Health Quality & Safety Commission New Zealand
Kupu Taurangi Hauora o Aotearoa

People aged 65 years and over dispensed five, six or seven unique long-term medicines

Technical information	
Indicator name (short)	Dispensed five, six or seven unique long-term medicines.
Description	This measure details the percentage of people aged 65 and over dispensed five, six or seven unique long-term medicines.
Rationale	Morphine is a strong opiate that is considered 'gold standard' treatment for severe acute pain, particularly in the palliative care setting. The National Institute of Clinical Evidence (NICE) clinical guidelines recommends that morphine should not be used for neuropathic pain without specialist assessment. Polypharmacy is associated with: • reduced adherence to therapies • significant costs to patients and health services • poor health outcomes, such as adverse drug events, drug interactions, admissions to hospital and death. Older people (defined here as those aged 65 and over) are more susceptible to medicine related morbidity and mortality, especially those who are frail or have multiple co-morbid conditions. The frequency of adverse drug events increases with the number of medicines taken from 13 percent with two medicines and 58 percent with five medicines to 82 percent when seven or more medicines are taken.[1] Polypharmacy is more likely to be appropriate in the robust 'young elderly' while problematic polypharmacy is more likely to occur in the frail 'old elderly'. Hence a focus on the 85 year and over age group may be most appropriate, where the doses used may be as important as the number of medicines. 1. Patterson S et al. Interventions to improve the appropriate use of polypharmacy for older people. *Cochrane Database Syst Rev* 2012, Issue 5, Art. No. CD008165.
Numerator	• Average number of people in a quarter. • Number of distinct chemicals (excluding those below) dispensed in quarter that were also dispensed in previous quarter = 5 or more.
Denominator	New Zealand population, using Statistics New Zealand (StatsNZ) population projections for the relevant years.
Inclusions	Age at end of quarter ≥ 65 years.

Exclusions	• Therapeutic group 1: dermatologicals • Therapeutic group 1: special foods • Therapeutic group 1: sensory organs • Therapeutic group 1, section C – extemporaneously compounded preparations and galenicals • Therapeutic group 2: respiratory devices • Therapeutic group 2: unknown (eg, header rows, named patient authority) • Therapeutic group 2: various (eg, brand switch fee) • Therapeutic group 2: diabetes management: ketone testing, blood glucose testing, insulin syringes and needles, insulin pumps, insulin pump consumables
Note for calculation	Unit of measure: Percentage Adjustment applied: None District health board (DHB) assignment: Domicile
Data sources	Pharmaceutical Collection, Ministry of Health. National Resident Population, Statistics New Zealand.
Suppression rule	Data is not presented where the denominator was less than 10.
Notes	A 'long-term' medicine was defined as the same medicine dispensed in two consecutive quarters. *See appendix for more details.*

Appendix 1. Interpretation notes

Standard deviation
Data is presented as standard deviation from the mean. Standard deviation is a statistical measure of variation from a mean. Assuming that recorded instances are normally distributed (ie, they are in the usual 'bell-shaped curve'), 68 percent of all recorded instances would be expected to be within one standard deviation either side of the mean and 95 percent within two standard deviations. The two 'middle' shades will be within one standard deviation of the mean.

Confidence intervals
Data for each DHB is presented as rate per 100 population. Upper and lower confidence intervals were calculated to 95 percent level of confidence.

Te Kāwanatanga o Aotearoa
New Zealand Government