

# Inpatient average length of stay for acute readmissions for people aged 20 to 64 years old

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## Outcome

By shortening hospital length of stay, while ensuring patients receive sufficient care to avoid readmission, the DHB will impact on the Ministerial priority of improved hospital productivity.

## Measure

Inpatient average length of stay for acute admissions for people aged 20 to 64 years old

## Type

Contributory measure

## Relationship(s) to other frameworks

This measure is the same as 'OS3 Inpatient Average Length of Stay (ALOS)' in the District Health Board (DHB) non-financial monitoring framework and performance measures Ministry of Health. 2015. DHB Non-financial monitoring framework and performance measures – Sept 2015. Wellington: Ministry of Health Framework available at: [www.health.govt.nz](http://www.health.govt.nz)

## Rationale

By shortening hospital length of stay, while ensuring patients receive sufficient care to avoid readmission, the DHB will impact on the Ministerial priority of improved hospital productivity. This will be achieved through freeing up beds and other resources so the DHB can both provide more elective surgery and reduce length of stay in the emergency department.

There is a need for DHBs to manage within a slower funding growth path and make demonstrable productivity improvements to offset cost pressures and to meet wider Crown expectations (i.e. maintain per capita service coverage, achieve national Health Targets, and eliminate DHB deficits). Shortening hospital length of stay will also help to delay infrastructure expansion and/or make savings that can assist in reducing DHBs' deficits.

Addressing the factors that influence a patient's length of stay in hospital will require the DHB to consider its performance on other measures, such as reducing readmissions, and increasing its integration activities that strengthen the ability of primary care to treat people more appropriately in the community. Supporting patients to return home sooner may, in part, be achieved by reducing the rate of patient complications and better use of the time clinical staff spend with patients. Patients will also be less at risk of contracting nosocomial (or hospital-acquired) infections. Through these actions, the DHB will contribute to an improved patient experience.

The following actions and activities are examples of initiatives that have a proven impact on this measure:

- Implementing programmes such as The Productive Ward – Releasing Time to Care or Optimising the Patient Journey which focus on improving ward processes and environments

to help nurses and therapists spend more time on patient care, thereby improving safety and efficiency

- Process mapping and/or service redesign to improve the patient journey, reduce “waste” and improve primary care’s access to services
- Improving rates of day of surgery admissions (DOSA) for elective patients
- Improving pre-admission programmes for elective patients

## Eligible population

Total New Zealand resident population

## Measure status

Active

## Numerator

Average length of stay for patients who have acute readmissions per DHB of domicile per year

## Denominator

Total number patients who have acute readmissions per DHB of domicile per year aged 20-64 year old

## National target

## Local target

Milestones to be decided by Alliance

## Data Sources

- National Minimum Dataset, Ministry of Health

## Data extracted from data sources

- Financial years data from the NMDS

## Data availability

Data will be released by the Ministry of Health quarterly

## Measure calculation process

The standardised ALOS is the ratio of ‘observed’ (actual) to ‘predicted’ ALOS, multiplied by the nationwide inpatient ALOS.

### **Joining events into stays**

- If an event starts before the end of a previous event with the same NHI, its start time is set to the end time of the prior event
- If an event ends before the end of a previous event with the same NHI, its end time is set to the end time of the prior event
- The quarter before the 12 month time period is also loaded to help detect long stays. Only stays which end within the 12 month time period are included.

The length of stay calculation includes day case events, and joins multiple discharge events where

- The events have the same National Health Index (NHI) number
- The events have the same DHB of Service
- The prior event ends in a transfer
- There is less than 24 hours between the end of one event and the start of the next event

Where multiple discharge events are joined, the admission type for the stay is the admission type of the first event. In the rest of this document:

- An elective discharge is defined as a stay where the first or only event in the stay is elective
- An acute discharge is defined as a stay where the first or only event in the stay is acute

**Quantitative Indicator** The standardised ALOS for inpatient discharges in a surgical specialty with an elective admission type, expressed as the ratio of the observed to predicted ALOS, multiplied by the nationwide elective surgical inpatient ALOS.

The DHB observed ALOS, and the nationwide elective surgical inpatient ALOS, are both defined as the total bed days for elective surgical inpatients discharged during the 12 months to the end of the quarter, divided by the total number of discharges for elective surgical inpatients during the 12 months to the end of the quarter.

The predicted ALOS is derived by taking the nation-wide ALOS for each grouping of patient discharges, defined by DRG cluster and complexity group, multiplying this by the proportion of total discharges this group represents, and summing the result across all discharge groups. A contingency table is used to provide the ALOS across all DHBs for each DRG and complexity group. This information is then used to calculate the standardised ALOS for the casemix DRGs within each DHB.

### Calculating length of stay

- Each event's length is calculated, rounded to the closest half hour, then summed together.
- No adjustment is made for leave days.
- Non-casemix events have their length set to zero

### Determining Stay Information

- DHB; the first event's DHB
- Start Date; the first event's start date
- End Date; the last event's end date
- Admission Type; the first event's admission type
- DRG; the DRG of the highest caseweight event
- PCCL; the PCCL of the highest caseweight event
- Caseweight; the sum of every events' caseweight
- Length of Stay; the sum of every events' length

### Exclusions:

- where the first event in the stay does not have a valid DHB of service e.g. is missing
- where every event in the stay is non-casemix
- where the first event in the stay is not Elective
- where the purchaser of the first event in the stay is not in a set list
- where the stay is Elective and no event has a surgical purchase unit (ie the purchase unit code does not start with "S")
- where the last event in the stay ended in a transfer