

# Health system indicators

Technical and process documentation

High-level measures

June 2022



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# 1. Overview

The health system indicators (HSI) framework is a new approach to measuring the performance of New Zealand’s health system. The Ministry of Health, in partnership with the Health Quality & Safety Commission (the Commission), is leading the implementation of the framework. The framework replaces the six national health targets and incorporates measures from different existing frameworks including the system level measures (SLM). This document provides a technical description of each of the health system indicators, as well as an overview of the methodology used in creating them.

The Government has six priorities for our health system: improving child wellbeing; improving mental wellbeing; improving wellbeing through prevention; having a strong and equitable public health system; having better primary health care; and ensuring a financially sustainable health system. The framework consists of one or two high-level measures for each of these priorities.

## Overview of health system indicators

There are one to two measures for each of the six priority areas. Some measures originated from existing frameworks and others have been developed specifically for this new framework. Table 1 below shows a summary of the indicators, including descriptions, sources of indicators and reporting timelines.

**Table 1: Description of indicators**

Government priority	Health system indicator	Description	Source	Reporting timeline
Improving child wellbeing	Immunisation rates for children at 24 months	Percentage of children who have all their age-appropriate schedule vaccinations by the time they are two years old	DHB accountability framework and system level measures (SLMs) – reported quarterly	National level from the date of announcement and DHB results from December 2021
	Ambulatory sensitive hospitalisations for children (age range 0–4)	Rate of hospital admissions for children under five for an illness that might have been prevented or better managed in the community	DHB accountability framework – reported quarterly	National level from the date of announcement and DHB results from December 2021

Improving mental wellbeing	Under-25s able to access specialist mental health services within three weeks of referral	Percentage of child and youth accessing mental health services within three weeks of referral	DHB accountability framework – reported quarterly	National level from the date of announcement and DHB results from December 2021
Improving wellbeing through prevention	Ambulatory sensitive hospitalisations for adults (age range 45–64)	Rate of hospital admissions for people aged 45–64 for an illness that might have been prevented or better managed in the community	DHB accountability framework – reported quarterly	National level from the date of announcement and DHB results from December 2021
Strong and equitable public health system	Acute hospital bed day rate	Number of days spent in hospital for unplanned care including emergencies	DHB accountability framework and SLM – reported quarterly	National level from the date of announcement and DHB results from December 2021
	Access to planned care	People who had surgery or care that was planned in advance, as a percentage of the agreed number of events in the delivery plan	DHB accountability framework – reported quarterly	National level from the date of announcement and DHB results from December 2021
Better primary health care	People report they can get primary care when they need it	Percentage of people who say they receive care from a GP or nurse when they need it	Commission primary care patient experience survey questions (part of SLM)	National level from the date of announcement and DHB results from December 2021
	People report being involved in the decisions about their care and treatment	Percentage of people who say they feel involved in their own care and treatment with their GP or nurse	Commission Primary care patient experience survey questions (part of SLM)	National level from the date of announcement and DHB results from December 2021
Financially sustainable health system	Annual surplus/deficit at financial year end	Net surplus/deficit as a % of total revenue	DHB monthly financial templates	National level for 2019/20 and DHB results for 2020/21 from December 2021
	Variance between planned budget and year end actuals	Budget vs actuals variance as a % of budget	Final approved DHB annual plans	National level for 2019/20 and DHB results for 2020/21 from December 2021

## 2. Technical specifications

Note: in order to retain consistency, previous quarters of data reported in the health system indicators are not updated with each quarterly addition. This is in order to promote comparability over time and keep a focus on improvement. Where a number rather than a percentage point is reported, the number is calculated by taking the baseline rate and applying this to the current period denominator. This creates an expected number from which the actual number is subtracted (expected-observed).

### 24-months immunisation

<b>Government priority</b>	<b>Improving child wellbeing</b>	
<b>Indicator</b>	<b>Immunisation rates for children at 24 months</b>	
<b>Short name</b>	<b>24-months immunisation</b>	
<b>Description</b>	Percentage of children who have all their age-appropriate schedule vaccinations by the time they are two years old.	
<b>Desired outcome</b>	Healthy start – a high percentage of children received all the recommended vaccinations by two years of age.	
<b>Rationale</b>	<p>Timely immunisations ensure children are protected against harmful and avoidable diseases.</p> <p>The childhood immunisation programme is a series of vaccines that are offered free to babies and young children. The first vaccinations occur when the child is six weeks old. This programme is part of the national immunisation schedule.</p> <p>The programme aims to protect children from these serious diseases throughout their lifetime: diphtheria, tetanus, pertussis, poliomyelitis, Haemophilus influenzae type b, hepatitis B, invasive pneumococcal disease, measles, mumps and rubella.</p>	
<b>Measure definition</b>	<b>Numerator</b>	Children enrolled on the national immunisation register (NIR) who have turned two years old during the reporting period and have completed all age-appropriate immunisations.
	<b>Denominator</b>	Children enrolled on the NIR who have reached the age of two years within the reporting period (three-month reporting period).
<b>Data sources</b>	National immunisation register	
<b>Notes</b>	Immunisation status does not take into account whether the vaccinations were given on time or not. It only considers whether a child has had all the vaccinations they should have at that age.	

	Includes children enrolled in the programme with an NIR registration status of 'active', 'opt off' and 'provisional opt off'. Individuals with a database status of 'overseas', 'deceased' or 'inactive' are excluded.
<b>Data aggregation</b>	Three months

## ASH 0–4

<b>Government priority</b>	<b>Improving child wellbeing</b>	
<b>Indicator</b>	<b>Ambulatory sensitive hospitalisations for children (age range 0–4)</b>	
<b>Short name</b>	<b>ASH 0–4</b>	
<b>Description</b>	Rate of hospital admissions for children under five for an illness that might have been prevented or better managed in the community.	
<b>Desired outcome</b>	Primary and community care effectively manage the health of the population. Hospital admissions due to some medical conditions that can be managed in primary and community care (ASH events) are reduced.	
<b>Rationale</b>	<p>Ambulatory sensitive hospitalisation (ASH) is when someone is hospitalised for a condition that could have been treated or managed in primary or community care, preventing the hospitalisation. For example, by care delivered by general practitioners, dentists, nurses and other health professionals.</p> <p>Determining an ASH hospital event for a condition (using primary diagnosis) is based on the consideration of the characteristics of the condition and patient, research evidence, experts' opinions and consensus. Condition and population distribution of ASH is useful in prioritising health interventions. Time trends of ASH events can be used to monitor improvement or to identify issues in the effectiveness of primary and community care.</p> <p>Some social and environmental factors, eg, socioeconomic status and health behaviours can have a big impact on the ASH measure.</p>	
<b>Measure definition</b>	<b>Numerator</b>	Number of hospital inpatient ASH events for 0–4-year-olds from the NMDS. NMDS is used to identify ASH events by applying a list of conditions that has been developed by a clinical panel.
	<b>Denominator</b>	Domiciled population for 0–4-year-olds based on Stats NZ population projections.

<b>Data sources</b>	<ul style="list-style-type: none"> <li>• NMDS</li> <li>• Stats NZ population projection</li> </ul>
<b>Notes</b>	<p><b>Condition list:</b> The current list has been used since September 2015. The methodology was modified by a panel of clinicians and it defines ASH events in the 0–4 and 45–64 age groups to increase specificity and positive predictive value. Neonatal, injury, mental health conditions and non-casemix<sup>1</sup> discharges are not included in the current measure.</p> <p><b>Ethnicity:</b> Results for the Pacific ethnicity will only be provided for the eight DHBs with relatively large Pacific populations. For other DHBs, results for Pacific peoples will be included in the ‘other’ group.</p> <p><b>Moving average:</b> To control for significant seasonal variation in hospital events, ASH rates are reported on a 12-month basis.</p> <p><b>Other references:</b> WIES Version 14, Atlas of Healthcare Variation methodology.</p>
<b>Data aggregation</b>	Data is reported on a rolling 12-month basis.

## Mental health child and youth waiting times

<b>Government priority</b>	<b>Improving mental wellbeing</b>
<b>Indicator</b>	<b>Under-25s able to access specialist mental health services within three weeks of referral</b>
<b>Short name</b>	<b>Child and youth waiting times</b>
<b>Description</b>	Percentage of new clients aged under 25 seen within three weeks of referral to mental health services. <sup>2</sup>
<b>Desired outcome</b>	Decreasing waiting times for children and young people under 25 to access specialist mental health services.
<b>Rationale</b>	We know there are pressures on child and youth services, and some children and young people have to wait before accessing the help they need. The onset of serious mental illness mostly occurs before the age of 25, and crosses child and adolescent and adult service boundaries. It

<sup>1</sup> Casemix is a standardised clinical coding system used by the New Zealand health system. The purpose of this system is to aggregate patients and treatments into groups based on the health condition and the procedures carried out which can then be used to advise DHB funding. The standardised classification system for each event means hospital performance and resource use can be meaningfully compared. Non-casemix in this instance will refer to cases that fall outside the classification scope used in New Zealand.

<sup>2</sup> For this indicator only, people are assigned to their DHB of service rather than domicile in the reporting.



		is important to focus on the specific needs of young people presenting with a first episode of illness. This indicator aims to lift performance and support more timely access for children and young people.
<b>Measure definition</b>	<b>Numerator</b>	Number of new clients aged under 25 seen within three weeks
	<b>Denominator</b>	Total new clients aged under 25
<b>Data sources</b>		PRIMHD
<b>Notes</b>		<p>The waiting time is number of days from the date a new client was referred to an organisation to the first in-scope activity (services) the client attended at that organisation.</p> <p>New clients are those who have not accessed mental health services within the past year.</p> <p>The detailed data extract specification can be obtained by emailing <a href="mailto:data-enquiries@health.govt.nz">data-enquiries@health.govt.nz</a>.</p>
<b>Data aggregation</b>		Data is reported on a rolling 12 months basis.

## ASH 45–64

<b>Government priority</b>	<b>Improving wellbeing through prevention</b>
<b>Indicator</b>	<b>Ambulatory sensitive hospitalisations for adults (age range 45–64)</b>
<b>Short name</b>	<b>ASH 45–64</b>
<b>Description</b>	Rate of hospital admissions for people aged 45–64 for an illness that might have been prevented or better managed in the community.
<b>Desired outcome</b>	Primary and community care effectively manage the health of the population. Hospital admissions due to some medical conditions that can be managed in primary and community care (ASH events) are reduced.
<b>Rationale</b>	<p>Ambulatory sensitive hospitalisation (ASH) is when someone is hospitalised for a condition that could have been treated or managed in primary or community care, preventing the hospitalisation. For example, by care delivered by general practitioners, dentists, nurses and other health professionals.</p> <p>Determining an ASH hospital event for a condition (using primary diagnosis) is based on the consideration of the characteristics of the condition and patient, research evidence, experts' opinions and consensus. Condition and population distribution of ASH is useful in prioritising health interventions. Time trends of ASH events can be</p>

		<p>used to monitor improvement or to identify issues in the effectiveness of primary and community care.</p> <p>Some social and environmental factors, eg, socioeconomic status and health behaviours can have a big impact on the ASH measure.</p>
<b>Measure definition and data source</b>	<b>Numerator</b>	Number of hospital inpatient ASH events for 45–64-year-olds from the NMDS. The NMDS is used to identify ASH events by applying a list of conditions developed by a clinical panel.
	<b>Denominator</b>	Domicile population for 45–64-year-olds based on Stats NZ population projections and age-standardised based on Stats NZ population estimates.
<b>Data sources</b>		<ul style="list-style-type: none"> <li>• NMDS</li> <li>• Estimated New Zealand resident population with Stats NZ projections</li> </ul>
<b>Notes</b>		<p><b>Condition list:</b> The current list has been used since September 2015. The methodology was modified by a panel of clinicians and defines ASH events in the 0–4 and 45–64 age groups to increase specificity and positive predictive value. Neonatal, injury, mental health conditions and non-casemix discharges are not included in the current measure.</p> <p><b>Ethnicity:</b> Results for the Pacific ethnicity will only be provided for the eight DHBs with relatively large Pacific populations. For other DHBs, results for Pacific peoples will be included in the 'other' group.</p> <p><b>Moving average:</b> To control for significant seasonal variation in hospital events, ASH rates are reported on a 12-month basis.</p> <p><b>Other references:</b> WIES version 14, Atlas of Healthcare Variation methodology.</p>
<b>Data aggregation</b>		Data is reported on a rolling 12-month basis.

## Acute bed days

<b>Government priority</b>	<b>Strong and equitable public health system</b>
<b>Indicator</b>	<b>Acute hospital bed day rate</b>
<b>Short name</b>	<b>Acute bed days</b>
<b>Description</b>	Number of days spent in hospital for unplanned care including emergencies.
<b>Desired outcome</b>	Improved management of demand for acute care.

<b>Rationale</b>		<p>This is a measure of acute demand on secondary care. A reduction in acute demand can be an indication of effective partnership with primary and community care sectors, good hospital care and discharge planning, and/or appropriate integration of services and transitions between sectors.</p> <p>It can be used to improve system-wide health services delivery and to ensure appropriate and efficient care.</p> <p>The intent of the measure is to reflect integration between community, primary, and secondary care. It supports the strategic goal of maximising the use of health resources for planned care rather than acute care. Some population cohorts, such as Māori, would particularly benefit from improved primary care that will reduce the need for acute care.</p>
<b>Measure definition</b>	<b>Numerator</b>	Number of bed days for acute hospital stays using data from the NMDS.
	<b>Denominator</b>	Domicile population based on Stats NZ population projections.
<b>Data sources</b>		<ul style="list-style-type: none"> <li>• NMDS</li> <li>• Stats NZ population projection</li> <li>• Primary health organisation patient registers</li> </ul>
<b>Notes</b>		<p><b>Stay:</b> A stay is a sequence of patient events that can logically join to form an inpatient 'stay'. All events within a stay will be counted as an acute stay if the first event is acute, regardless of whether any other events in that stay are acute or not. Leave days<sup>3</sup> are included in the length of stay.</p> <p><b>Age standardisation:</b> This allows better comparability between different groups or regions of people with different age structures. Direct age-standardisation is used and uses data from either the World Health Organization population or New Zealand indigenous population figures.</p> <p><b>Exclusions:</b> Non-acute stays, non-casemix stays, overseas domiciled patients, and incomplete stays.</p>
<b>Data aggregation</b>		Data is reported on a rolling 12-month basis.

<sup>3</sup> This represents the number of days an inpatient on leave is absent from the hospital at midnight, up to a maximum of three days (midnight) for non-psychiatric hospital inpatients for any one leave episode.

## Planned care access

<b>Government priority</b>	<b>Strong and equitable public health system</b>	
<b>Indicator</b>	<b>Access to planned care</b>	
<b>Short name</b>	<b>Planned care access</b>	
<b>Description</b>	People who had surgery or care that was planned in advance, as a percentage of the agreed number of events in the delivery plan.	
<b>Desired outcome</b>	Increased access to care required within the planned care programme.	
<b>Rationale</b>	<p>Timely access to planned care is important for the health, wellbeing and quality of life of New Zealanders and is seen as a marker of the quality of the public hospital system.</p> <p>Delivery expectations for planned care Interventions are agreed between DHBs and the Ministry of Health each year as part of the annual plan's planned care performance measures and planned care funding schedule (PCFS).</p>	
<b>Measure definition</b>	<b>Numerator</b>	Count of inpatient and outpatient interventions from the NMDS and national non-admitted patient collection (NNPAC). Numbers are extracted one month in arrears on the first Monday of each month.
	<b>Denominator</b>	Number of planned care interventions agreed between DHBs and the Ministry as outlined in the PCFS.
<b>Data sources</b>	<ul style="list-style-type: none"> <li>• NMDS</li> <li>• NNPAC</li> <li>• PCFS</li> </ul>	
<b>Notes</b>	<b>Selected interventions only:</b> Publicly funded elective or arranged admissions excluding maternity purchase units for selected inpatient surgical discharges, minor procedures and non-surgical interventions.	
<b>Data aggregation</b>	Three months	

## Primary health care when needed

<b>Government priority</b>	<b>Better primary health care</b>
<b>Indicator</b>	<b>People report they can get primary care when they need it</b>
<b>Short name</b>	<b>Primary health care when needed</b>
<b>Description</b>	Percentage of people who say they receive care from a GP or nurse when they need it.
<b>Desired outcome</b>	People report being able to get health care from their GP or nurse when they want it.
<b>Rationale</b>	<p>Survey question is "In the past 12 months, was there ever a time when you wanted health care from a GP or nurse but you couldn't get it?" (Yes, no).</p> <p>This is an over-arching question on the ability of people to receive health care from their GP or nurse when they want it.</p> <p>People who answer 'yes' to this question are then asked: 'Why could you not get health care from a GP or nurse when you wanted it during the last 12 months?' The following options are provided.</p> <ul style="list-style-type: none"> <li>• Waiting time to get an appointment too long</li> <li>• The appointment was too expensive</li> <li>• Owed money to the general practice or medical centre</li> <li>• Dislike or fear of the GP</li> <li>• Difficult to take time off work</li> <li>• Had no transport to get there</li> <li>• Could not arrange childcare or care for a dependent (an adult who is ill or disabled)</li> <li>• Did not have a carer, support person or interpreter to go with you</li> <li>• Unable to visit clinic due to stay-at-home orders</li> <li>• Fear of getting sick by visiting in-person</li> <li>• Alert level restrictions meant I wasn't allowed</li> <li>• I didn't want to make the health care providers too busy</li> <li>• I was worried about catching COVID-19</li> <li>• Other (please tell us why)</li> </ul> <p><b>What questions might the data prompt?</b></p> <ul style="list-style-type: none"> <li>• A low score in this question may highlight unmet need. It is recommended you review responses to the following question on the reasons why people weren't able to get health care when they wanted it.</li> </ul>

		<ul style="list-style-type: none"> <li>What are the common reasons patients cite for not being able to get health care? Which of these are modifiable? How can you work with consumers to co-design a better system?</li> </ul>
<b>Measure definition</b>	<b>Numerator</b>	Number of respondents who answered no.
	<b>Denominator</b>	Number of respondents who answered the question.
<b>Methodology</b>	<p>The methodology can be accessed here:</p> <p><a href="http://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/publications-and-resources/publication/2923">www.hqsc.govt.nz/our-programmes/health-quality-evaluation/publications-and-resources/publication/2923</a></p>	
<b>Weighting</b>	<p>The results are weighted. Weighting adjusts for under- or over-representation in responses by age, gender and ethnic group and means the results account for differences in response rates within a local population.</p> <p>Weighting of results uses the population structure who had a qualifying encounter with the primary care service provider they are enrolled with during the survey period. It compares this with the sample structure (i.e. those who responded to the survey). This creates a weight that is applied to the results of the survey. This then increases or decreases a particular weighted result. This approach is distinct from standardisation. We are not seeking to compare DHBs, age groups, genders or ethnic groups with each other using this method. Rather we are seeking to weight so results accurately reflect the views of a representative local population (those who had a qualifying encounter with the primary care service provider they are enrolled with).</p> <p>Weighted results for individual questions give different values to responses, effectively reflecting how many patients of a particular age group, gender and ethnic group within a DHB each respondent is representing. The more over-represented a particular group among the respondents is, the fewer total patients each respondent represents and thus the response is down-weighted, and vice versa.</p> <p>For more detailed information on the weighting methodology please contact <a href="mailto:survey@hqsc.govt.nz">survey@hqsc.govt.nz</a>.</p>	
<b>Data sources</b>	<p>These data are sourced from the New Zealand primary care patient experience survey. People aged 15 years and over who have received a consultation from the primary care service provider they are enrolled with during the survey sample period receive a survey invitation.</p>	
<b>Baseline</b>	<p>The weighted average response for the 12 months from Jul – Sep 2020 to Apr – Jun 2021.</p>	
<b>Notes</b>	<p><b>Questionnaire refresh 2020</b></p>	

	<p>At the end of 2019 a review of the primary care questionnaire was undertaken. This resulted in a change to this question.</p> <p>In 2019 the question asked: 'Was there ever a time when you wanted health care from a GP or nurse but you couldn't get it?' The update adds a time period 'in the last 12 months' to the question. This ensures responses are relevant to recent health care. Keeping 12 months is consistent with the New Zealand Health Survey question. The answer options remain yes and no. If yes, the person is asked why. Additional response options to account for COVID-19, such as stay-at-home orders and fear of catching COVID-19 have been added.</p> <p>The percent of patients answering 'no' in 2020 may differ due to this change in question.</p> <p><b>Other points to note:</b></p> <ul style="list-style-type: none"> <li>• People were assigned to the DHB where they live.</li> <li>• Patient demographic details (age, ethnicity and gender) are collected from the NES database and in the survey. Patient-reported demographics are used in this measure. Those with missing demographic details are excluded from those specific analyses.</li> <li>• People can self-report multiple ethnicities. Ethnicity data presented uses prioritised ethnic group (Māori, Pacific peoples, Asian and other).</li> <li>• Survey responses are self-reported or completed on behalf of someone else (approximately 1.5 percent of responses are completed on behalf).</li> <li>• This question should be triangulated against the same question in the New Zealand Health Survey. People surveyed are those who are already able to access primary care.</li> <li>• Suppression rule: Data are not reported when the denominator is less than 30.</li> <li>• This method deliberately over-samples high users of primary care.</li> <li>• Data does not include those who do not attend primary care or are not enrolled. To view data for these groups, there is a similar question in the New Zealand Health Survey.</li> </ul>
<b>Data aggregation</b>	Three months

## Involved in primary care decisions

<b>Government priority</b>	<b>Better primary health care</b>
<b>Indicator</b>	<b>People report being involved in the decisions about their care and treatment</b>

<b>Short name</b>		<b>Involved in primary care decisions</b>
<b>Description</b>		Percentage of people who say they feel involved in their own care and treatment with their GP or nurse.
<b>Desired outcome</b>		People report being involved in decisions about their treatment and care as much as they wanted.
<b>Rationale</b>		<p>Survey question is 'Did the [health care practitioner] involve you as much as you wanted to be in making decisions about your treatment and care?' (Yes, definitely; somewhat; no; I did not want to be involved).</p> <p>Being involved in decisions about care and treatment as much as is wanted, is a critical component of ensuring patients accept practitioners' advice.</p> <p><b>What questions might the data prompt?</b></p> <ul style="list-style-type: none"> <li>• Have local young people been asked how they would like to be involved in decisions about their care and treatment? Are there groups providers can engage with?</li> <li>• If young people feel less involved in their care and treatment, might their understanding of their treatment plan also be impacted?</li> </ul>
<b>Measure definition</b>	<b>Numerator</b>	Number of respondents who answered 'yes definitely' to the question.
	<b>Denominator</b>	Number of respondents who answered yes, definitely; somewhat; no.
<b>Data sources</b>		This data is sourced from the New Zealand primary care patient experience survey. People aged 15 years and over who have received a consultation from the primary care service provider they are enrolled with during the survey sample period receive a survey invitation.
<b>Baseline</b>		The weighted average response for the 12 months from Jul – Sep 2020 to Apr – Jun 2021.
<b>Methodology</b>		<p>The methodology can be accessed here:</p> <p><a href="http://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/publications-and-resources/publication/2923">www.hqsc.govt.nz/our-programmes/health-quality-evaluation/publications-and-resources/publication/2923</a></p>
<b>Weighting</b>		Results are weighted. See indicator 'People report they can get primary care when they need it' for details on the weighting methodology.
<b>Notes</b>		<p><b>Question refresh 2020</b></p> <p>The previous question asked, 'Have you been involved in decisions about your care and treatment as much as you wanted to be?' (Yes; yes, to some extent; no).</p>



	<p>In the refresh the question was adjusted to include the answer option 'I didn't want to be involved' based on stakeholder feedback. The wording and answer options were changed to mirror other questions. The change was consistent with changes to the hospital survey.</p> <p>An open-ended question was added for respondents who answered somewhat or no to understand their response:</p> <p>What could have been done better to involve you in decisions about your treatment and care?</p> <p>[OPEN END]</p> <p><b>Other points to note:</b></p> <ul style="list-style-type: none"> <li>• People are assigned to the DHB where they live.</li> <li>• Patient demographic details (age, ethnicity and gender) are collected from the NES database and in the survey. Patient-reported demographics are used in this measure. Those with missing demographic details are excluded from those specific analyses.</li> <li>• People can self-report multiple ethnicities. Ethnicity data presented uses prioritised ethnic group (Māori, Pacific peoples, Asian and other).</li> <li>• Survey responses are self-reported or completed on behalf of someone else (approximately 1.5 percent of responses are completed on behalf).</li> <li>• Suppression rule: Data are not reported when the denominator is less than 30.</li> <li>• This method deliberately over-samples high users of primary care.</li> <li>• Data does not include those who do not attend primary care or are not enrolled. To view data for these groups, there is a similar question in the New Zealand Health Survey.</li> </ul>
<b>Data aggregation</b>	Three months

## Annual surplus/deficit

<b>Government priority</b>	<b>Financially sustainable health system</b>
<b>Indicator</b>	<b>Annual surplus/deficit at financial year end</b>
<b>Short name</b>	<b>Annual surplus/deficit</b>
<b>Description</b>	Net surplus/deficit as a percentage of total revenue.
<b>Desired outcome</b>	DHBs manage resources and deliver services in line with revenue available.

<b>Rationale</b>		The New Zealand Public Health and Disability Act 2000 requires DHBs to operate in a financially responsible manner and, for this purpose, DHBs must endeavour to cover all annual costs from net annual income. This shows how well the DHBs have managed their annual cost for providing services relative to their funding revenue. A negative measure indicates a deficit, or overspend, and the higher the negative percentage relative to revenue the worse their performance has been.
<b>Measure definition</b>	<b>Numerator</b>	Annual year-to-date surplus or deficit.
	<b>Denominator</b>	Annual year-to-date revenue.
<b>Data source</b>		DHB monthly financial templates
<b>Notes</b>		This indicator will include financial impacts associated with COVID-19 activity and Holidays Act remediation.

## Variance against planned budget

<b>Government priority</b>	<b>Financially sustainable health system</b>
<b>Indicator</b>	<b>Variance between planned budget and year end actuals</b>
<b>Short name</b>	<b>Variance against planned budget</b>
<b>Description</b>	Budget vs actuals variance as a percentage of budget.
<b>Desired outcome</b>	DHBs manage resources and deliver services in line with revenue available.

<b>Rationale</b>		The New Zealand Public Health and Disability Act 2000 requires DHBs to operate in a financially responsible manner and, for this purpose, DHBs must endeavour to cover all annual costs from net annual income. This measure is designed to show how well DHBs have performed against their financial target/budget for the year, ie, did they do what they said they would do?
<b>Measure definition</b>	<b>Numerator</b>	Annual year-to-date actual financial result.
	<b>Denominator</b>	Annual year-to-date budgeted financial result.
<b>Data source</b>		Final approved DHB annual plans
<b>Notes</b>		This indicator will include financial impacts associated with COVID-19 activity and Holidays Act remediation.

# 3. Data sources

## National Minimum Dataset

The National Minimum Dataset (NMDS) is a national collection of public and private hospital discharge information, including coded clinical data for inpatients and day patients.

Link: [www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/national-minimum-dataset-hospital-events](http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/national-minimum-dataset-hospital-events)

## National non-admitted patient collection

The national non-admitted patient collection (NNPAC) information includes event-based purchase units that relate to medical and surgical outpatient events and emergency department events.

Link: [www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/national-non-admitted-patient-collection](http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/national-non-admitted-patient-collection)

## National immunisation register

The national immunisation register (NIR) contains all registered immunisation enrolments and events of children born since 2005.

Link: [www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/national-immunisation-register](http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/national-immunisation-register)

## Mental health data

The Programme for the Integration of Mental Health Data (PRIMHD) is a Ministry of Health single national mental health and addiction information collection of service activity and outcomes data for health consumers.

Link: [www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/primhd-mental-health-data](http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/primhd-mental-health-data)

## Planned care funding schedule

As part of the annual planning cycle, DHBs agree on an expected number of planned care interventions to be delivered for their populations – the planned care funding schedule (PCFS). These volumes are phased throughout the year, and by national collections purchase unit.

## Stats NZ population projections

Yearly population projections by DHB are made available to the Ministry by Stats NZ based on the latest available Census data and other relevant information.

## Primary health organisation enrolment collection

The primary health organisation (PHO) enrolment collection provides a national collection that holds primary health care system patient enrolment data. It is used for monitoring patient enrolment and for research.

Link: [www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/primary-health-organisation-enrolment-collection](http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/primary-health-organisation-enrolment-collection)

More information can also be found here: [www.health.govt.nz/our-work/primary-health-care/primary-health-care-subsidies-and-services/national-enrolment-service](http://www.health.govt.nz/our-work/primary-health-care/primary-health-care-subsidies-and-services/national-enrolment-service)

## Primary care patient experience survey

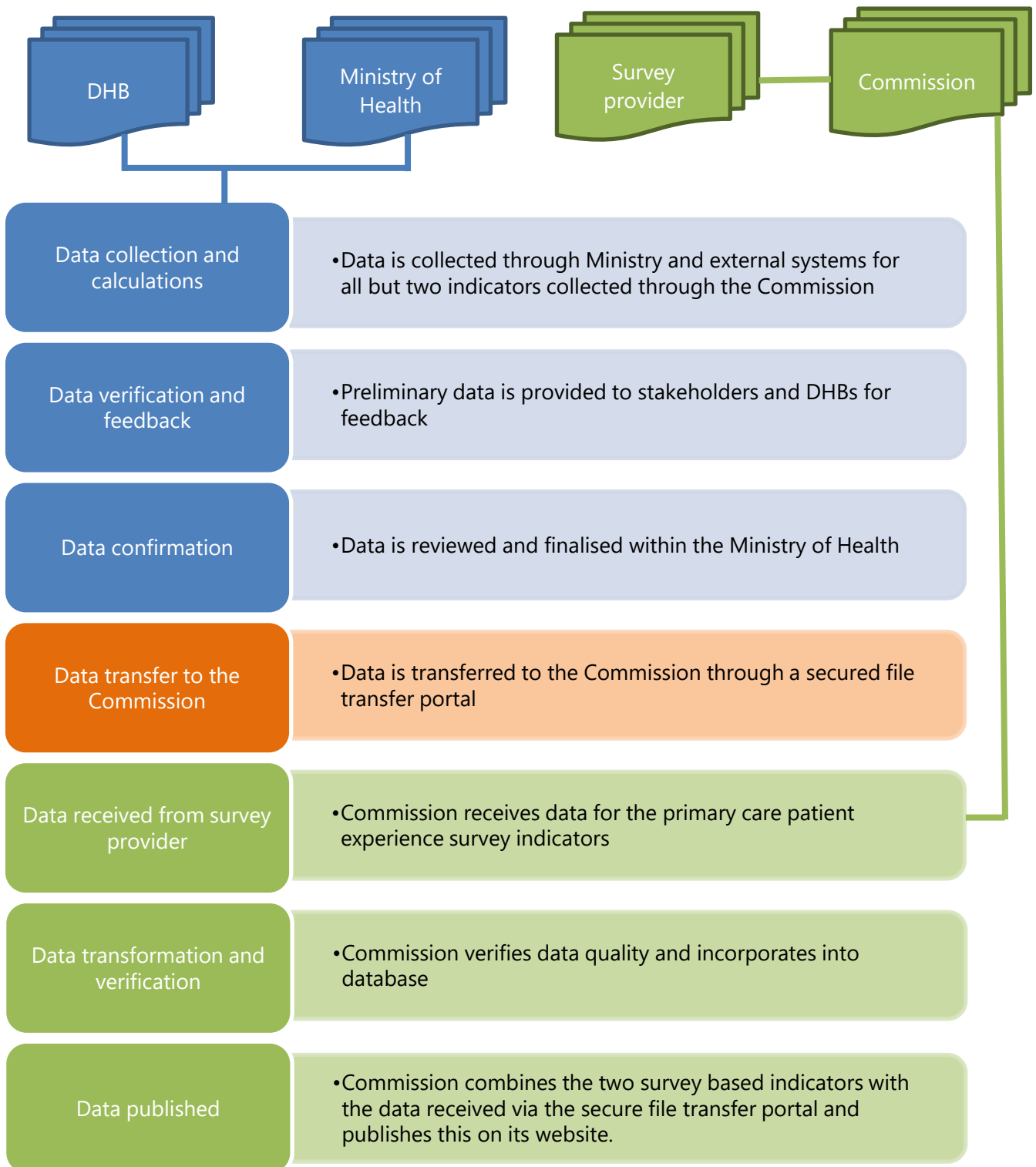
The primary care patient experience survey is designed to find out what patients' experience in primary care is like and how their overall care is managed between their general practice, diagnostic services, specialists and hospital staff. The information is used to improve the quality of service delivery and patient safety.

The survey is now the largest health survey in New Zealand, with around 25,000 responses expected each quarter.

More information can also be found here: [www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/patient-experience/adult-primary-care-experience](http://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/patient-experience/adult-primary-care-experience)

# 4. Data flow process

The diagram below shows how data will flow from the Ministry through to the Commission prior to it being published on the Commission’s website.



## Data flow process in details

### 4.1 Data collection and calculations

#### Data collection and calculations

- Data is collected through Ministry and external systems for all but two indicators, which are collected through the Commission

This is the first step of the data flow process. Raw data for eight indicators is currently collected by the Ministry of Health through various means.

For data in the national collections data warehouse, these are supplied by DHBs via secure file transfer portals. Validation processes are used to assess the quality of each file. Erroneous files are sent back to DHBs for corrections. Data quality reports are generated regularly as part of the quality assurance process. Data from the data warehouse is used by four indicators: ASH 0–4, ASH 45–64, acute bed day and planned care access.

The health system indicators project team also obtains data for four other indicators via other teams within the Ministry. The 24-months immunisation data is part of tier 1 statistics publicly available on the Ministry of Health website. Data for the mental health measure is provided by the mental health directorate. The two financial indicators are obtained through the DHB and Crown entity monitoring team. Once the mental health access and bowel screening indicators are up and running, these will be obtained in similar ways. The project team calculates and compiles results for the eight indicators after data is made available.

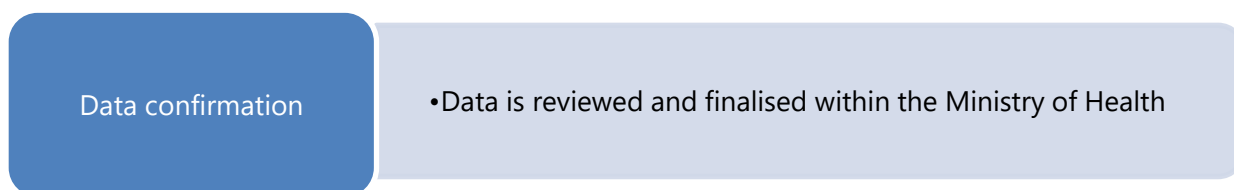
### 4.2 Data verification and feedback

#### Data verification and feedback

- Preliminary data is provided to stakeholders and DHBs for feedback

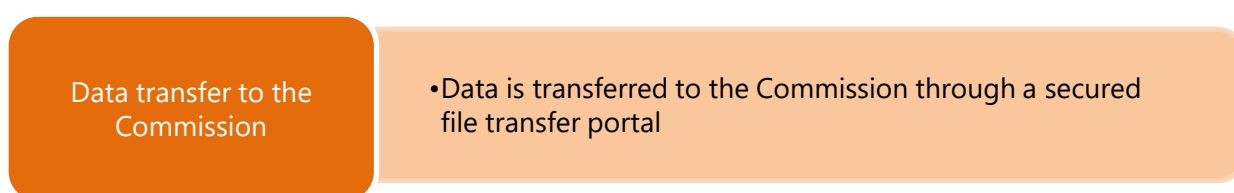
DHBs are expected to take full ownership of the data they supply and are responsible for any necessary corrections. At the same time, they also have a role in reviewing the data and assisting with the quality assurance of the data. After the Ministry compiles aggregated reports and tabulated data, these will be sent back to DHBs and other stakeholders for review and feedback.

### 4.3 Data confirmation



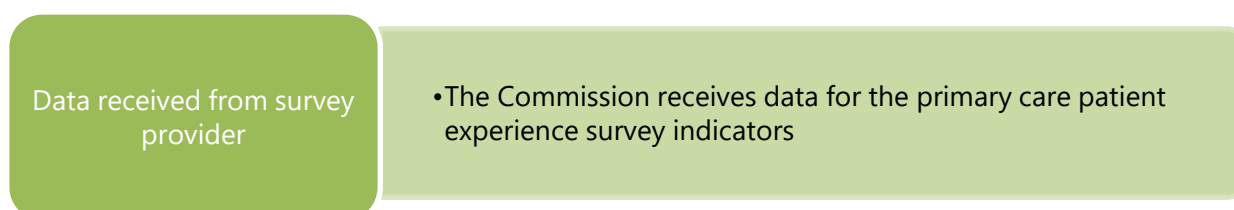
The Ministry compiles results based on the Commission’s data specifications and provides sense checks prior to passing on the data to the Commission to make sure there are no obvious errors. Data is compiled using SAS (Statistical Analysis Software) for all available Ministry indicators and output into flat files in accordance with data specifications from the Commission.

### 4.4 Data transfer to the Commission



Data is transferred to the Commission securely via the electronic file transfer (EFT) system over the connected health network once data is verified. This is a secure portal for the Ministry to transfer files to external organisations. The Commission receives automatic e-mail notification when files arrive.

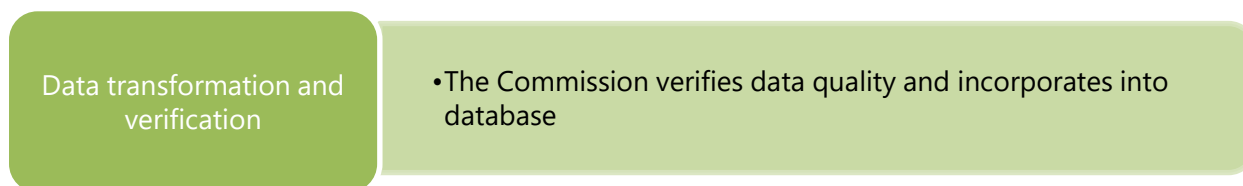
### 4.5 Data received from survey provider



Surveys are completed electronically and saved in the survey provider’s platform. The database hosted by the survey provider is located within New Zealand and adheres to strict privacy and security protocols. The resulting statistics and measures are available via a reporting portal. Different data users at individual practices, PHOs, DHBs, the Commission and the Ministry have varied levels of access to it. The two survey indicators are received by the Commission from the survey provider directly.

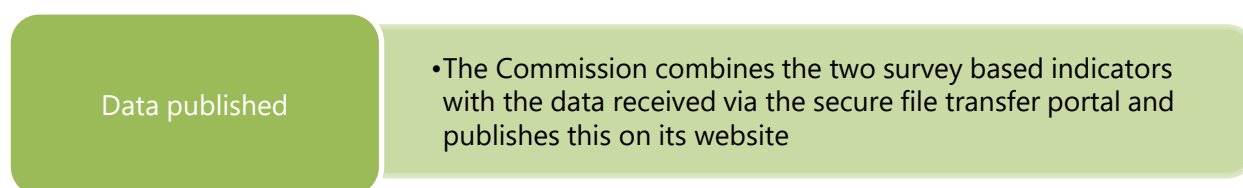


#### **4.6 Data transformation and verification**



Data from the Ministry are reshaped and undergo necessary transformations before being stored into the Commission's database. The Commission carries out quality assurance and data integrity checks on the data before use.

#### **4.7 Data published**



After the necessary quality assurance processes are completed, the dashboard is refreshed and released to the public. The dashboard is hosted on the Commission website and is publicly accessible.

# 5. Acronym list

<b>Acronym</b>	<b>Full name</b>
<b>ASH</b>	Ambulatory sensitive hospitalisations
<b>[The] Commission</b>	Health Quality & Safety Commission
<b>DHB</b>	District health board
<b>HSI</b>	Health system indicators
<b>NHI</b>	National health index
<b>NIR</b>	National immunisation register
<b>NMDS</b>	National Minimum Dataset
<b>NNPAC</b>	National non-admitted patient collection
<b>PCFS</b>	Planned care funding schedule
<b>PRIMHD</b>	Programme for the integration of mental health data
<b>SLM</b>	System level measures
<b>WIES</b>	Weighted inlier equivalent separations

*Ref: 280222*