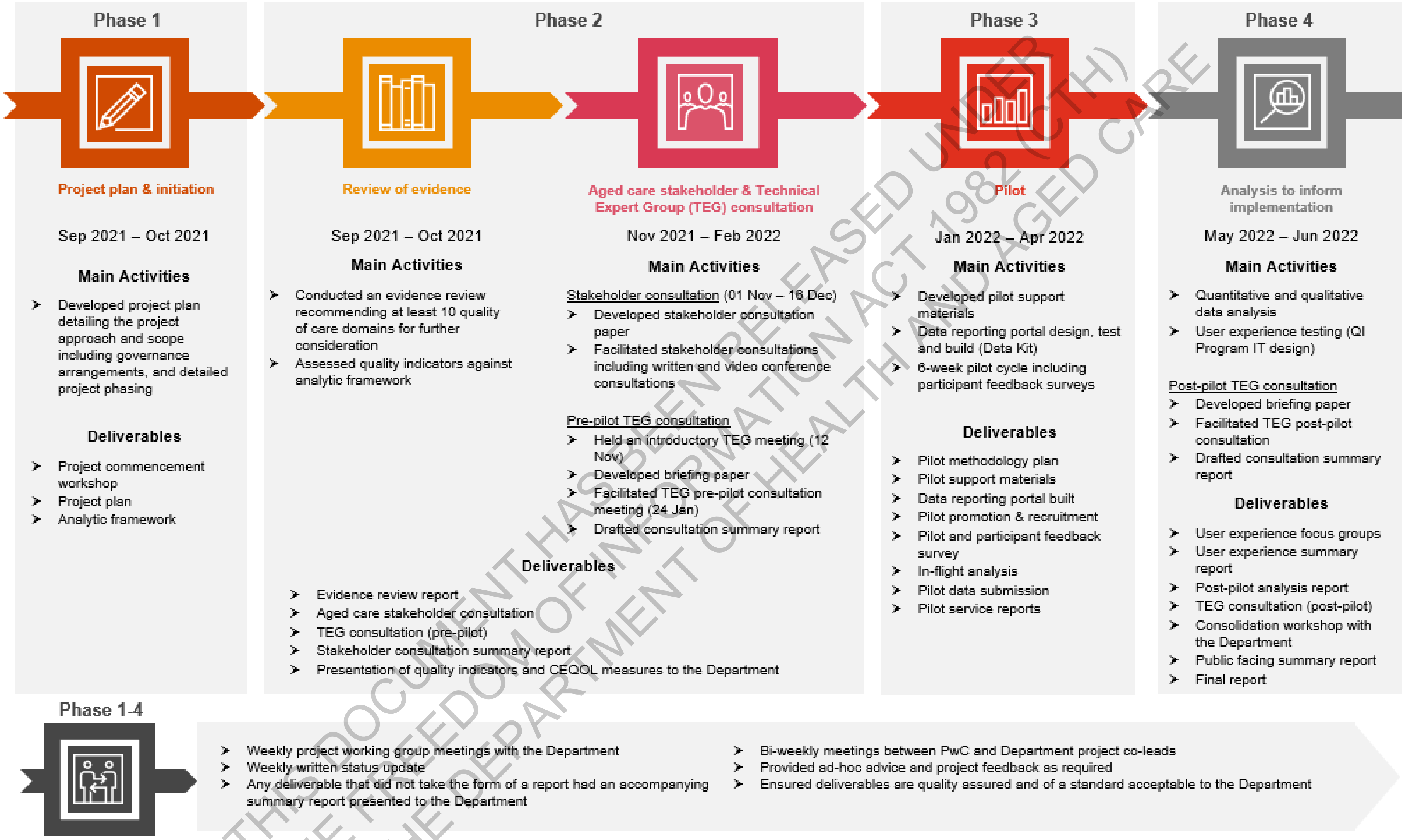
The consortium was engaged to identify, assess, and pilot evidence based quality indicators across quality of care domains and examine the use of consumer experience and quality of life (CEQOL) assessment tools. The project commenced in September 2021 and concluded in June 2022.

1.2 Overview of project stages

Figure 1 provides a summary of the project's four phases and the sequencing of each phase.

Overview

Figure 1 Overview of project phases



Phase 1

Project plan & initiation

Sep 2021 – Oct 2021

Main Activities

- Developed project plan detailing the project approach and scope including governance arrangements, and detailed project phasing

Deliverables

- Project commencement workshop
- Project plan
- Analytic framework

Phase 2

Review of evidence

Sep 2021 – Oct 2021

Main Activities

- Conducted an evidence review recommending at least 10 quality of care domains for further consideration
- Assessed quality indicators against analytic framework

Aged care stakeholder & Technical Expert Group (TEG) consultation

Nov 2021 – Feb 2022

Main Activities

Stakeholder consultation (01 Nov – 16 Dec)

- Developed stakeholder consultation paper
- Facilitated stakeholder consultations including written and video conference consultations

Pre-pilot TEG consultation

- Held an introductory TEG meeting (12 Nov)
- Developed briefing paper
- Facilitated TEG pre-pilot consultation meeting (24 Jan)
- Drafted consultation summary report

Deliverables

- Evidence review report
- Aged care stakeholder consultation
- TEG consultation (pre-pilot)
- Stakeholder consultation summary report
- Presentation of quality indicators and CEQOL measures to the Department

Phase 3

Pilot

Jan 2022 – Apr 2022

Main Activities

- Developed pilot support materials
- Data reporting portal design, test and build (Data Kit)
- 6-week pilot cycle including participant feedback surveys

Deliverables

- Pilot methodology plan
- Pilot support materials
- Data reporting portal built
- Pilot promotion & recruitment
- Pilot and participant feedback survey
- In-flight analysis
- Pilot data submission
- Pilot service reports

Phase 4

Analysis to inform implementation

May 2022 – Jun 2022

Main Activities

- Quantitative and qualitative data analysis
- User experience testing (QI Program IT design)

Post-pilot TEG consultation

- Developed briefing paper
- Facilitated TEG post-pilot consultation
- Drafted consultation summary report

Deliverables

- User experience focus groups
- User experience summary report
- Post-pilot analysis report
- TEG consultation (post-pilot)
- Consolidation workshop with the Department
- Public facing summary report
- Final report

Phase 1-4

- Weekly project working group meetings with the Department
- Weekly written status update
- Any deliverable that did not take the form of a report had an accompanying summary report presented to the Department
- Bi-weekly meetings between PwC and Department project co-leads
- Provided ad-hoc advice and project feedback as required
- Ensured deliverables are quality assured and of a standard acceptable to the Department

1.2.1 Evidence review

A rapid, targeted review of national and international literature was undertaken to identify evidence-based quality of care domains and quality indicators for possible expansion of the QI Program for residential aged care.

This review identified 175 quality indicators across the following 13 quality of care domains (listed in alphabetical order):

- Behavioural symptoms
- Cognition
- Continence
- Depression
- Function and activities of daily living (ADLs)
- Hospitalisation
- Infection control
- Mortality
- Medications (not already included in QI Program)
- Pain
- Palliative care
- Service delivery and care planning
- Wait times.

Each quality of care domain was ranked based on a quantitative assessment. From the top 10 ranked quality of care domains a total of 165 quality indicators were identified. Each of the quality indicators were assessed against the US National Quality Forum criteria modified for the Australian aged care context, including additional criteria on attribution and value to the QI Program. Quality indicators within each domain were then ranked in order of priority based on the evidence (e.g. the first five criteria) and value to the QI Program using a prioritisation matrix. An overview of the evidence review methodology is provided in Figure 2 overleaf.

Consumer experience and quality of life (CEQOL) was excluded from the evidence review due to work completed by a separate department appointed consortium. Flinders University conducted a comprehensive evidence review of validated tools to measure quality of life, consumer experience and consumer satisfaction in aged care[1].

The methodology, analysis and findings of the evidence review were synthesised into the *Expansion of quality indicators for residential aged care – Evidence review summary report.* This is provided at Attachment A.

---

[1] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

Overview

Figure 2 Overview of evidence review methodology

Step 1

Analytic framework design

Co-designed with the Department the analytic framework for the consistent assessment of:

- domain ranking
- quality indicator assessment
- quality indicator prioritisation.

Step 2

Literature review parameters

Defined parameters informing the search for international and national quality of care domains and quality indicators including data from:

- academic literature
- grey literature
- government reports organisation reports and websites.

Step 3

Domain theming

The full list of quality indicators were themed into representative quality of care domains.

Domains were included for review if:

- the domain and associated quality indicators aim to improve / monitor the quality of age care
- data collection is based on the population
- reporting and quality indicators are contemporary (e.g. last 10 years).

Step 4

Data extraction

Data about quality indicators from studies and reports were extracted through the defined search process (Step 2). Each quality indicator was documented including:

- general descriptions
- quality indicator type (structural, outcome, process)
- numerator
- denominator
- exclusion criteria
- risk adjustment
- data collection type and frequency
- reporting (public, facility level, rating systems)
- licensing or approval requirements
- recommended targets.

Data extraction and domain theming of quality indicators occurred concurrently and through iterative cycles until all quality indicators had identified through extraction.

Step 5

Domain ranking

Domains were quantitatively assessed and ranked against the following criteria using a standardised scoring system:

1. the quality of care domain is critical to high-quality care and consumer experience
2. there is at least one evidence-based quality indicator available
3. there is international agreement that the domain is important
4. services are able to influence care and experiences of the domain.

Step 6

Quality indicator assessment

Quality indicators within the top ten ranked quality of care domains were quantitatively assessed and ranked against the following criteria using a standardised scoring system:

1. feasibility (e.g. data burden)
2. scientific acceptability (e.g. validity, biases)
3. importance (to the aged care system)
4. usability (e.g. understandable)
5. attribution (ability of providers to improve), and
6. value to the QI program (alignment with program goals).

Step 7

Prioritisation and reporting

A recommended ranked set of quality of care domains and quality indicators with the highest levels of evidence were developed through the use of a prioritisation matrix.

Quality indicators were prioritised based on their assessment scores from Step 6 against:

- evidence base (aggregate score from criteria 1-5)
- value to the QI Program (score on criteria 6).

The analytic framework was applied in quantitative assessment of evidence review results to ensure consistent assessment.

1.2.2 Aged care stakeholder consultations

The purpose of consultation was to seek feedback from stakeholders on the preferred quality of care domains, quality indicators and CEQOL assessment tools for inclusion in the QI Program. Older Australians, their families and representatives, residential aged care service providers, peak bodies, government agencies, individual aged care, and health and medical professionals were invited to contibute through virtual workshops and written submissions.

Consultations were supported by two briefing papers, publicy available on the PwC project website:

- Expansion of quality indicators for residential aged care - Consultation paper (see Attachment B), and
- Expansion of quality indicators for residential aged care - Consultation paper for senior Australians, representatives, families and carers (see Attachment C).

Consultation papers summarised the highest ranked quality of care domains (see Table 1 below) and associated quality indicators, from the evidence review and the Flinder's University led CEQOL evidence review.

Table 1 List of highest ranked quality of care domains

s22

[redacted]	[redacted]
[redacted]	Consumer experience and quality of life (not ranked)

Virtual consultation

Stakeholders registered for virtual consultation sessions via the stakeholder consultation registration form provided by direct email, the PwC website, and the department's Engagement Hub. Between 1 November and 16 December 2021 a total of 31 residential aged care virtual consultations were conducted with 412 stakeholders:

- 20 workshops across the eight quality of care domains (at least two sessions were held per domain, with additional sessions held where registration numbers were high)
- 4 workshops specifically designed for older Australians, their families and representatives
- 4 workshops focused on the CEQOL assessment tools
- 1 dedicated workshop with aged care peak bodies
- a Sector Reference Group meeting with aged care peak bodies, providers, academics and health and medical professionals
- a Consumer Reference Group meeting with older Australians, their representatives and relevant peak bodies.

Written consultation

Three Qualtrics surveys were published to seek written stakeholder feedback. Surveys were tailored to the audiences - older Australians, their families and representatives; residential aged care service providers; and peak bodies, government and other agencies. Between 24 November and 15 December 2021 a total of 80 written responses were recieved from stakeholders:

- 27 from older Australians, their families and representatives

- 30 from residential aged care service providers
- 23 from peak bodies, government and other agencies.

In addition, nine organisations provided standalone written submissions outside the survey process.

The outcomes of the consultation process were synthesised into the *Expansion of quality indicators for residential aged care – Consultation summary report*. This is provided at Attachment D.

1.2.3 Pre-pilot Technical Expert Group

The purpose of the Technical Expert Group (TEG) was to present findings from the evidence review and consultation and seek technical feedback on the quality of care domains and quality indicators for pilot. The TEG included a range of technical experts.

Prior to the TEG meeting, a briefing paper was circulated outlining the short list of quality of care domains and associated quality indicators favoured by stakeholders for inclusion in the QI Program (see Attachment E). Feedback was obtained from the TEG via an online survey between 13 – 19 January 2022.

The pre-pilot TEG meeting convened on 24 January 2022 with members providing advice to refine and better define the identified quality indicators with respect to their technical specifications, including definitions, data capture tools, frequency of data collection, exclusion criteria, and appropriateness to take forward.

The discussion and findings of the pre-pilot TEG meeting were synthesised into the *Expansion of quality indicators for residential aged care – Pre-pilot Technical Expert Group summary report*. This is provided at Attachment F.

1.2.4 Quality indicator specifications review

Following the pre-pilot TEG meeting, a rapid review of quality indicator specifications was undertaken by the consortium to provide additional information to further refine the proposed quality indicators and inform the department's selection of pilot quality indicators. A review was conducted against each of the potential quality indicators, with regard to:

- relevance to best clinical practice
- psychometric properties (face validity, reliability, responsiveness to change, ability of services to influence results)
- feasibility of implementation (availability of existing measures, data collection burden).

The findings of the review were synthesised into the *Quality indicator specifications review*. This is provided at Attachment G.

1.2.5 Department presentation

The purpose of the Department presentation was to present findings to date to inform the selection of quality indicators and CEQOL measures for pilot. On 7 February 2022, PwC presented the findings from the evidence review, aged care stakeholder consultations and the pre-pilot TEG consultation to representatives from the department, the Aged Care Quality and Safety Commission, the Australian Institute of Health and Welfare (AIHW), as well as the wider PwC consortium partners. The presentation informed discussion to guide the department's selection of the pilot quality indicators and was supported by a pre-reading briefing document (see Attachment H).

A summary of the discussion at the Department presentation was synthesised into the *Expansion of quality indicators for residential aged care – Department presentation summary report.* This is provided at Attachment I.

1.2.6 Residential aged care quality indicator pilot

Quality indicators selected for inclusion in the residential aged care pilot

The department selected the quality indicators for pilot following consideration of findings from the evidence review, consultation and the pre-pilot TEG meeting,

Table 2 Quality indicators selected for pilot

Domain	Quality indicator
s22 [redacted]	[redacted]
Quality of life	Percentage of care recipients who report 'good or 'excellent' quality of life

Pilot purpose

A six-week pilot was conducted from 21 March 2022 to 29 April 2022 to test the selected quality indicators. The pilot sought to collect data from a nationally representative sample of at least 165 residential aged care services, achieved through recruitment of a diverse range of services.

The key objectives of the pilot were to examine the:

- relevance, appropriateness, and usability of the piloted quality indicators for the purposes of the QI Program
- feasibility of data capture and collection processes, including implications for residential aged care services
- accessibility and utility of the support materials, including opportunities for enhancement
- data collection preferences
- enablers for implementation and lessons for consideration in the further expansion of the QI Program.

An additional pilot objective related to conducting user experience (Ux) testing to inform the IT build for data submission in the My Aged Care Provider Portal environment. The findings against this objective are captured in the *Expansion of quality indicators for residential aged care - User experience summary*. This is provided at Attachment J.

Five key stages in the pilot methodology were developed, with Figure 3 on the next page highlighting key activities and deliverables for each stage of the pilot.

Figure 3 Pilot approach

	20 Sept – 21 Mar	24 Jan – 18 Mar	21 Mar – 29 Apr	21 Mar – 11 May	12 May - 10 Jun
Stages	**1. Pilot promotion and recruitment**	**2. Development of materials to support the pilot and onboarding of participants**	**3. Pilot launch and data collection**	**4. Feedback on pilot from participants**	**5. Post pilot activities**
Key activities	The pilot was **promoted** via the PwC website, Department's BIDS notices and newsletter, and available channels A stratification approach was taken to **recruitment**, with a goal of recruiting a nationally representative sample of at least 165 residential aged care services	**Support materials** were developed to assist participants throughout the pilot Designed, tested and built the **data collection platform** Participants were **onboarded** via a webinar where an overview of the pilot objectives and a timeline of activities was provided	The pilot was **launched** on 21 March 2022 Throughout the pilot **ongoing support** was provided via a centrally monitored email and hotline **Clinical enquiries** were escalated according to the Department Pilot data was uploaded and submitted by participants using **Data Kit** Ongoing **in-flight analysis** of the subpopulations was conducted	**Ongoing and ad hoc feedback** was obtained from participants via the centrally monitored email and hotline **Formal feedback** was requested through the Pilot Feedback Survey, using Data Kit Three **user experience (UX) focus group sessions** with sector participants were held between 9 – 11 May to discuss UX needs and recommendations (beyond survey response results)	The pilot was **completed** on 29 April A **TEG meeting** was held to brief the group on the results and seek feedback and validation on early findings against the objectives A **post-pilot workshop** was held with the Department to share, test and validate the analysis, outcomes and findings, as well as explore emerging themes Initial findings from the pilot as well as feedback and outcomes from post-pilot consultations were synthesised and provided to the Department in the **post-pilot analysis report** Services that participated in the pilot were provided with service **reports**, to view their results and compare their data with other pilot participants
Deliverables	• Promotional materials/comms • Set up PwC website	• Hotline number and email • Pilot handbook • Frequently Asked Questions • Data Collection Templates • Training materials • Onboarding webinar • Data Kit	• In flight analysis update during weekly status meeting	• Post pilot feedback survey questions • UX focus group sessions • UX summary report	• Post pilot feedback • Post-pilot consultation summary report • Draft and final post-pilot analysis report • Service reports

Pilot promotion and recruitment

Pilot promotion commenced in October 2021 with a range of planned recruitment activities to ensure all residential aged care services in Australia had an opportuinty to partcipate in the pilot. Activities built stakeholder awareness of the pilot, with advertising materials desseminiated through various communications channels, including:

- a dedicated PwC pilot website
- the Department of Health and Aged Care's (the department) aged care sector newsletter
- the department's Engagement Hub
- direct email to Aged Care Engagement Database subscribers
- direct email to services who submitted an expression of interest to participate in the 2019 residential aged care quality indicator pilot
- PwC consortium networks (e.g. direct email and LinkedIn posts).

Expressions of interest

Services interested in pilot participation were initially invited to submit a short online expression of interest (EOI), capturing key details about services, including points of contact for further communications and additional information on the pilot when available.

A total of 123 services submitted an EOI. While the majority were completed at the individual service level, some providers withheld service nomination until information on pilot timeframes and quality indicators became available.

Pilot registrations

Formal pilot recruitment commenced in February 2022 following the department's selection of the pilot quality indicators. Services who completed an EOI were invited to submit a registration form, collecting service demographic information to support appropriate sampling.

To further increase pilot participation, targeted phone calls and emails were made to:

- larger service providers to encourage them to register multiple services in the pilot
- services who completed an EOI form but did not submit a pilot registration form
- services who participated in the 2020 residential aged care pilot.

On pilot commencement, a total of 185 services had formally registered in the pilot.

Pilot sampling

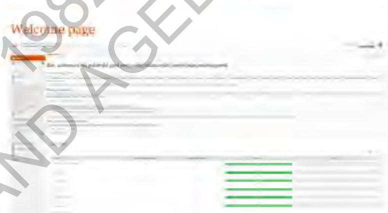
Pilot promotion enabled recuirtment of a nationally representative sample to provide diverse and representative feedback on the quality indicators. This was supported through a purposive stratification approach developed with a sampling frame based on targets informed by the national distribution of residential aged care service demographic groups, derived using AIHW GEN Aged Care Data.

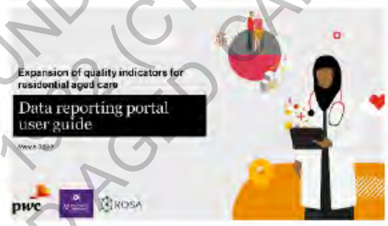
The target pilot recruitment sample was comprised of at least 165 residential aged care services, reflecting approximately 4-6 per cent of the 2,700 residential aged care services nationally. Targets incorporated geographic classification (e.g. metropolitan, rural or remote), location (e.g. New South Wales, Victoria, Tasmania), provider size (e.g. number of places, number of employees), service type and structure (e.g. not for profit, private, government based), and prior involvement in QI Program pilots.

Pilot resources and ongoing support

Participants received support through several resources and activities overseen by the PwC pilot support team. Key pilot resources were developed to provide guidance and facilitate pilot participation, as outlined in Table 3.

Table 3 Pilot resources

Resource	Purpose	Visual example
Pilot handbook	Provided detailed information for the pilot, including quality indicator specifications, definitions, and data collection and reporting methods. This handbook followed a similar structure to the existing manual for the QI Program.	 Expansion of quality indicators for residential aged care
Data reporting poral	An online data reporting portal was developed for services to enter and submit pilot data. The data reporting portal was built using the PwC web-based platform Data Kit and replicated as close as possible the format and functionality used by services for QI Program reporting on the My Aged Care Provider Portal.	 Welcome page
Pilot frequently asked questions	Provided answers to frequently asked questions (FAQs) about the quality indicators, the pilot, data reporting portal, and the QI Program more broadly. FAQs were continually updated as the hotline and mailbox received enquiries throughout the pilot, to ensure all participants had access to the same information.	
Data collection templates	A printable excel data collection template and set of instructions were developed for each quality indicator. The templates were designed to auto calculate summary information to allow services to enter and submit in the data reporting portal.	
Webinar orientation session	A webinar was held on 17 March 2022 as an induction to help participants prepare for the pilot. The session introduced participants to the PwC pilot support team and provided an in-depth overview of the pilot quality indicators, data collection requirements and support materials.	 Expansion of quality indicators for residential aged care Pilot webinar

Resource	Purpose	Visual example
Training materials and information resources	The webinar session was recorded and made available to all participants on the data reporting portal as a key resource. Quick reference guides were developed to provide digestible summaries of the quality indicator specifications, definitions, and data collection and reporting methods, as well as case studies for each quality indicator.	 Activities of daily living – Shah MBI
Pilot hotline and mailbox	A pilot enquiry hotline and mailbox were established to coach services and provide ongoing support before, during and after the pilot.	02 8266 1017 qipilotresidentialcare@au.pwc.com
Data reporting portal user guide	The data reporting portal user guide was developed to provide services with an overview of the data reporting portal, including instructions on how to access the portal, navigate pages, and enter and submit pilot data.	 Expansion of quality indicators for residential aged care Data reporting portal user guide

Proactive weekly emails provided key reminders and prompts for services to contact the pilot support team when experiencing challenges with pilot participation, including questions relating to data collection and reporting.

Snapshot of key communications with pilot participants:

- Approximately 510 emails were sent by services to the mailbox throughout pilot recruitment, during the pilot and in the period after the pilot. The most common queries related to pilot registration, access to and navigating the data reporting portal, and understanding the quality indicator data collection requirements.
- Approximately 100 inbound phone calls were received by the telephone hotline. Calls ranged from less than a minute to up to 30 minutes. Short phone calls generally related to access to the data reporting portal, while longer phone calls usually related to questions on technical specifications of a quality indicators or coaching services to enter and submit data into the data reporting portal.
- Approximately 350 proactive outbound calls were made to services to offer ongoing support and to gauge potential for unforeseen challenges with data collection and reporting. In weeks 5 and 6, all pilot participants were contacted via the telephone hotline to check on progress and to help with early identification of issues prior to the conclusion of pilot.

Pilot demographics

All services registered for the pilot answered demographic questions when first accessing the data reporting portal. Questions collected information relevant to the demographic groups in the sampling frame. All demographic groups in the sampling frame were represented in the pilot sample, as summarised below.

Jurisdiction (see Figure 4):

- All states and territories were represented in the pilot.
- There was an underrepresentation of services from Queensland and Western Australia by approximately 6 per cent and 5 per cent, respectively.
- Representation across other state and territories broadly aligned to the demographic targets.

Geographical classification (see Figure 5):

- There was an overrepresentation of around 8 per cent in rural services and an underrepresentation of around 13 per cent in metropolitan services.
- The number of remote services was low; however, the target number of services for remote population was exceeded by 4 per cent.

Service type (see Figure 6):

- There was an underrepresentation of around 24 per cent in private services.
- There was an overrepresentation of around 22 per cent in not for profit services.

Service size (number of staff and care recipient places) (see Figures 7 and 8):

- There was an underrepresentation for services with 75-99 care recipients and <25 care recipients by around 16 per cent and 10 percent respectively.
- Representation of service size by number of employees at the service was broadly aligned with the target percentages, except for 50+ FTE where an underrepresentation of approximately 8 per cent was observed.

Figure 4 Pilot sample (131 services) and sampling frame target by State and Territory

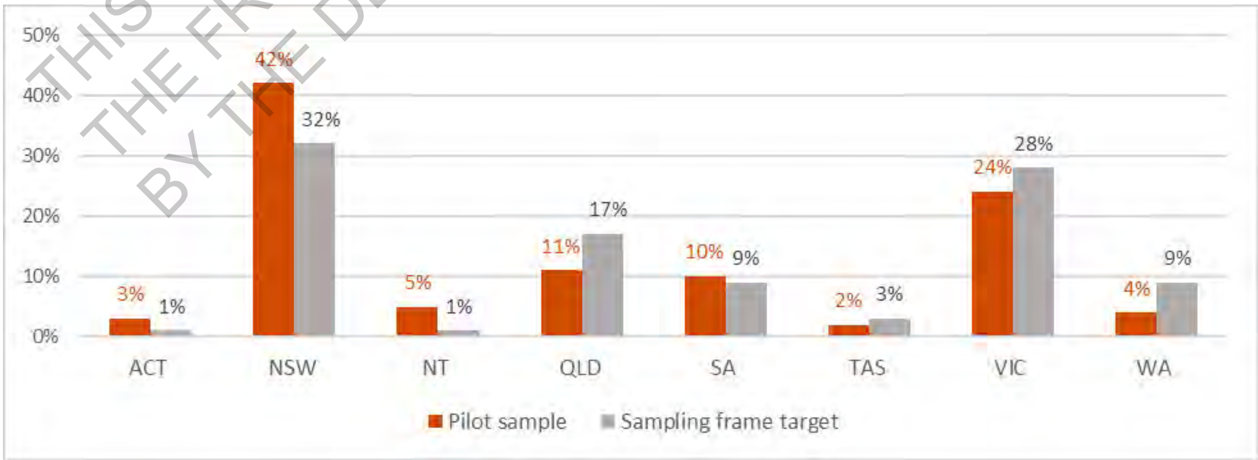


Figure 5 Pilot sample (131 services) and sampling frame target by geographic classification

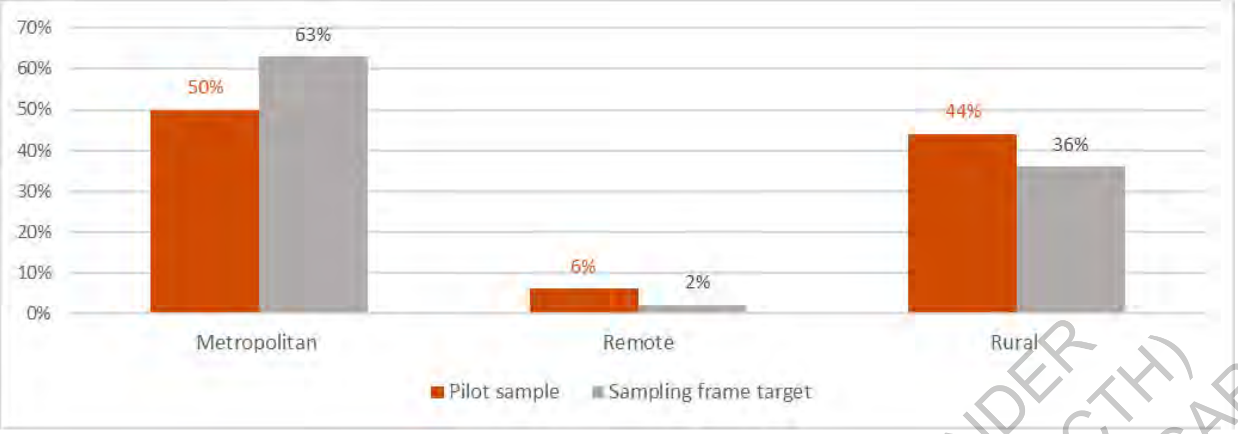


Figure 6 Pilot sample (131 services) and sampling frame target by service type

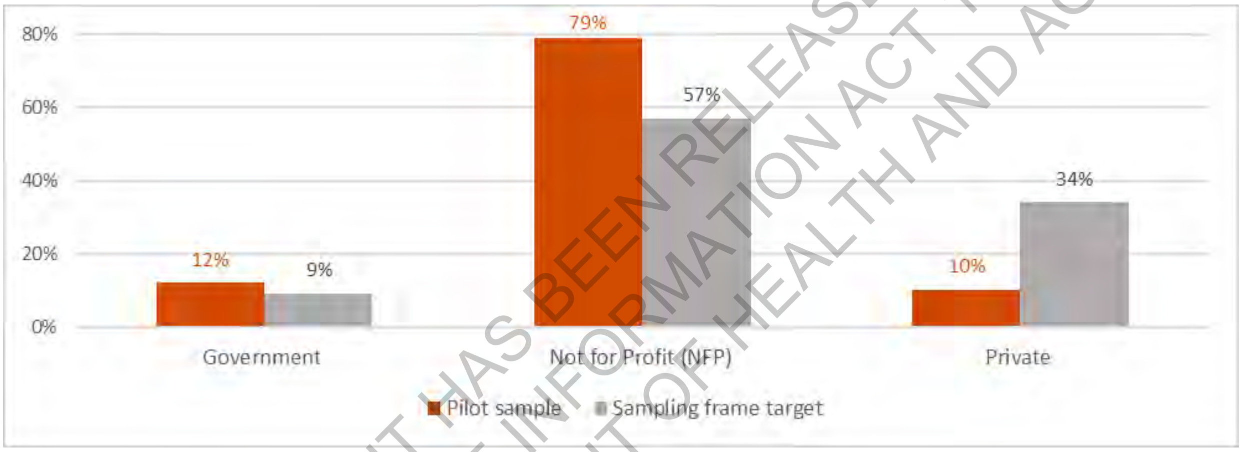


Figure 7 Pilot sample (131 services) and sampling frame target by number of residential aged care places

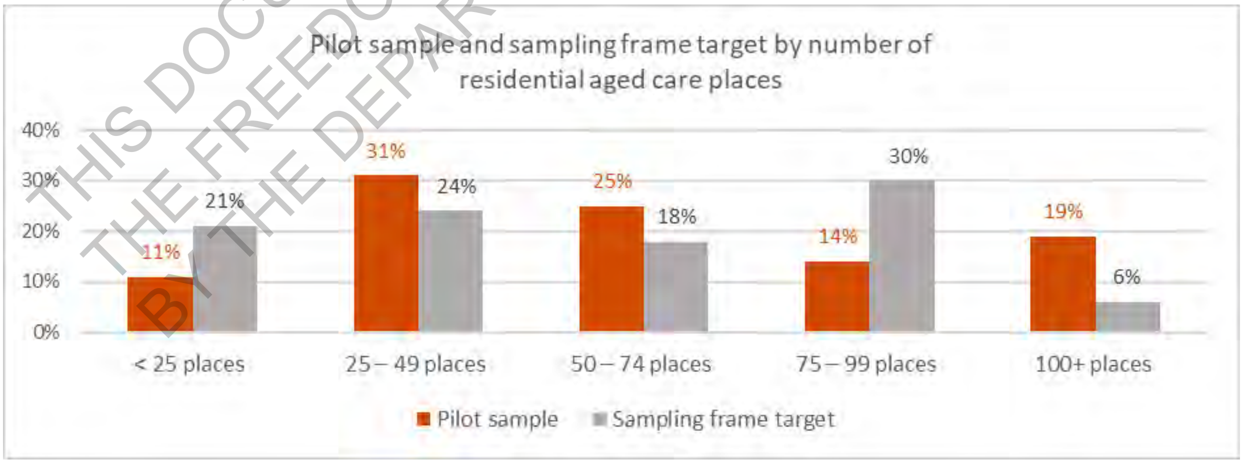
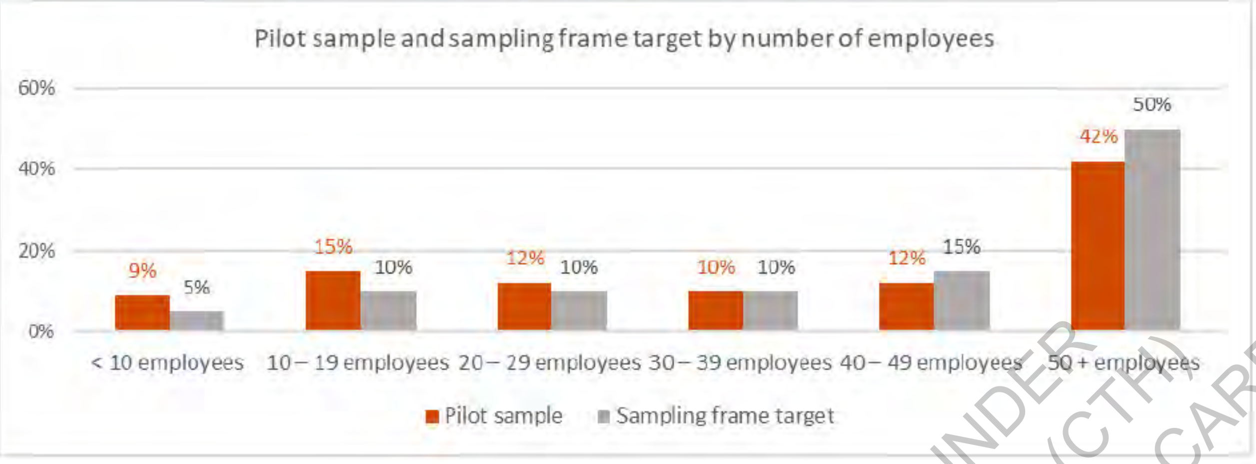


Figure 8 Pilot sample (131 services) and sampling frame target by number of employees



Pilot data submission

Each service registered for the pilot had a unique page on the data reporting portal. Services nominated at least two pilot point of contacts, and each contact had a unique log on to the data reporting portal and their service page.

At the conclusion of the pilot, 131 residential aged care services submitted pilot quality indicator data. Participation levels were continuously monitored by in-flight analysis examining services engagement with the data reporting portal (Data Kit).

Despite proactive communications via the telephone hotline and mailbox targeted services a number of services were not be able to collect and report data for all pilot quality indicators. The majority of services cited the impacts of the COVID-19 pandemic limited the ability to collect and report pilot data, with the remaining services noting staff turnover and conflicting priorities as key reasons for not submitting data.

The breakdown of quality indicator data submissions received is outlined below.

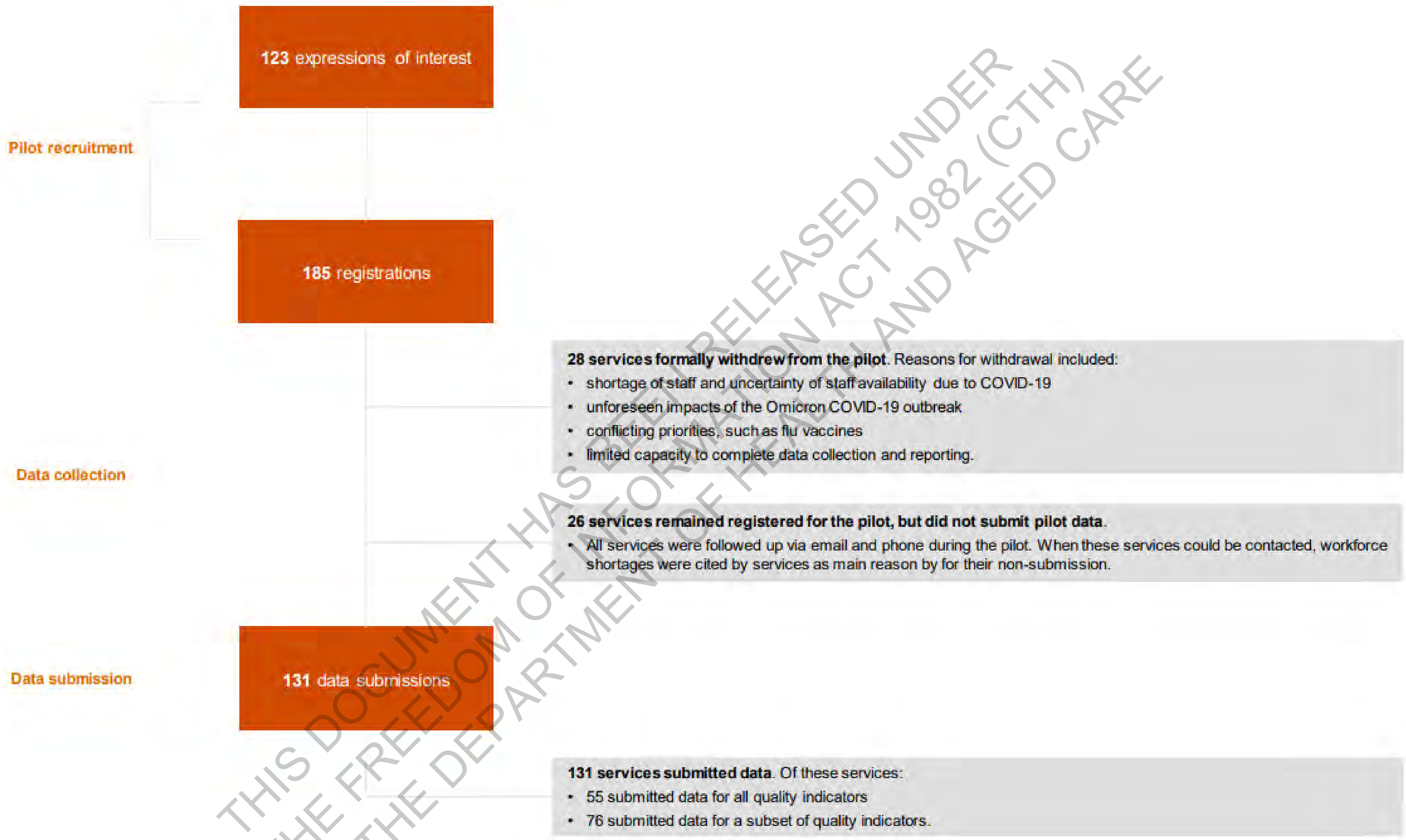
Summary of quantitative pilot data

- 55 services submitted quantitative data for all pilot quality indicators.
- 76 services submitted quantitative data for a subset of pilot quality indicators.
- Listed below are the number of submissions for each of the pilot quality of care domains:
    s22
    [redacted]
    - Quality of life: 74

The final number of registered services, formal withdrawals, and complete and partial data submissions is shown in Figure 9 on the following page.

Overview

Figure 9 Overview of pilot participation



28 services formally withdrew from the pilot. Reasons for withdrawal included:

- shortage of staff and uncertainty of staff availability due to COVID-19
- unforeseen impacts of the Omicron COVID-19 outbreak
- conflicting priorities, such as flu vaccines
- limited capacity to complete data collection and reporting.

26 services remained registered for the pilot, but did not submit pilot data.

- All services were followed up via email and phone during the pilot. When these services could be contacted, workforce shortages were cited by services as main reason by for their non-submission.

131 services submitted data. Of these services:

- 55 submitted data for all quality indicators
- 76 submitted data for a subset of quality indicators.

Pilot feedback survey submissions

Feedback surveys were made available to all participants in the data reporting portal, encouraging qualitative feedback on the:

- relevance, appropriateness, and usability of the piloted quality indicators
- nature and implications of required data collection
- usefulness of pilot support materials
- usability of the data reporting portal
- QI Program more broadly
- usefulness of the service reports.

The breakdown of qualitative data submissions received is outlined below.

Summary of qualitative pilot data

- 86 services submitted qualitative data by answering one or more of the pilot feedback surveys.
- The breakdown of the number of responses for each of the individual feedback surveys is outlined below:

  s22 [redacted]

  - Quality of life: 78

  s22 [redacted]

Service reports

Service reports were made accessible via the data reporting portal on 9 May 2022, accompanied by a user guide to support interpretation of pilot quality indicator data. The format of these reports was intentionally simple, using graphical illustrations where possible, and provided a snapshot of pilot quality indicator results at an individual service and de-identified averages across all pilot participants and service demographic groups. To maintain the confidentiality of pilot participants, filtering by demographic groups could not be applied to a cohort of less than five services.

Services were invited to provide feedback on the usefulness of the service reports by completing a survey in the data reporting portal.

Pilot data analysis

During the pilot, feedback was collected from participants on their experience and the extent to which the overarching QI Program objectives and pilot objectives were met.

Quantitative analysis

Participants generated quantitative data through the submission of quality indicator data. Quality assurance was undertaken on the raw quantitative data submitted by participants, including:

- identifying transcription errors (e.g. negative numbers, key mis-strokes)
- manually validating unusual or 'suspect' data entries against comments and data submitted in other quality indicators (e.g. significant variation in the number of care recipients assessed between quality indicators)
- identifying reporting errors (e.g. instances where services reported a larger numerator than denominator or a larger number of care recipients assessed for the additional reporting measure)
- identification of any remaining outlier data that was not amended through previous quality assurance processes
- verbal confirmation with the service to verify outliers and possible data entry errors, prior to making any adjustments to raw data.

Following the quality assurance process, the following analysis was completed for each quality indicator:

- calculation of summary statistics (e.g. pilot averages, median, range, and standard deviations)
- analysis of quality indicator values based on demographics
- graphical representation of relevant data for each quality indicator
- analysis of emerging key insights for each quality indicator.

Qualitative analysis

Qualitative data was primarily gathered through the pilot feedback surveys, with a smaller volume of data generated through the mailbox and telephone hotline support processes. The process for analysing this information included:

- quantification of responses for each binary survey question
- thematic coding of free text responses related to individual quality indicators
- a review of ad hoc feedback received through the hotline and mailbox; cross checked against themes identified in the responses to the pilot feedback surveys
- manual verification with services where further clarity was needed on qualitative data provided
- a selection of illustrative qualitative data for key insights, including identification of quotes from services in free text responses
- an analysis of emerging key insights from the data for each quality indicator.

Synthesis of pilot data

Key insights from quantitative and qualitative data were synthesised for each quality indicator. Discrepancies between insights generated through qualitative and quantitative methods were identified and causes were considered. Where causes could not be verified through other means, limitations or need for further investigation were identified. Triangulated results were categorised against the pilot objectives. The following should be noted when considering the pilot data results:

- the quantitative findings for each quality indicator have been calculated using all data submissions received during the pilot, including to determine whether:
    - prevalence data supports inclusion in the QI Program
    - frequency in variation provides meaningful differences between services
    - mean and median are as expected using current definitions.
- preferred tool for quality indicators with multiple assessment options (i.e. activities of daily living
- variations in the sample composition from demographic targets were identifed during analysis and implications were considered (however no statistical weighting was applied)
- the quantitative data was interpreted as an approximation of the range of results that may be received against each quality indicator to indicate whether this has the potential to support the QI Program objectives, namely:
    - enabling services to monitor their performance and engage in quality improvement
    - providing consumers with comparable information about quality in aged care
- the quantitative data was analysed alongside the qualitative results to assist in evaluating each pilot quality indicator appropriateness for future inclusion in the QI Program.

Pilot limitations

Participation rates due to the COVID-19 Omicron wave in early 2022

- Participation rates were impacted by the rapid escalation of the COVID-19 Omicron wave in early 2022 and the associated workforce challenges experienced by the aged care sector. A significant proportion of care recipients and staff in residential aged care services were affected by COVID-19, either through illness or quarantine and isolation requirements. This resulted in increased demands on services to manage outbreaks and widespread staff shortages across the sector.

Data collection immaturity

- Data collection immaturity results in limitations in:
    - determining whether variation in quality indicator results is due to actual differences in quality of services, or the influence of contextual information about the service (e.g. case mix, or measurement errors due to lack of familiarity with the quality indicators and data collection requirements).
    - establishing reference ranges for quality indicators or as a baseline to measure continuous improvement or conduct trend analysis.
    - drawing conclusions on the relative performance of services or demographic groups, with caution to be exercised when considering the raw differences in values of quality indicators between services and by service demographics.

The constraints of a single six-week pilot

- The pilot construct allowed for only one opportunity for services to collect data against each of the pilot quality indicators (except for activities of daily living which required two assessments for each care recipient). As a result, it was not possible to test if quality indicator results changed when pilot participants became more familiar with the quality indicator specifications and the assessment tools through repeat measurements.

Voluntary pilot participation

- The pilot sought to recruit a diverse sample of services; however, all pilot participants self-nominated. There are inherent limitations in a sample selected on a volunteer basis, known as volunteer bias. It is possible pilot participants represented a cohort of services with organisational characteristics different from the broader cohort of services who chose not to participate.
- Approximately 20 per cent of registered services reported they participated in the 2020 residential aged care quality indicator pilot, reducing any potential bias or over-weighting of services who have previous experience with a pilot.

A summary of the pilot approach is included in the *Expansion of quality indicators for residential aged care – Post-pilot analysis report.* This is provided at Attachment K.

1.2.7 Post-pilot TEG meeting

The post-pilot TEG meeting was held on Friday 20 May 2022. The purpose of the meeting was to seek technical and clinical expertise in relation to pilot findings and to discuss potential considerations of the identified quality indicators for the future expansion of the QI Program.

The Pilot handbook (see Attachment L) was provided as pre-reading to members outlining detailed information about the quality indicators selected for pilot, including the technical specifications and data collection methods. During the meeting, a summary of the quantitiative and qualitative pilot findings was presented (see Attachment M). The following guiding questions were provided to members to support consideration of the pilot quality indicators and their potential inclusion in the QI Program:

1. Were the pilot results (e.g. the range and mean) for each of the quality indicator expected?
2. Do the quantitative results support the inclusion of any pilot quality indicators in the QI Program?
3. Do the qualitative results support the inclusion of any pilot quality indicators in the QI Program?
4. Are any changes required to the quality indicators to support their inclusion in the QI Program?
5. What else is required to support services to understand the quality indicators and support data collection and quality improvement activities?

The discussion and findings of the post-pilot TEG meeting has been synthesised into the *Expansion of quality indicators for residential aged care – Post-pilot Technical Expert Group summary report.* This is provided at Attachment N.

1.2.8 Consortium consolidation workshop with the department and quality indicator assessment

A consortium-led consolidation workshop was held with the department on 31 May 2022. The overarching purpose of this workshop was to discuss the outcomes and key considerations highlighted during the pilot and post-pilot TEG meeting. Potential iterations to the technical specifications of the pilot quality indicators were discussed, identifying enablers and barriers to support future QI Program implementation.

Quality indicator assessment

Following the consolidation process, each quality indicator was assessed for its ability to support the objectives of the QI Program and its readiness for implementation.

The process and findings summarised in this report are aligned to the assessment approach that supported the expansion of the QI Program in 2020. Two ratings are used to show the consortium’s assessment of each quality indicator’s ability to support the objectives of the QI Program.

➔ The quality indicator is suitable to support the QI Program’s objectives and is ready to move into the implementation phase.

✗ The quality indicator is not suitable to support the QI Program’s objectives or requires substantial work for it to be ready to move into the implementation phase.

The quality indicators have been assessed against revised quality indicator technical specifications, developed using pilot feedback, technical expert guidance in the post-pilot TEG meeting and through the consolidation process.

It is anticipated future inclusion of these quality indicators as part of the QI Program would be supported by several preparatory activities to ensure successful implementation. These include activities and further consideration relating to:

- communication and engagement activities with residential aged care services to support introduction of any new quality indicators
- revisions to the QI Program resources (e.g. the QI Program Manual – Part A, Part B, QI Program Data Recording Templates, Quick Reference Guides, Frequently Asked Questions, and QI Program interactive modules)
- continued development of mechanisms and capacity building initiatives to support services to reliably collect quality indicator data
- consideration of a staggered introduction of new quality indicators or an initial period of voluntarily reporting.

In the following chapters of this report, project findings for each project stage are presented by each individual quality of care domains, with a summary of the quality indicator evaluation.

7

Quality of life

7.1 Quality of life overview

The Royal Commission recommended a comprehensive quality of life assessment tool is implemented in residential aged care. Quality of life refers to a person's perception of their position in life taking into consideration their environment and their goals, expectations, standards, and concerns. It includes their emotional, physical, material, and social wellbeing. Regular monitoring of quality of life is an important part of routine care and allows services to tailor and improve care.

7.2. Assessment tools for this domain

An earlier piece of work led by Flinders University included a comprehensive evidence review of validated tools to measure quality of life, consumer experience and consumer satisfaction in aged care, examining their appropriateness for residential aged care for the purposes of potential incorporation in the QI Program. [5] A number of quality of life assessment tools were identified through this review and included in stakeholder consultations. The identified assessment tools are outlined in Table 49.

Table 49 Qualiy of life assessment tools

Quality of life assessment tools
Quality of Life–Aged Care Consumers (QOL-ACC) This tool was designed specifically for quality assessment in aged care to capture consumer (older person and family carer) focused quality of life outcomes from their own perspective. It was co-designed with consumers in Australia for used in aged care. The tool consists of six dimensions: mobility, emotional wellbeing, social connections, independence, activities, and pain management with five response levels attached to each dimension. There are self-completed, interviewer administered and proxy versions of the QOL-ACC available.
Good Spirit, Good life tool (GSGL) This non-preference based tool measures the quality of life of older Aboriginal Australians aged 45 years and over. It consists of twelve dimensions: family and friends, country, community, culture, health, respect, elder role, supports and services, safety and security, spirituality, future planning, and basic needs. There is also a carer version of the tool available. It is the first instrument of its kind developed from its inception with older Aboriginal people and was designed to be applied with this population.
Dementia Quality of Life tool (DEMQOL) This non-preference based tool measures the health-related quality of life of individuals with dementia. The tool has five dimensions: health and well-being, cognitive functioning, social relationships, daily activities, and self-concept. There are 28 self-report measures completed by the person with dementia, and 31 items competed by a caregiver.

7.3 Findings from the stakeholder consultations

During consultations, stakeholders were asked to consider the quality of life assessment tools. A summary of the feedback received during the consultations is outlined in Table 50.

---

[5] Ratcliffe J, Khadka J, Crocker M, Lay K, Caughey G, Cleland J, Gordon S, Westbrook J. Measurement tools for assessing quality of life, consumer satisfaction and consumer experience across residential and in-home aged care: Summary Report. Caring Futures institute, Flinders University, October 2021.

Table 50 Summary of stakeholder feedback for quality of life

Themes	Stakeholder feedback
Attribution and quality improvement	• Strong support was voiced by older Australians and service providers for consumer experience and quality of life measures in guiding quality improvement. • Quality of life measures were the most widely preferred. • A number of services are currently using information on care recipient quality of life, consumer experience and satisfaction to guide practice. • This includes the use of the quality of life assessment tool (Quality of Life, Aged Care Consumers - QOL-ACC) to support services to engage in meaningful conversations with care recipients and to support quality improvements. Other tools identified as being used in practice included the Adult Social Care Outcomes Toolkit (ASCOT) and EQ5D. • Stakeholders supported use of QOL-ACC, noting it would allow for meaningful conversations with care recipients and support quality improvements.
Definitions, inclusion, and exclusion criteria	• On balance, most stakeholders preferred a quality of life assessment tool over other tools measuring consumer experience and consumer satisfaction. • Quality indicators complimentary to consumer experience and consumer satisfaction assessment tools include measures relating to the quality and types of food provided, access to outside spaces, and care recipient turnover. • Appropriate risk adjustment or inclusion/exclusion criteria are necessary to ensure services do not avoid accepting older Australians with higher complexity or clinical care needs.
Feasibility, data collection and reporting	• Point in time measurement presents complexities in assessing a person's wellbeing. • Frequency of data collection should be carefully considered to limit burden on older Australians (e.g. some care recipients may not like completing questionnaires or surveys). There were mixed views from stakeholders on the appropriate frequency of data collection. • Consideration should be given to the most appropriate mode of administration. Self-completion of consumer experience and quality of life assessment tools is widely recognised as best practice. The use of an alternate workforce could also be considered to assist Australians in completing the relevant assessment, noting that service providers widely acknowledged the merit in the conversations it prompted. • Clear arrangements are required for proxy administered assessments, with assessment tools, including QOL-ACC providing clear guidance to support proxy administration. • Assessments should be tailored to support older Australians. This includes older Australians with cognitive, visual or physical impairment, or culturally and linguistically diverse needs, including through the use of trusted representatives and/or the availability of assessment tools in different formats, including via tablet, computer or hard copy (pen and paper survey).

During consultations, stakeholders provided support for the inclusion of an assessment tool measuring quality of life in the QI Program. The Quality of Life – Aged Care Consumers (QOL-ACC) assessment tool was most favoured.

7.4 Findings from the pre-pilot Technical Expert Group (TEG) meeting

7.4.1 Potential quality indicator for TEG consideration

A potential quality of life quality indicator was constructed based on stakeholder views and put forward for TEG consideration and feedback to support further refinement and selection of quality indicators for pilot.

Table 51 Potential quality of life quality indicator for TEG consideration

Potential quality indicator	Definition / assessment tool	Collection method	Technical Specifications		
			Numerator	Denominator	Exclusions
Percentage of care recipients whose quality of life declined	Quality of life measured using the Quality of life, Aged care consumers (QOL-ACC).	Comparison of QOL-ACC score for each care recipient, or their proxy, in relation to their last assessment - taken around the same time last quarter. Collection through online platforms, self-completion and scripted survey are to be considered. Opportunities and disadvantages of known/anonymous reporting must be determined to inform collection methods.	Number of care recipients whose scores on the QOL-ACC declined in the last 3 months.	All care recipients, minus exclusions.	Care recipients who withheld consent to undergo an assessment for quality of life for the entire quarter. Care recipients who were absent from the service for the entire quarter. Care recipients who are receiving end of life care.

7.4.2 Summary of TEG feedback

A summary of feedback received from members during the pre-pilot TEG meeting and through the online survey is outlined in Table 52.

Table 52 Summary of TEG survey responses and consultation feedback for quality of life

Themes	Survey results	TEG feedback
Quality improvement	• Quality indicator supports care quality and quality improvement (n=8)* *total survey responses (n=11)	• Consumer experience and quality of life measures were widely considered to support quality improvement, with quality of life measures being preferred. • It was acknowledged that the Royal Commission recommended a comprehensive quality of life assessment tool and that Government has committed to this. • There are known challenges with correlating service providers impact on care recipient's quality of life. This can be influenced by various factors including acute illness or a major change in health status. • Mixed views on whether all elements of a care recipient's quality of life can be influenced by service providers (e.g. some may be influenced by a care recipient's life circumstance. • It is important that 'decline' is defined and a clinically meaningful change in score is determined. Further consideration is required to define decline in quality of life and what change in score would be considered meaningful. • An alternative quality indicator was proposed to measure point in time quality of life.

Themes	Survey results	TEG feedback
Modalities of tool administration	• Face to face (n=8) • Tablet (n=5) • Paper based (n=5) • Email (n=1) • All (n=5)* *total survey responses (n=11)	• Self-completion of CEQOL assessment tools is widely recognised as best practice, with clear arrangements for proxy administered assessments with clear guidance. • Assessments should be tailored to support older Australians, including those with cognitive, visual or physical impairment, or culturally and linguistically diverse needs.
Use of proxy	• Proxies could be used for care recipients who cannot self-report (yes n=4, unsure n=7)* *total survey responses (n=11)	• TEG members agreed that proxies are important advocates for older Australians in aged care. • The proxy preferences of care recipients should be also considered (e.g. use of a preferred carer or staff member). • Communication experts could be engaged to support administration of the tool and improve reliability of data. • Challenges were described with the use of proxies to complete tools and the validity of results compared to self-reporting. • Care recipients self-completing assessment tools was preferred, however if required, proxies should be clearly defined.
Data collection frequency	• Quality indicator to be collected quarterly (yes n=7, no n= 1)* *total survey responses (n=8)	• There was some support for revising the measure to one focused on single point prevalence (e.g. percentage of care recipients who have poor QoL or prevalence of unhappiness). This would reduce the data collection burden required to collect and compare sequential assessments. • Further consideration is required to determine an appropriate time period for data collection that will result in change e.g. 3, 6, or 12-months.
Data reporting	• Data collected by proxies should be reported separately (yes n=8, no n=1)* *total survey responses (n=10)	• There was support for the separation of proxy and non-proxy reported data, given statistical discrepancy that should be adjusted for any future publication.
Collection bias	• Data should be collected by someone independent from the service (n=7) or a combination of independent and service collection (n=4)* *total survey responses (n=11)	• Concerns were raised that service provider bias may emerge if quality of life reporting was published publicly. • There was support for use of independent collectors.
Exclusions	• Are there instances that should be excluded (yes n=2, no n=5)* *total survey responses (n=7)	• There was support inclusion of all care recipients.

7.5 Department presentation summary

7.5.1 Key considerations presented for discussion at the Department presentation

The following discussion points were highlighted for further consideration during the Department presentation:

- In the pilot and over the first 12 months post-implementation of the measure in the QI Program, it is recommended that:
    - the point prevalence of 'poor' or 'very poor' quality of life be recorded
    - consideration be given to whether the point prevalence of all five categories should be reported.
- It is recommended that care recipients receiving end of life care or withholding consent are not exclusions. If these are exclusions, is it recommended that these figures are reported.
- In the future, the quality indicator could measure a decline in quality of life. A 'decline' may be defined as a downward movement from one category to another (e.g. 'moderate' to 'poor'). However, this may be the consequence of a 1-point change in score. The frequency distribution of scores over the pilot and early implementation period (adopting a prevalence measure) will inform the definition of a clinically meaningful decline in quality of life to support the implementation of an incidence measure (e.g. 3-point decline).

7.5.2 Summary of department feedback

A summary of the feedback received during the Department presentation is outlined in Table 53.

Table 53 Summary of Department presentation discussion on quality of life

Themes	Discussion points
Quality indicator specifications	**Definitions** • There was support for quality of life measuring prevalence rather than decline, with initial reporting to focus on the proportion of care recipients who report excellent or good quality of life using the QOL-ACC tool. **Collection frequency** • The five QOL-ACC categories have not been piloted at a population level in residential aged care. • Quarterly reporting is reasonable, noting it is important to explore the responsiveness over time and what impact a residential aged care service provider has on care recipient's quality of life. • It was acknowledged while self- reporting is preferred, facilitating this through the QI Program and to maintain anonymity requires consideration. **Collector** • A proxy for care recipients experiencing cognitive decline or dementia was proposed, stratifying reporting to indicate when results were obtained via self-reporting (including interview) or proxy completion. **Additional reporting** • Collection and reporting of all five QOL-ACC categories would provide important frequency of distribution information to determine meaningful change.
Additional considerations	• Agreement the tool needs to be trialled and refined over time, with further work required to understand appropriate responses by service providers to improve quality of life scores, and to inform benchmarking activities. • The inclusion of quality of life with existing consumer experience data collection was said to not contribute materially to increase data burden, given the size and simplicity of the QOL-ACC. • There are opportunities to link quality of life measures with other domains (including pain and workforce).

7.6 Selection of pilot quality indicators

Following the Department presentation, a quality of life quality indicator was selected for pilot. An overview of the quality of life quality indicator and specifications selected for pilot is outlined in Table 54.

Table 54 Quality of life quality indicator overview

Percentage of care recipients who report 'good' or 'excellent' quality of life

Collection

- One quality of life assessment for each care recipient during the assessment period.

Quality indicator reporting

- Care recipients who reported 'Good' or 'Excellent' quality of life using the Quality of Life – Aged Care Consumers (QOL-ACC).

Additional reporting

- Care recipients assessed for the quality of life quality indicator
- Care recipients who reported quality of life through self-completion of the QOL-ACC six question survey:
    - 'Excellent' (care recipients who score between 22–24)
    - 'Good' (care recipients who score between 19–21)
    - 'Moderate' (care recipients who score between 14–18)
    - 'Poor' (care recipients who score between 8–13)
    - 'Very poor' (care recipients who score between 0–7).
- Care recipients who reported quality of life through interviewer administered of the QOL-ACC six question survey:
    - 'Excellent' (care recipients who score between 22–24)
    - 'Good' (care recipients who score between 19–21)
    - 'Moderate' (care recipients who score between 14–18)
    - 'Poor' (care recipients who score between 8–13)
    - 'Very poor' (care recipients who score between 0–7).
- Care recipients who reported quality of life through proxy-completion of the QOL-ACC six question survey:
    - 'Excellent' (care recipients who score between 22–24)
    - 'Good' (care recipients who score between 19–21)
    - 'Moderate' (care recipients who score between 14–18)
    - 'Poor' (care recipients who score between 8–13)
    - 'Very poor' (care recipients who score between 0–7).

Exclusions

- Care recipients who withheld consent to complete a quality of life assessment during the entire assessment period.
- Care recipients who were absent from the service for the entire assessment period.

7.7 Findings from the residential aged care quality indicator pilot

7.7.1 Quantitative analysis of pilot results

From the 74 data submissions received for the quality of life quality indicator:

Pilot average quality indicator value

- The average reported percentage of care recipients who reported 'good' or 'excellent' quality of life was 71.41 per cent, and the median was 74.33 per cent.

Summary totals

- 2,441 care recipients were assessed for the quality of life quality indicator.
- 1,712 care recipients reported 'good' or 'excellent' quality of life.

Exclusions

- 1,346 care recipients were excluded because they withheld consent to complete a quality of life assessment.
- 41 care recipients were excluded because they were absent from the service.

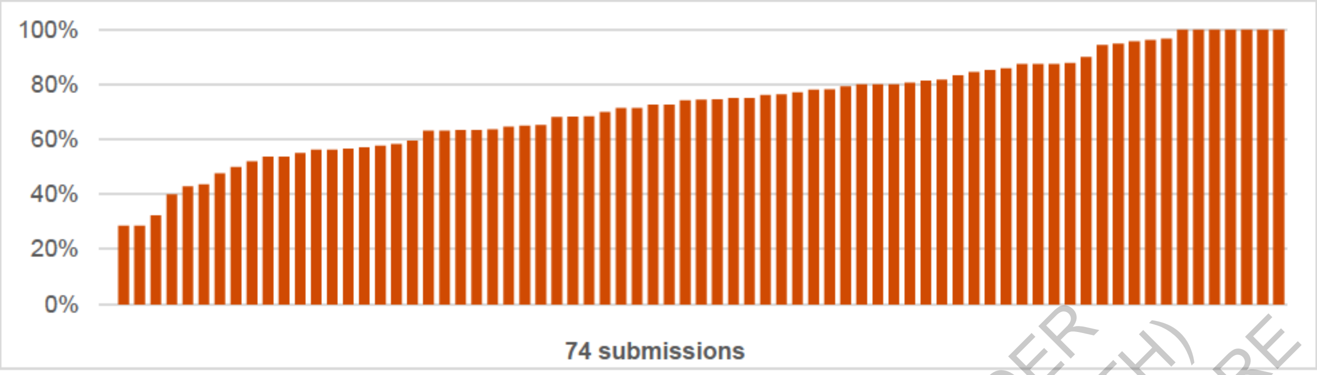
Additional reporting

Method of administration	Scoring category					
	Excellent	Good	Moderate	Poor	Very poor	Total
Self-reported	261	180	101	17	3	562
Interview administered	545	442	357	88	9	1441
Proxy completion	181	103	103	47	4	438

Pilot average and frequency of distribution

Overall, services reported a pilot average of 71.41 per cent of care recipients who reported 'good' or 'excellent' quality of life. Figure 29 shows the range of service responses for care recipients who reported 'good' or 'excellent' quality of life was between 28.57 per cent and 100.00 percent. The majority of service responses were high, with only four services reporting a prevalence of less than 40.00 per cent.

Figure 29 Percentage of care recipients who report 'good' or 'excellent' quality of life (n=74)



The majority of care recipients reported quality of life through interview completion of the QOL-ACC survey (64.33 per cent). Several services reported due to the short timeframe for completing the quality of life quality indicator, many individuals were unable to complete proxy surveys on time. The low number of proxy completion may explain the large number of care recipients excluded because they (of their proxy) withheld consent to complete a quality of life assessment.

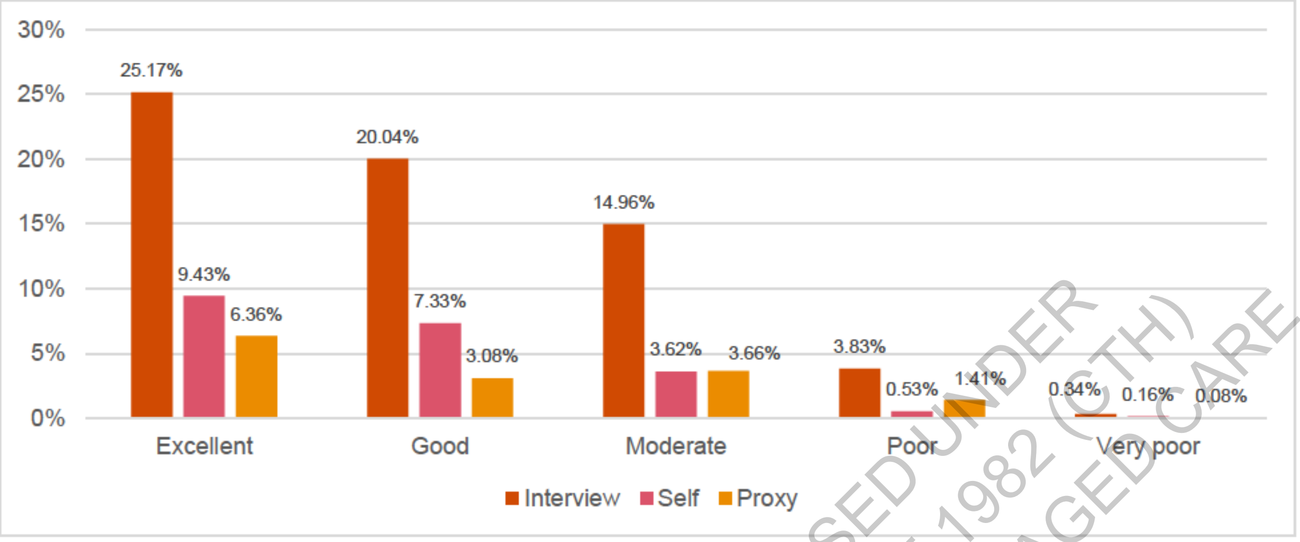
The breakdown of survey responses across the three methods of completion is shown in Table 55.

Table 55: Percentage of care recipients who reported quality of life, reported against three methods of completion (n=74)

	Method of completion
Self-completion	21.07%
Interview administered	64.33%
Proxy-completion	14.59%

On average, 6.34 per cent of care recipients at a service reported a 'poor' or 'very poor' quality of life while 41.00 per cent of care recipients reported an 'excellent' quality of life. The breakdown of average scores against the five QOL-ACC scoring categories is shown in Figure 30. These results indicate the percentage of care recipients who reported 'good' or 'excellent' quality of life was consistently higher for interview administered completion than for self-completion. Similarly, the percentage of care recipients who reported 'good' or 'excellent' quality of life via proxy completion was typically lower than via self-completion.

Figure 30 Percentage of care recipients who report quality of life against each of the scoring categories and methods of administration (n=74)

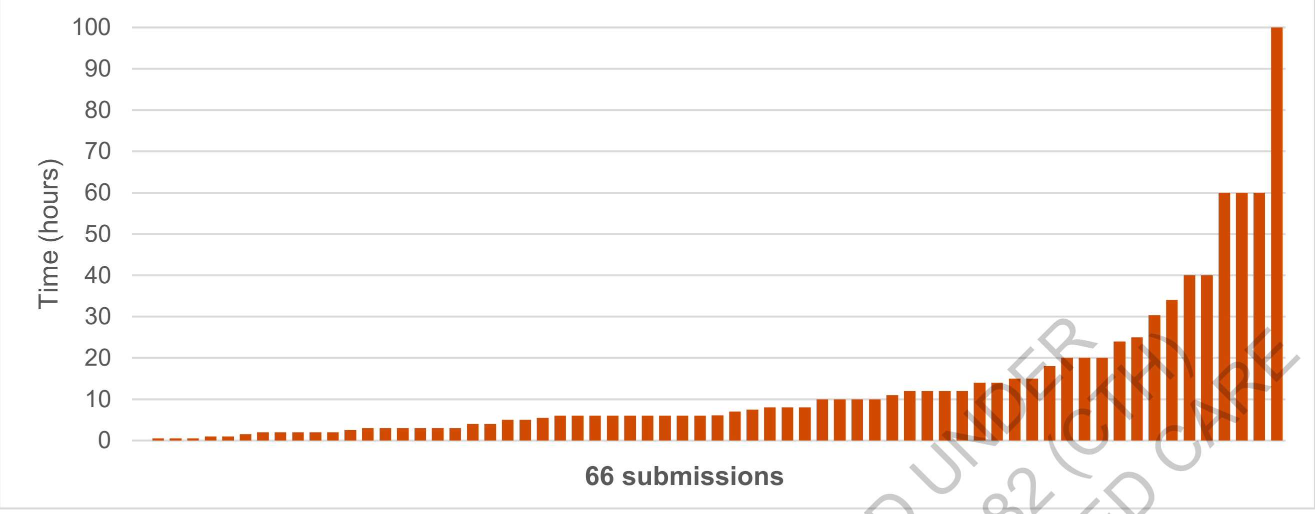


7.7.2 Qualitative analysis of pilot results

Collection of quality indicator data

- Some services (26 per cent) used multiple roles within their workforce for the collection and reporting of this quality indicator.
- The most common roles for data collation included governance team members (35 per cent), nursing staff (34 per cent), lifestyle and wellbeing staff (26 per cent), and directors/managers (25 per cent).
- The median time for data collection and reporting was 6.1 hours, with an average of 24 minutes per care recipient, 13.1 hours per service and a range of 30 minutes to 100 hours (see Figure 31). Self-completed surveys on average took less time.
- 92 per cent of services reported the supporting materials for the quality of life quality indicator provided clear instructions for collecting and reporting data.
- 84 per cent of services used the data recording template to support data collection.
- Nearly a quarter of service providers reported they did not believe amendments were required to assist with data collection. The remaining three-quarters suggested enhancements could include:
    - improvements to supporting materials (e.g. score sheets included with interview questions)
    - consideration to a sampling methodology rather than assessing all care recipients
    - a simplified assessment tool with fewer questions for care recipients, incorporated into daily operations
    - distinguishing between consent withheld by the care recipient versus consent withheld by their proxy in the quality indicator specifications
    - three services advocated for additional staff resources to assist with data collection and reporting.

Figure 31 Time taken (hours) to collect and report on the quality of life quality indicator (n = 66)



Feasibility of quality indicator collection and reporting

- 69 per cent of services reported collecting and monitoring quality of life data prior to the pilot, with 5 per cent of services unsure.
- 27 per cent of services reported the data collected for the quality of life quality indicator was available through care records or systems, with 9 per cent of services unsure.
- 71 per cent of services reported the quality of life quality indicator provided meaningful information could inform service-level quality improvement, with 13 per cent of services unsure.
- 70 per cent of services reported the quality of life quality indicator provided actionable insights to improve an individual's care, with 14 per cent of services unsure.
- 50 per cent of services reported quarterly reporting of the quality of life quality indicator was feasible for their organisation, with 22 per cent of services unsure. Others suggested consideration should be given to bi-annual collection rather than quarterly due to the resource demands and willingness of care recipients to complete the survey.
- 49 per cent of services report additional resources and support were required to make quarterly reporting of this quality of life quality indicator feasible, with 22 per cent of services unsure.

Quality of life assessment tool

- 87 per cent of service providers reported the QOL-ACC assessment tool was easy to understand and complete:
- Additional feedback from services on the QOL-ACC assessment tool notes:
    - consideration is required on the appropriateness of the tool in capturing quality of life for Aboriginal and Torres Strait Islander care recipients (e.g. difficulties gaining proxy feedback from individuals located in regional and remote regions)
    - concerns regarding the subjectivity of proxy completion of the survey
    - the format of the form was not user friendly (e.g. there was no contextual information provided around the purpose of the survey and the font was too small for older people).

- 19 per cent of services reported their service was using the QOL-ACC assessment tool to complete quality of life assessments prior to the pilot. Services who reported they were not using the QOL-ACC assessment tool prior to the pilot said they were using the following tools:
    - Internally developed survey
    - Long-term care quality of life scale (LTC-QoL)
    - Adult Social Care Outcomes Toolkit (ASCOT)
    - Personal Wellbeing Index (PWI) survey.
- 14 per cent of services reported specific training would assist in familiarising staff with the QOL-ACC assessment tool.

7.8 Findings from the post-pilot TEG meeting

Table 56 Summary of post-pilot TEG meeting feedback for quality of life

TEG feedback
• The prevalence of care recipients who reported 'good' or 'excellent' quality of life was higher than anticipated, with limited variation in results across services. • The higher than expected scores may reflect sample bias and the recruitment of higher performing services. • The five QOL-ACC scoring categories for quality of life require further consideration to ensure the frequency of distribution provides scope for services to improve over time and for consumers to compare and contrast services. • Results across the three modes of administration (self-completion, interview administered and proxy-completion) indicate potential collection bias. The testing instrument needs to be accompanied by appropriate information to support administration and be reported separately across three categories for accurate comparison and interpretation. • Training and supporting materials are important, particularly for interviewers and proxies to reduce collection bias and inconsistencies between reported values across the three modes of administration. • Online survey collection and digitised tools could support improved response rates and allow care recipients to provide more truthful answers; however, there are practical challenges with digital methods of collection for older Australians and their proxies. • There is a preference for independent assessment and an alternative workforce should be considered, particularly prior to future publication of data. A TEG member suggested pharmacists soon to be embedded in residential aged care could provide support. It was acknowledged this would increase the costs of data collection and may take away from alternative uses of expertise.

7.9 Outcomes and opportunities for implementation

A summary of feedback from the consolidation process and considerations for QI Program implementation is outlined in Table 57.

Table 57 Quality indicator assessment, consolidation process feedback and implementation considerations for quality of life

Quality indicator	Quality indicator assessment	Feedback from consolidation process	Implementation considerations
Percentage of care recipients who report 'good' or 'excellent' quality of life	➔	• Current collection methods of interview, proxy and self-complete should remain. • To reduce collection bias, resources should provide guidance to support interview and proxy-completed assessment with self-completion remaining the preferred assessment method. • Independent assessors should be considered prior to public reporting. • Survey completion methods (e.g. self-reporting, interview administered and proxy) should be reported within the quality indicators additional reporting data sets. • The current QOL-ACC scoring categories (e.g. good, excellent etc.) are suitable for quality indicator implementation, however over time may need to be revised based on analysis of cumulative results.	• To reduce burden on both services and care recipients and support anonymity, data collection and reporting should capture total number of care recipients offered a QOL-ACC assessment and the responses received. • Online survey options should be explored to promote care recipient self-completion, assist anonymity in responses, to offer alternative formats to address usability issues and to improve data collection accuracy. • Further consideration of the use of independent assessors to reduce the likelihood of completion bias with thought given to data collection frequency. • Consideration should be given to working with indigenous communities to understand how they would best like to be heard and whether the introduction of other tools would be beneficial. • Licensing for use of assessment tools in the QI Program may be required.

The quality of life quality indicator selected for pilot was further refined following synthesis of the pilot, post-pilot TEG, and consolidation process. The updated technical specifications for the quality of life quality indicator is outlined Table 58.

Table 58 Updated post-pilot quality of life quality indicator overview

Percentage of care recipients who report 'good' or 'excellent' quality of life

Collection

- A quality of life assessment must be offered to each care recipient for completion, around the same time every quarter.

Quality indicator reporting

- Care recipients who reported 'Good' or 'Excellent' quality of life using the QOL-ACC.

Additional reporting

- Care recipients who were offered a quality of life assessment for completion.
- Care recipients who reported quality of life through self-completion of the QOL-ACC, scored against the five categories:
  - 'Excellent' (care recipients who score between 22–24)
  - 'Good' (care recipients who score between 19–21)
  - 'Moderate' (care recipients who score between 14–18)
  - 'Poor' (care recipients who score between 8–13)
  - 'Very poor' (care recipients who score between 0–7).
- Care recipients who reported quality of life through interviewer facilitated completion of the QOL-ACC, scored against the five categories:
  - 'Excellent' (care recipients who score between 22–24)
  - 'Good' (care recipients who score between 19–21)
  - 'Moderate' (care recipients who score between 14–18)
  - 'Poor' (care recipients who score between 8–13)
  - 'Very poor' (care recipients who score between 0–7).
- Care recipients who reported quality of life through proxy-completion of the QOL-ACC, scored against the five scoring categories:
  - 'Excellent' (care recipients who score between 22–24)
  - 'Good' (care recipients who score between 19–21)
  - 'Moderate' (care recipients who score between 14–18)
  - 'Poor' (care recipients who score between 8–13)
  - 'Very poor' (care recipients who score between 0–7).

Exclusions

- Care recipients who did not choose to complete the quality of life assessment for the entire quarter.
- Care recipients who were absent from the service for the entire quarter.

www.pwc.com.au

www.pwc.com.au

Development of quality indicators for aged care

Consultation workshop

Consumers, consumer representatives, families and carers

22 November 2021

pwc ROSA The University Of Queensland Australia

Purpose

To seek feedback from consumers, consumer representatives, families and carers on:

- which areas of care and associated measures (quality indicators) are most:
  - meaningful
  - useful for quality improvement
  - appropriate for collection as part of the QI Program
- which consumer experience and quality of life (CEQOL) assessment tools best meet the objectives of the QI Program.

This will help guide the selection of quality indicators for pilot and will support the future expansion of the QI Program.

Agenda

Agenda item
Overview of the project
Overview of the areas of care (domains) identified
Areas of care (domains) for discussion
Identified measures (quality indicators)
Consultation questions for discussion
Next steps

Royal Commission into Aged Care Quality and Safety

Aged care **quality** should be **defined, understood, and capable of being measured**.

Currently there is **a lack of information** about service quality to inform consumer choice, provider quality improvement, regulation and policy development.

To have a consumer centred system, we need a **philosophical shift** and the **voices of people must be heard**.

The Australian Government has responded including by publishing a **Star Rating system** for residential aged care services on My Aged Care by the end of 2022.

Quality indicators measure important aspects of aged care quality that can affect a care recipient's health and wellbeing.

Quality indicators help aged care service providers to measure, monitor, compare and improve the quality of their services.

Quality Indicator Program benefits

For government and policy makers

Provide nationally consistent quality measures across residential care services in Australia

Support sector-wide improvement and provide information about quality aged care

For residential care services

Provide robust, valid data to measure and monitor performance

Enable the use of quality data to identify and implement activities to improve quality of care delivered

For consumers, care recipients and the community

Provide transparent information about quality in aged care

Enhance understanding of quality and assist decision making

Royal Commission into Aged Care Quality and Safety

Recommendation 22:

- expand the quality indicators for care in residential aged care
- develop quality indicators for care at home, and
- implement a comprehensive quality of life assessment tool for people receiving aged care in residential care and at home

Overview of the project

A consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland and the Registry of Senior Australians has been engaged by the Department of Health to assist in the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

This work will identify, assess and pilot evidence-based quality indicators across:

- five areas of care (domains) for in-home aged care
- four areas of care (domains) for residential aged care

and consider a consumer experience and quality of life (CEQOL) domain for in-home and residential aged care.

In-home aged care

19 areas of care (domains)
were identified, assessed and ranked:

230 measures (quality indicators)
were identified, assessed and ranked.

Residential aged care

13 areas of care (domains)
were identified, assessed and ranked:

109 measures (quality indicators)
were identified, assessed and ranked.

Overview of the areas of care (domains) identified

In-home aged care		
Rank	**Area of care**	**No. of quality indicators**
1	Function and activities of daily living (ADLs)	25
2	Service delivery and care plans	64
3	Weight loss / malnutrition / dehydration	7
4	Falls and major injuries	14
5	Pressure injuries / skin integrity	6
6	Workforce	21
7	Pain	10
8	Continence	10
9	Hospitalisations	14
10	Depression	4
Consumer experience and quality of life (CEQOL)		
Quality of life		
	Quality of Life–Aged Care Consumers (QOL-ACC)	-
	Good Spirit, Good life tool (GSGL)	-
	Dementia Quality of Life tool (DEMQOL)	-
	Quality of Care-Aged Care Consumers (QCE-ACC)	-
	Resident Satisfaction Questionnaire (RSQ)	-

Residential aged care		
Rank	**Area of care**	**No. of quality indicators**
1	Function and activities of daily living (ADLs)	24
2	Medication	7
3	Continence	17
4	Infection control	23
5	Depression	9
6	Behavioural symptoms	9
7	Hospitalisations	5
8	Pain	10
Consumer experience and quality of life (CEQOL)		
Quality of life		
	Quality of Life–Aged Care Consumers (QOL-ACC)	-
	Good Spirit, Good life tool (GSGL)	-
	Dementia Quality of Life tool (DEMQOL)	-
Consumer experience		
	Quality of Care-Aged Care Consumers (QCE-ACC)	-
	Consumer Choice Index – 6 Dimensions (CCI-6D)	-
	Consumer Experience Questionnaire (CEQ)	-
Consumer satisfaction		
	Resident Satisfaction Questionnaire (RSQ)	-
	Consumer Perception of Value Questionnaire (CPVQ)	-

Overview of the measures (quality indicators) identified

ID	Quality indicators
1. Function and activities of daily living (ADLs)	
A	People who experienced a decline in function and/or ADLs
B	People whose function and/or ADLs improved
C	People who do not have an assistive device or services but would benefit from these
D	People who do not receive rehabilitation services but would benefit from these
2. Service delivery and care plans	
A	People who have a home care plan
B	People who have missed visits or late visits
C	People who have had a review of their home care plan outcomes
D	People who have had an unplanned readmission to hospital
E	People who receive home care with risk prevention measures
F	Length of visit
3. Weight loss, malnutrition, and dehydration	
A	People who experienced weight loss
B	People who presented to Emergency Department or are hospitalised with weight loss or malnutrition
C	People who experienced dehydration
4. Falls and major injuries	
A	People who had a fall
B	People who had a fall with injury
C	People who sustained a hip fracture
5. Pressure injuries and skin integrity	
A	People who had a pressure injury
B	People who had a pressure injury requiring hospitalisation

ID	Quality indicators
6. Workforce	
A	Responsiveness of staff, safety living at home, and confidence in staff
B	Staff provide consistent home care for people
C	Staff retention
D	Visits for each client per home care worker
E	Home care workers who had a supervision discussion
7. Pain	
A	People who experience daily pain
B	People who have inadequate pain control
C	People whose pain improved
8. Continence	
A	People who experience incontinence
B	People whose continence declined
C	People whose incontinence improved
D	People who have a catheter
9. Hospitalisations	
A	Emergency Department presentation or visits
B	People who are readmitted to hospital
C	People who require hospitalisation
D	People who have a catheter
10. Depression	
A	People whose mood declined
B	People who have fewer depressive symptoms
C	People who have more depressive symptoms
D	People who suffer from depression

Overview of the measures (quality indicators) identified

ID	Quality indicators
1. Function and activities of daily living (ADLs)	
A	People whose function and/or ADLs improved
B	People who experienced a decline in function and/or ADLs
C	People who have received a lack of nursing care to improve ADLs
D	People with little or no activity
E	People who are bedfast (unable to leave bed)
2. Medications	
A	People who experience a high sedative load
B	People who receive antianxiety or hypnotic sedatives
C	People who receive hypnotic medications
3. Continence	
A	People whose incontinence worsened
B	People who have incontinence
C	People who have improved continence
D	People who have in-dwelling catheters
E	People who have faecal impaction
4. Infection control	
A	People who receive a vaccination
B	People who have an antibiotic or antimicrobial prescription
C	People who are receiving treatment for an infection(s)
D	People who are unable to receive a vaccination
E	People who have a urinary tract infection

ID	Quality indicators
5. Depression	
A	People who have worsening depression or declining mood
B	People who have symptoms of depression
6. Behavioural symptoms	
A	People who have worsened behavioural symptoms
B	People who have improved behavioural symptoms
C	People who have behavioural symptoms that affect others
D	People who have a change in their ability to communicate
7. Hospitalisations	
A	People who present at an emergency department
B	People who present at an emergency department without being hospitalised
C	People who have unplanned hospital admission
8. Pain	
A	People who have worsened pain
B	People who have daily pain
C	People who are on long-term pain medication (opioids)

Consultation questions

Questions for discussion

1. What is important for you to know about the quality of care provided by aged care services?
2. Which areas of care are most important to you and why?
3. Within each area of care, which measures are most important to you and why?
4. Could services reporting on these measures help you in choosing aged care services?
5. Do you have any other comments about areas of care or measures?

Next steps

Timeline

15 November – 10 December 2021	**Written and virtual consultations**
Early 2022	**Pilot**
Mid 2022	**Publication of project summary report**

Written consultation

If you would like to provide additional feedback on these areas of care, please feel free to tell us through our written consultation process.

Submissions will be open until 10 December 2021.

In-home aged care

Additional support with the consultation process is available via the:

- Hotline - 02 8266 1016 *Weekdays, 8am - 7pm AEDT*
- Email - qipilothomecare@au.pwc.com.

Residential aged care

Additional support with the consultation process is available via the:

- Hotline - 02 8266 1017 - Weekdays, 8am – 7pm AEDT
- Email - qipilotresidentialcare@au.pwc.com

Consultation schedule

Residential aged care

Domain Sessions – Week 2	
Behavioural symptoms	22 November, 1:00 – 2:00pm AEDT
Hospitalisations	23 November, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	24 November, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	25 November, 12:00 – 1:00pm AEDT
Pain	25 November, 1:00 – 2:00pm AEDT

Domain Sessions – Week 3	
Function and ADLs	29 November, 3:00 – 4:00pm AEDT
Medications	30 November, 12:00 – 1:00pm AEDT
Continence	1 December, 3:00 – 4:00pm AEDT
Infection control	2 December, 1:00 – 2:00pm AEDT
Depression	3 December, 3:00 – 4:00pm AEDT

Domain Sessions – Week 4	
Behavioural symptoms	6 December, 1:00 – 2:00pm AEDT
Hospitalisations	7 December, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	8 December, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	9 December, 12:00 – 1:00pm AEDT
Pain	9 December, 1:00 – 2:00pm AEDT

In-home aged care

Domain sessions – Week 2	
Pain	22 November, 12:00 – 1:00pm AEDT
Continence	23 November, 12:00 – 1:00pm AEDT
Consumer experience and quality of life	24 November, 12:00 – 1:00pm AEDT
Hospitalisations	25 November, 12:00 – 1:00pm AEDT
Consumer experience and quality of life	25 November, 1:00 – 2:00pm AEDT
Depression	26 November, 12:00 – 1:00pm AEDT

Domain sessions – Week 3	
Functions and ADLs	29 November, 12:00 – 1:00pm AEDT
Service delivery and care plans	30 November, 3:00 – 4:00pm AEDT
Weight loss, malnutrition, and dehydration	1 December, 12:00 – 1:00pm AEDT
Falls and major injuries	2 December, 12:00 – 1:00pm AEDT
Pressure injuries and skin integrity	2 December, 4:00 – 5:00pm AEDT
Workforce	3 December, 12:00 – 1:00pm AEDT

Domain sessions – Week 4	
Pain	6 December, 12:00 – 1:00pm AEDT
Continence	7 December, 12:00 – 1:00pm AEDT
Consumer experience and quality of life	8 December, 12:00 – 1:00pm AEDT
Hospitalisations	9 December, 12:00 – 1:00pm AEDT
Consumer experience and quality of life	9 December, 1:00 – 2:00pm AEDT
Depression	10 December, 12:00 – 1:00pm AEDT

Thank you

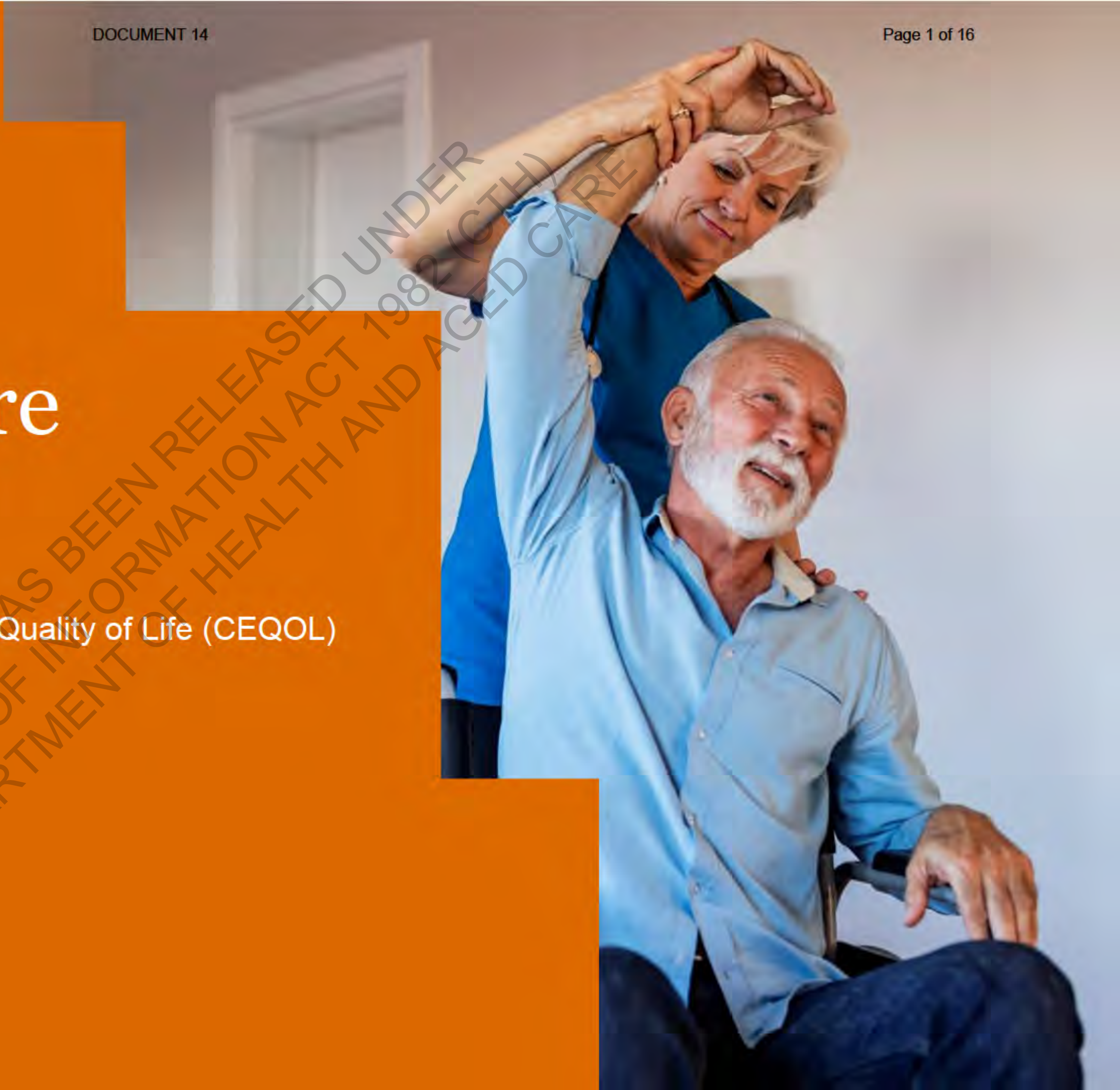
www.pwc.com.au

www.pwc.com.au

Expansion of the residential aged care quality indicators

Consultation workshop | Consumer Experience and Quality of Life (CEQOL)

November 2021



pwc ROSA The University Of Queensland Australia

Purpose

The overall purpose of the consultation phases is to seek feedback from stakeholders on:

- which domains and associated quality indicators are most:
  - meaningful for consumers, providers and the broader aged care sector
  - useful for quality improvement
  - appropriate for quarterly collection as part of the QI Program
- which consumer experience and quality of life (CEQOL) assessment tools best meet the objectives of the QI Program.

This will help guide the selection of quality indicators and CEQOL tools for pilot while supporting the future expansion of the residential aged care QI Program.

Agenda

Agenda item
Department welcome
Overview of the project
Overview of the CEQOL tools
CEQOL tools for discussion
Consultation questions
Selection of preferred CEQOL tools
Next steps

QI Program

Quality indicators measure outcomes that impact on the health and wellbeing of aged care recipients

QI Program

For government and policy makers

Provide nationally consistent quality measures across residential care services in Australia

Support sector-wide improvement and provide information about quality aged care

For residential care services

Provide robust, valid data to measure and monitor performance

Enable the use of quality data to identify and implement activities to improve quality of care delivered

For consumers, care recipients and the community

Provide transparent information about quality in aged care

Enhance understanding of quality and assist decision making

Royal Commission into Aged Care Quality and Safety

Recommendation 22

- expand quality indicators in residential aged care
- develop quality indicators for care at home
- implement a comprehensive quality of life assessment tool for people receiving aged care in residential care and at home.

Overview of the project

Overview of the project

A consortium consisting of PricewaterhouseCoopers (PwC), the Centre for Health Services Research at the University of Queensland and the Registry of Senior Australians has been engaged by the Department of Health to assist in the further expansion of the National Aged Care Mandatory Quality Indicator Program (QI Program).

Development of quality indicators for residential aged care

This work will identify, assess and pilot evidence-based quality indicators across four quality of care domains and examine the use of assessment tools for a consumer experience and quality of life (CEQOL) domain for residential aged care.

pwc ROSA THE UNIVERSITY OF QUEENSLAND AUSTRALIA

Overview of CEQOL

- An evidence review of tools to assess quality of life, consumer experience and consumer satisfaction was completed by Flinders University.
- **Quality of life** refers to a person's perception of their position in life taking into consideration their environment, goals, expectations, standards, and concerns. This includes emotional, physical, material, and social wellbeing.
- **Consumer experience** looks at the experience of the person receiving care.
- **Consumer satisfaction** measures how well a service is meeting an individual's expectations, it also assesses an individual's level of fulfillment with the care and services provided.
- The tools assessing these concepts allow people to provide feedback on their lived experience, and over time, provide information on aged care to assist consumer decision making.
- The Royal Commission into Aged Care Quality and Safety recommended the implementation of a comprehensive quality of life assessment tool for people receiving aged care in residential and at home care.

Poll 1: Selection of preferred domains

Poll 1

Which domains are most important to you?
Please select as many as you like.

Questions to consider when nominating via the poll

1. Which domains are you already focusing on?
2. Which domains will assist services in continuous quality improvement activities?
3. What is important in this domain to measure?
4. Can reporting this measure help consumers make decisions about choosing services?

Please note: Below Poll 1 is a second Poll question. Please do not complete this question for the moment as we will shortly discuss the quality indicators to help inform your selection

PWC to provide screenshot of poll 1

"Which domain is most important to you?

1. **Quality of Life**
2. **Consumer Experience**
3. **Consumer Satisfaction**

CEQOL tools

#	Assessment tool	Dimensions
A	**Quality of life**	
A1	Quality of Life - Aged Care Consumers	Mobility, emotional wellbeing, social connections, independence, activities, and pain management in older Australians.
A2	Good Spirit, Good Life	Family and friends, country, community, culture, health, respect, elder role, supports and services, safety and security, spirituality, future planning, and basic needs in older Aboriginal Australians.
A3	Dementia Quality of Life	Health and well-being, cognitive functioning, social relationships, daily activities, and self-concept in people with dementia.
B	**Consumer experience**	
B1	Quality of Care - Aged Care Consumers	Respect and dignity, services and supports, decision-making, staff skills and training, social relationships, and feedback.
B2	Consumer Choice Index - 6 Dimensions	Care time, spaces, own room, outside and gardens, meaningful activities, and care flexibility in older people with cognitive decline.
B3	Consumer Experience Questionnaire	Dignity, autonomy, and choice; assessment and planning; care; lifestyle; service; feedback; human relations; governance; food, and independence.
C	**Consumer satisfaction**	
C1	Resident Satisfaction Questionnaire	Individual needs; residential centre; social life and involvement in the aged care centre; links with the community; chaplaincy services; resident services; resident involvement, and feedback.
C2	Consumer Perception of Value Questionnaire	Delivery of care; spiritual life; meals; cleanliness; laundry; activities; facilities; and overall satisfaction.

CEQOL tools

Key considerations

- Tools to measure quality of life, consumer experience or consumer satisfaction are **not inter-changeable as they measure different dimensions**.
- The **assessment comprehensiveness of quality of life, consumer experience and consumer satisfaction tools vary**. The holistic approach of quality of life may be particularly useful in the residential aged care environment.
- **Consumer experience tools have previously proven acceptable to the sector** due to meaningful data collection, high response rates and usability.
- The presence of **'satisfaction bias' may result in consumer satisfaction tools being unreliable** to support quality improvement and consumer choice.
- It is currently **unclear how often assessment should be completed**.
- It is **preferred that consumers complete assessments themselves**, however consideration should be given to the circumstances in which a proxy (e.g. family member) may be required.
- Consideration should be given to **format preference of consumers** (e.g. via tablet, computer or hard copy) when completing the preferred assessment tool.

Consultation questions

Questions for discussion prior to Poll 2

1. Is it more important to measure quality of life, consumer experience, or consumer satisfaction?
2. Are there currently any tools used in residential aged care for the measurement of quality of life, consumer experience or consumer satisfaction?
3. Can residential aged care services influence residents quality of life, consumer experience and consumer satisfaction?
4. Would measuring/monitoring these concepts support quality improvement in residential aged care services?
5. How feasible would it be for residential aged care services to collect and report quarterly on this data?
6. Could reporting on quality of life, consumer experience or consumer satisfaction help consumers make decisions about choosing services?

Poll 2: Selection of preferred tools

A poll question has been listed for your consideration. As the discussion continues and the quality indicators are overviewed, please answer the second poll question. There is also an **optional free text question** where you can include any additional comments. Please click “submit” to record your answers.

Poll:

Which CEQOL tools are most meaningful to you?

Questions to consider when nominating via the poll

1. Which tools will assist services in continuous quality improvement activities?
2. Which tools will help consumers make decisions about choosing services?

Residential aged care | Consumer Experience and Quality of Life (CEQOL)

Poll 1: Which CEQOL tools are most meaningful to you (please select as many as you like)

☐ A.1 Quality of Life–Aged Care Consumers (QOL-ACC)
☐ A.2 Good Spirit, Good life tool (GSGL)
☐ A.3 Dementia Quality of Life tool (DEMQOL)
☐ B.1 Quality of Care-Aged Care Consumers (QCE-ACC)
☐ B.2 Consumer Choice Index – 6 Dimensions (CCI-6D)
☐ B.3 Consumer Experience Questionnaire (CEQ)
☐ C.1 Resident Satisfaction Questionnaire (RSQ)
☐ C.2 Consumer Perception of Value Questionnaire (CPVQ)

CEQOL tools

#	Assessment tool	Dimensions
A	**Quality of life**	
A1	Quality of Life - Aged Care Consumers	Mobility, emotional wellbeing, social connections, independence, activities, and pain management in older Australians.
A2	Good Spirit, Good Life	Family and friends, country, community, culture, health, respect, elder role, supports and services, safety and security, spirituality, future planning, and basic needs in older Aboriginal Australians.
A3	Dementia Quality of Life	Health and well-being, cognitive functioning, social relationships, daily activities, and self-concept in people with dementia.
B	**Consumer experience**	
B1	Quality of Care - Aged Care Consumers	Respect and dignity, services and supports, decision-making, staff skills and training, social relationships, and feedback.
B2	Consumer Choice Index - 6 Dimensions	Care time, spaces, own room, outside and gardens, meaningful activities, and care flexibility in older people with cognitive decline.
B3	Consumer Experience Questionnaire	Dignity, autonomy, and choice; assessment and planning; care; lifestyle; service; feedback; human relations; governance; food, and independence.
C	**Consumer satisfaction**	
C1	Resident Satisfaction Questionnaire	Individual needs; residential centre; social life and involvement in the aged care centre; links with the community; chaplaincy services; resident services; resident involvement, and feedback.
C2	Consumer Perception of Value Questionnaire	Delivery of care; spiritual life; meals; cleanliness; laundry; activities; facilities; and overall satisfaction.

Next steps

Timeline

15 November – 10 December 2021	**Written and virtual consultations**
Early 2022	**Pilot**
Mid 2022	**Publication of project summary report**

Pilot

Aged care services are invited to participate in the pilot to test the selected quality indicators and CEQOL assessment tools.

Additional information about the pilot can be found on the PwC website. To express your interest in participating in the pilot, please complete the expression of interest form on the PwC website.

Written consultation

If you would like to provide additional feedback on the CEQOL tools, please feel free to tell us through our written consultation process.

Submissions are open until 10 December 2021.

Additional support required by stakeholders will be provided via the:

- ☎ Hotline - 02 8266 1017 - Weekdays, 8am – 7pm AEDT
- ✉ Residential aged care email qipilotresidentialcare@au.pwc.com

Consultation schedule

Domain Sessions – Week 2	
Behavioural symptoms	22 November, 1:00 – 2:00pm AEDT
Hospitalisations	23 November, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	24 November, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	25 November, 12:00 – 1:00pm AEDT
Pain	25 November, 1:00 – 2:00pm AEDT

Domain Sessions – Week 3	
Function and ADLs	29 November, 3:00 – 4:00pm AEDT
Medications	30 November, 12:00 – 1:00pm AEDT
Continence	1 December, 3:00 – 4:00pm AEDT
Infection control	2 December, 1:00 – 2:00pm AEDT
Depression	3 December, 3:00 – 4:00pm AEDT

Domain Sessions – Week 4	
Behavioural symptoms	6 December, 1:00 – 2:00pm AEDT
Hospitalisations	7 December, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	8 December, 1:00 – 2:00pm AEDT
Consumer experience & quality of life	9 December, 12:00 – 1:00pm AEDT
Pain	9 December, 1:00 – 2:00pm AEDT

Consumers, consumer representatives, families & carers sessions:
22 November, 4:00 – 5:00pm AEDT
23 November, 4:00 – 5:00pm AEDT
24 November, 3:00 – 4:00pm AEDT
25 November, 3:00 – 4:00pm AEDT

Thank you

www.pwc.com.au