



Definitions

interRAI Quality Indicators

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Introduction

This document describes the algorithm calculation for the Long Term Care Facility Quality Indicators (LTCF QIs).

There are two types of QIs:

- Prevalence
 - The number of assessments that met a certain criteria within a time period
 - Only requires one assessment per resident.
- Incidence
 - The percentage of assessments that change for a certain criteria
 - Requires two assessments per resident.

Prevalence – General rules

- Assessment type is LTCF
- The reporting period is quarterly (three months)
- First assessments are excluded
- If a resident has more than one assessment during a quarter, then only the latest assessment is included.

Prevalence

QI10: Percent of residents with indwelling catheters

Numerator

- H2. Urinary collection device = 2. Indwelling catheter

Exclusions

- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- H2. Urinary collection device, not answered

Denominator: All remaining assessments

QI13: Percent of residents with a urinary tract infection

Numerator

- I1s. Disease diagnosis - Urinary tract infection = '1. Primary diagnosis / diagnoses for current stay' or '2. Diagnosis present, receiving active treatment' or '3. Diagnosis present, monitored but no active treatment'

Exclusions

- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- I1s. Disease diagnosis - Urinary tract infection, not answered

Denominator: All remaining assessments

QI22: Percent of residents who have fallen in the last 30 days

Numerator

- J1. Falls = '2. One fall in last 30 days' or '3. Two or more falls in last 30 days'

Exclusions

- J1. Falls, not answered

Denominator: All remaining assessments

QI27: Percent of residents with a feeding tube

Numerator

- K3. Mode of nutritional intake = '5. Combined oral and parenteral or tube feeding' or '6. Nasogastric tube feeding only' or '7. Abdominal feeding tube '

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- K3. Mode of nutritional intake, has not been populated

Denominator: All remaining assessments

QI28: Percent of residents with pain

Numerator

- (J6a. Pain frequency = '3. Exhibited daily in last 3 days' and J6b. Pain intensity = '2. Moderate') or J6b. Pain intensity = '3. Severe' or '4. Times when pain is horrible or excruciating'

Exclusions

- J6a. Pain frequency, not answered
- J6b. Pain intensity, not answered
- J6a. Pain frequency = '0. No Pain' and J6b. Pain intensity = '1. Mild' or '2. Moderate' or '3. Severe' or '4. Times when pain is horrible or excruciating'

Denominator: All remaining assessments

QI31: Percent of residents who have a Pressure Ulcer Stage 2 to 4

Numerator

- L1. Most severe pressure ulcer = '2. Partial loss of skin layers' or '3. Deep craters in the skin' or '4. Breaks in skin exposing muscle or bone' or '5. Not codeable'

Comments

- Includes '5. Not codeable' (this differs from original definition)

Exclusions

- No exclusions.

Denominator: All remaining assessments

QI33: Percent of residents in physical restraints

Numerator

- O7b. Trunk restraint = '2. Used daily-Nights only' or '3. Used daily-Days only' or '4. Used night and days but not constant' or '5. Constant use for full 24 hours' answered or O7c. Chair prevents rising restraint = '2. Used daily-Nights only' or '3. Used daily-Days only' or '4. Used night and days but not constant' or '5. Constant use for full 24 hours'

Comments

- Ignore limb restraint as not in LTCF (this differs from original definition)

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- O7b. Trunk restraint, not answered or (ignore limb restraint as not in LTCF) or O7c. Chair prevents rising, not answered
- I1i. Disease diagnosis - Quadriplegia = '1. Primary diagnosis' or '2. Diagnosis present, receiving active treatment' or '3. Diagnosis present, monitored but no active treatment'

Denominator: All remaining assessments

QI35: Percent of residents who have unexplained weight loss

Numerator

- K2a. Weight loss = 1

Exclusions

- K2a. Weight loss, not answered
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'

Denominator: All remaining assessments

Incidence – General rules

- The assessment type is LTCF.
- The reporting period is quarterly (three months).
- If both assessments are recorded as first assessments then client is excluded.
- If a resident has more than two assessments in a quarter, then each client is only counted once in each quarter. A client may be counted in more than one quarter (the same “previous” assessment could theoretically be used for more than one quarter if it met all of the rules below).
- To identify the two assessments for each resident the following join rules are followed:
 - The NHIs are the same.
 - The facilities (Momentum ID) are the same.
 - The two assessment dates must be more than 90 days and less than 330 days apart. This is a change from the original definition. In Canada LTCF assessments occur every three months and hence the parameters were more than 45 days and less than 165 days apart.
 - The latest assessment needs to occur in the current reporting quarter. Another change to the original definition is that to ignore the following rule as it does not make sense in a NZ context. The previous assessment needs to have occurred in the previous quarter.

Incidence – Declined

QI01: Percent of residents who had an unexpected loss of function in some basic daily activities

Numerator

- If two or more ADLs (bed mobility, transfer toilet, eating, toilet use) have worsened by one point, or one or more ADLs have worsened by two points

Exclusions

- C1. Making decisions regarding tasks of daily life = ‘5. No discernable consciousness, coma’
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = ‘2. 1-2 of last 3 days’ or ‘3. Daily in last 3 days’
- (Previous) G1i. ADL self performance - bed mobility, not answered, or G1g. ADL self performance - Transfer toilet, not answered, or G1j. ADL self performance – Eating, not answered, or G1h. ADL self performance - Toilet use, not answered
- G1i. ADL self performance - bed mobility, not answered, or G1g. ADL self performance - Transfer toilet, not answered, or G1j. ADL self performance – Eating, not answered, or G1h. ADL self performance - Toilet use, not answered
- (previous) All of the four questions = 6. Total dependence, or 8. Activity did not occur during entire period

Denominator: All remaining assessments

QI06: Percent of residents who declined status on mid-loss ADL functioning transfer, locomotion or remain completely dependent in mid-loss ADLs

Numerator

- If the three ADLs (transfer toilet, walking, locomotion) stay as total dependent, or the sum of the three ADLs worsened.

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- G1g. ADL self performance - Transfer toilet, not answered, or G1e. ADL self performance - Walking, not answered, or G1f. ADL self performance - Locomotion, not answered
- (previous) (G1g. ADL self performance - Transfer toilet, not answered, or G1e. ADL self performance - Walking, not answered, or G1f. ADL self performance - Locomotion, not answered) AND (G1g. ADL self performance - Transfer toilet + G1e. ADL self performance - Walking + G1f. ADL self performance - Locomotion) > 0

Denominator: All remaining assessments

QI07: Percent of residents who declined status on early-loss ADL functioning (dressing and personal hygiene) or remain completely dependent in early-loss ADLs (ELADL)

Numerator

- If the three ADLs (dressing upper body, dressing lower body, personal hygiene) stay as total dependent, or the sum of the three ADLs worsen.

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- G1c. ADL self performance - Dressing upper body, not answered, or G1d. ADL self performance - Dressing lower body, not answered, or G1b. ADL self performance - Personal Hygiene, not answered
- (previous) (G1c. ADL self performance - Dressing upper body, not answered, or G1d. ADL self performance - Dressing lower body, not answered, or G1b. ADL self performance - Personal Hygiene, not answered) AND (G1c. ADL self performance - Dressing upper body >1 or G1d. ADL self performance - Dressing lower body >1 or G1b. ADL self performance - Personal Hygiene >1)

Denominator: All remaining assessments

QI08: Percent of residents who have declined in ADLs

Numerator

- ADL long form has worsened

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) ADL long form is not calculated
- ADL long form is not calculated

Denominator: All remaining assessments

QI09: Percent of residents who have declining behavioural symptoms

Numerator

- Sum of behavioural measures have worsened (wandering, verbal abuse, physical abuse, socially inappropriate, sexual behaviour inappropriate)

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- Any behavioural measure is not answered

Denominator: All remaining assessments

QI11: Percent of residents with worsening bowel continence

Numerator

- Worsening bowel continence

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) H3. Bowel continence = 5. Incontinent
- H3. Bowel continence, not answered
- (previous) H3. Bowel continence, not answered AND H3. Bowel continence = some level of incontinence
- H4. Ostomy, not answered, or 1. Yes

Denominator: All remaining assessments

QI12: Percent of residents with worsening bladder continence

Numerator

- Worsening bladder continence

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) H1. Bladder continence = 5. Incontinent
- H1. Bladder continence, not answered
- (previous) H1. Bladder continence, not answered, AND
- H1. Bladder continence = some level of incontinence

Denominator: All remaining assessments

QI16: Percent of residents whose cognitive ability has worsened

Numerator

- CPS score has worsened

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) CPS, not calculated
- AND
- CPS > 0
- CPS, not calculated
- (previous) CPS = 6. Very severe impairment

Denominator: All remaining assessments

QI18: Percent of residents whose ability to communicate has worsened

Numerator

- Sum of D1. Making self understood, and D2. Ability to understand others, has worsened

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- D1. Making self understood, not answered OR D2. Ability to understand others, not answered
- (previous) (D1. Making self understood, not answered OR D2. Ability to understand others, not answered) AND (D1 + D2 > 0)
- (previous)
 - D1. Making self understood = 4. Rarely or never understood AND
 - D2. Ability to understand others = 4. Rarely or never understands

Denominator: All remaining assessments

QI24: Percent of residents who have declined in their ability to locomote

Numerator

- Locomotion has declined

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) G1f. ADL self performance - Locomotion = 6. Total dependence
- G1f. ADL self performance - Locomotion, not answered
- (previous) G1f. ADL self performance - Locomotion, not answered AND G1f. ADL self performance - Locomotion > 1 (not independent)

Denominator: All remaining assessments

QI26: Percent of residents who decline in mood from symptoms of depression (based on MDS Depression Rating Scale)

Numerator

- DRS has declined

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- (previous) DRS = 14
- DRS, not calculated
- (previous) DRS, not calculated AND DRS > 0

Denominator: All remaining assessments

QI29: Percent of residents with worsening pain (Worsening pain)

Numerator

- Pain score has worsened

Status: Draft SQL in progress

Comments: Why exclude previous Pain = 3 (max value is 4. Daily excruciating pain)

Exclusions

- (previous) Pain = 3. Daily severe pain
- Pain, not calculated
- (previous) Pain, not calculated AND Pain > 0

Denominator: All remaining assessments =

QI30: Percent of residents with worsening stage 2-4 pressure sores (Worsening stage 2-4 pressure sores)

Numerator

- Pressure sores have worsened, current pressure score >1, previous pressure score was 0,1,2,3

Comments: Differing title and code to master list

Exclusions

- L1. Most severe pressure ulcer, not answered
- (previous) L1. Most severe pressure ulcer, not answered and
- L1. Most severe pressure ulcer > 0 (no pressure ulcer)
- (previous) L1. Most severe pressure ulcer = 4. Breaks in skin exposing muscle or bone, or 5. Not codeable

Denominator: All remaining assessments

QI32: Percent of residents who have a newly occurring pressure ulcer stage 2 to 4 (Newly occurring pressure ulcer stage 2 to 4)

Numerator

- (Previous) L1. Most severe pressure ulcer = 0. No pressure ulcer, or 1. Any area of persistent skin redness
- L1. Most severe pressure ulcer ≥ 2

Exclusions

- L1. Most severe pressure ulcer, not answered
- (previous) L1. Most severe pressure ulcer ≥ 2

Denominator: All remaining assessments

Incidence – Improved

QI03: Percent of residents who improve status on mid-loss functioning transfer, or remain completely independent in mid-loss ADLs

Numerator

- If the three ADLs (transfer toilet, walking, locomotion) stay as either 0 or 1, or the sum of the three ADLs improve.

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- G1g. ADL self performance - Transfer toilet, not answered, or G1e. ADL self performance - Walking, not answered, or G1f. ADL self performance - Locomotion, not answered
- (previous) (G1g. ADL self performance - Transfer toilet, not answered, or G1e. ADL self performance - Walking, not answered, or G1f. ADL self performance - Locomotion, not answered) AND (G1g. ADL self performance - Transfer toilet + G1e. ADL self performance – Walking + G1f. ADL self performance – Locomotion) > 0

Denominator: All remaining assessments

QI04: Percent of residents who improve status on early-loss ADL functioning (dressing and personal hygiene) or remain completely independent in early-loss ADLs (ELADL)

Numerator

- If the three ADLs (dressing upper body, dressing lower body, personal hygiene) stay as either 0 or 1, or the sum of the three ADLs improve.

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- G1c. ADL self performance - Dressing upper body, not answered, or G1d. ADL self performance - Dressing lower body, not answered, or G1b. ADL self performance - Personal Hygiene, not answered
- (previous) (G1c. ADL self performance - Dressing upper body, not answered, or G1d. ADL self performance - Dressing lower body, not answered, or G1b. ADL self performance - Personal Hygiene, not answered) AND (G1c. ADL self performance - Dressing upper body >1 or G1d. ADL self performance - Dressing lower body >1 or G1b. ADL self performance - Personal Hygiene >1)

Denominator: All remaining assessments

QI05: Percent of residents who had an improvement of function in some basic daily activities

Numerator

- If two or more ADLs (bed mobility, transfer toilet, eating, toilet use) have improved by one point, or one or more ADLs have improved by two points

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (Previous) G1i. ADL self performance - bed mobility, not answered, or G1g. ADL self performance - Transfer toilet, not answered, or G1j. ADL self performance – Eating, not answered, or G1h. ADL self performance - Toilet use, not answered
- G1i. ADL self performance - bed mobility, not answered, or G1g. ADL self performance - Transfer toilet, not answered, or G1j. ADL self performance – Eating, not answered, or G1h. ADL self performance - Toilet use, not answered
- (previous) All of the four questions = 0. Independent, or 1. Independent, setup help only

Denominator: All remaining assessments

QI14: Percent of residents with improving bowel continence

Numerator

- Improving bowel continence

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) H3. Bowel continence = Continent, Control, did not occur
- H3. Bowel continence, not answered
- (previous) H3. Bowel continence, not answered AND H3. Bowel continence = some level of incontinence
- H4. Ostomy, not answered, or 1. Yes

Denominator: All remaining assessments

QI15: Percent of residents with improving bladder continence

Numerator

- Improving bladder continence

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) H1. Bladder continence = Continent, Control, did not occur
- H1. Bladder continence, not answered
- (previous) H1. Bladder continence, not answered AND H1. Bladder continence = some level of incontinence

Denominator: All remaining assessments

QI17: Percent of residents whose cognitive ability has improved

Numerator

- CPS score has improved

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) CPS, not calculated AND $CPS > 0$
- CPS, not calculated
- (previous) CPS = 0. Intact

Denominator: All remaining assessments

QI19: Percent of residents whose ability to communicate has improved

Numerator

- Sum of D1. Making self understood, and D2. Ability to understand others, has improved

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- D1. Making self understood, not answered
- D2. Ability to understand others, not answered
- (previous) (D1. Making self understood, not answered
- D2. Ability to understand others, not answered) AND $(D1 + D2 > 0)$
- (previous) D1. Making self understood = 0. Understood AND D2. Ability to understand others = 0. Understands

Denominator: All remaining assessments

QI25: Percent of residents who have improved in their ability to locomote

Numerator

- Locomotion has improved

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- J7c. End-stage disease, 6 or fewer months to live = Yes
- O2m. Treatments and programmes - Palliative care, = '2. 1-2 of last 3 days' or '3. Daily in last 3 days'
- (previous) G1f. ADL self performance – Locomotion = 0. Independent, or 1. Independent, setup help only
- G1f. ADL self performance – Locomotion, not answered
- (previous) G1f. ADL self performance - Locomotion, not answered AND G1f. ADL self performance – Locomotion > 1 (not independent)

Denominator: All remaining assessments

QI36: Percent of residents who have improved behavioural symptoms

Numerator

- Sum of behavioural measures have improved (wandering, verbal abuse, physical abuse, socially inappropriate, sexual behaviour inappropriate)

Exclusions

- C1. Making decisions regarding tasks of daily life = '5. No discernable consciousness, coma'
- Any behavioural measure is not answered

Denominator: All remaining assessments