Transition Period from the

PHO Performance Programme to the

Integrated Performance and Incentive Framework

Indicator Definitions

As at 1 July 2015

Version 7.0

Document History

Date	Version	Description
September 2008	1	First release
October 2008	2	➢ Sections 3.3 and 5.7 - Changed HealthPAC references to Sector Services ➢ Section 5.4 - Eligible population definition for CVRA for total population – 'Males of any ethnicity aged 45-74 years and enrolled with PHO' and 'Females of any ethnicity aged 55-74 years and enrolled with PHO' TO 'Males of any other ethnicity aged 45-74 years and enrolled with PHO' and 'Females of any other ethnicity aged 55-74 years and enrolled with PHO' ➢ Section 1 – inclusion of high need definition specific to CVD risk assessment
November 2008	3	➢ Sections 5.3 to 5.6 – inclusion of Programme goals and target bands ➢ Inclusion of sections 7.4 to 7.6 – definitions of ischaemic CVD, CVD risk assessment and diabetes ➢ Section 7.2 – Ethnicity – updated to state that code '98 declined to state' is not included in data which is sent through to the Programme via the CPI and SU reports ➢ Inclusion of data flows for all indicators
September 2009	3.1	➢ Removal of references to future data standard versions from CVD and Diabetes indicator descriptions ➢ Insertion of Appendix on Target Setting Methodology ➢ Insertion of Appendix on Practitioner to PHO Allocation

		➢ Insertion of Appendix on Dr Zero
April 2010	4	➢ Inclusion of Phase One smoking indicators as 'information only' from 1 January 2010 ➢ Inclusion of Phase Two smoking indicators as 'information only' from 1 July 2010 ➢ Inclusion of definitions for all 'information only' indicators ➢ Inclusion of reference to 'Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard' document – specific READ codes for each indicator have now been removed ➢ Update of IHD indicator definition to reflect new CPI report query (reference to the interim MI query to measure this indicator has been removed) ➢ Update of DAR indicator definition to reflect new CPI report query (no longer limited to Get Checked)
January 2011	5	➢ Extension to the breast screening age band measurement to align with the National Screening Unit ➢ Inclusion of the funding methodology that is applied to smoking cessation activity and correction of data source description for brief advice and cessation support indicators ➢ Update of the RSM indicator definition to reflect move to information only status and new measure ➢ Update of the 2 year old age appropriate vaccination indicator to reflect change in data source and alignment of goal with Health Target
May 2011	5.1	➢ Updates made to support alignment of performance indicators with current Health Targets

		(smoking age bands from 15-75 years to 15-74 years)
July 2011	5.2	➢ Updates made to accommodate 1st July indicator and weighting changes
August 2011	5.2 (b)	➢ Minor update – inclusion of reference that smoking composite measure is only funded when 70% of eligible patients have been coded with a smoking status
September 2011	5.3	➢ Alignment of definitions to describe calculation of smoking indicators with numerator and denominator definitions
November 2011	5.4	➢ Updating of Influenza process diagram to reflect correct date of service ➢ Renaming of indicator "Diabetes Detection and Follow Up" to "Diabetes Follow Up After Detection" ➢ Increasing immunisation goal from 90% to 95% ➢ Specifying incremental targets for CVDRA to achieve 90% by 30 June 2014 ➢ Updating Diabetes prevalence methodology to reflect 'observed' prevalence model rather than 'expected'
June 2012	5.5	➢ Inclusion of new Age Appropriate Vaccinations for Eight Month Olds indicator and resulting changes to weightings ➢ Updating of cervical screening terminology to align with that used by the MOH ➢ Inclusion of decile 9 | 10 to high need population definition for ALL indicators
July 2013	5.6	➢ Updating of hysterectomy algorithm to align with that used by the MOH ➢ Updating of Appendix on Target Setting Methodology

		➢ Correction to Diabetes Follow Up After Detection indicator weightings ➢ Extension of influenza season from 1 Jan – 30 Jun to 1 Jan – 30 Sep ➢ Update of references to CPI report queries to align with version 2.0 (dated July 2012) ➢ Addition of Appendix on Smoking Indicators ➢ Addition of Appendix on Incentive Payments
January 2014	5.7	➢ Corrected documentation of Age Appropriate Vaccination for 8 Month Olds: o Minimum Payment Threshold o Eligible Population o Funding Equation in Appendix o "Other" population not "Total" ➢ Update to Cervical Screening Coverage: o Programme Goal increase to 80% from 1/1/14 o Upper bracket of Target Setting increased to 80% o Reported Age band changed to 25-69 years to align with NCSP reporting ➢ Removed "Staged Indicator Phase" section from all Indicators as no longer used. ➢ All Information Only Indicators relating to Smoking have had Programme Goals removed. ➢ General Spelling/Grammar corrections
July 2014	6.0	➢ Removed programme prerequisites and target setting methodology as they are no longer required for the transition from PPP to IPIF ➢ Aligned the funded indicators and definitions with the new IPIF measures for 2014/15 ➢ Transferred the other PPP funded indicators to information only for 2014/15 ➢ Removed all references to programme goals and targets as no longer required

July 2015	7.0	➢ Aligned the funded indicators and definitions with the IPIF measures for 2015/16 ➢ Changed the definition for Better Help for Smokers to Quit – Primary Care to align with the new Health Target definition from 1 July 2015 ➢ Transfer of the historical Information Only Indicators to the 'Historical Indicators Under PPP' section, and changed Status to 'Historical' ➢ Addition of an 'IPIF Measures In Development' section which includes three new IPIF measures of Early registration with a lead maternity carer; Early enrolment with a PHO; and Polypharmacy

Contents

Purpose and Background

The purpose of this document is to outline the data definitions for the IPIF meaures set during the transition period from the PHO Performance Programme (PPP) to the Integrated Performance and Incentive Framework (IPIF) while the framework is being further developed.

Funded IPIF Measures

The following table lists the **funded** IPIF measures and weightings for the transition period from PPP to IPIF;

IPIF Measure	Description	Population Measure	Annual Weighting	National Target
Cervical screening	% of enrolled women 25 to 69 years who have **received a cervical smear** in the past three years	Total Population	25 percent	80 percent
More heart and diabetes checks	% of enrolled people within the eligible population who have had a **CVD risk recorded** within the last five years	Total Population	25 percent	90 percent
Better help for smokers to quit	% of enrolled patients who are current smokers and have been **given brief advice and/or given or referred to cessation support** in the last fifteen months	Total Population	25 percent	90 percent
Increased immunisation for eight-month-olds	% of children within the eligible population who are **fully immunised** (with the three primary vaccinations scheduled at six weeks, three months and five months) **by eight months** of age	Total Population	15 percent	95 percent
Increased immunisation for two-year-olds	% of children within the eligible population who have **received their final dose (fully immunised) vaccination on or before their second birthday** for the full set of vaccines included in the National Immunisation Schedule	Total Population	10 percent	95 percent

Note: The **Annual Weighting** column refers to the payment weighting that is applied to each IPIF Measure. For example, 25% of a PHO's total possible annual payment is attributed to cervical screening.

Funded IPIF Measure Definitions

1.1 Cervical screening

Purpose		Early detection and treatment of cervical cancer and other abnormalities lowers the rate of premature death for women. The available international evidence suggests that women between the ages of 20 and 69 years should have a cervical smear once every three years. The eligible population has been set at 25 to 69 years of age to align with the National Cervical Screening Programme (NCSP), exclude women only age 17-19 in the past three years and allow time for recruitment.
Population Measure		Total Population
Eligible Population		All women aged 25 to 69 years old who are enrolled with a PHO
Status		Funded
Indicator Definition	**Numerator**	Count of women aged 25 to 69 years old who are enrolled with a PHO and have received a cervical smear in the past three years
	Denominator	Count of women aged 25 to 69 years old who are enrolled with a PHO. Adjusted for the expected number of women who have had a hysterectomy.
National Target		80 percent
Annual Weighting	**Total Population**	25 percent
Data Sources		PHO Enrolment Register NSU Cervical Screening Database
Data Extracted From Data Sources		PHO Enrolment Register • Enrolment Quarter • Lead DHB Name • PHO ID (PerOrg) • PHO Name • PHO Practice • PHO Practice ID • NHI

	• Date of Birth • Gender • Ethnicity • Deprivation Level Conditions: • Where age is between 25 and 69 as at beginning of the PHO enrolment quarter • Where gender is female • Where the PHO enrolment quarter is the one closest to the last month where complete cervical screening transactions are available <u>NSU Cervical Screening Database</u> • NHI • Date of Screening • Date of Birth • Programme Status Conditions: • Where date of screening occurred in the three years prior to the beginning of the PHO enrolment quarter
Indicator Calculation Process	1. Extract the data according to the above specification 2. Join the data sets by NHI 3. Identify those women between 25 and 69 who have received a cervical smear in the past three years 4. Adjust the denominator population (enrolled women between 25 and 69) by the number of expected hysterectomies) 5. Divide the results of step 3 by the results of step 4
Further Information	Refer to Appendix H – Cervical Screening Indicator Considerations

1.2 More heart and diabetes checks

Purpose		To determine what proportion of the population eligible for a CVD risk assessment (definition provided in Appendix D – Population Eligible for a CVD Risk Assessment) have had their CVD risk recorded in the past five years.
Population Measure		Total Population
Eligible Population		CVD Eligible: • Males of Maori, Pacific, or Indian sub-continent ethnicity (refer to Appendix C – Method for Calculating NZ National Ischaemic CVD Prevalence) aged 35-74 years at the end of the reporting period and enrolled with PHO • Females of Maori, Pacific, or Indian sub-continent ethnicity (Refer to Appendix C – Method for Calculating NZ National Ischaemic CVD Prevalence) aged 45-74 years at the end of the reporting period and enrolled with PHO • Males of any other ethnicity aged 45-74 years at the end of the reporting period and enrolled with PHO • Females of any other ethnicity aged 55-74 years at the end of the reporting period and enrolled with PHO
Status		Funded
Indicator Definition	**Numerator**	Count of enrolled people in the PHO within the eligible population who have had a CVD risk recorded within the last five years
	Denominator	Count of enrolled people in the PHO who are eligible for a CVD risk assessment
National Target		90 percent
Annual Weighting	**Total Population**	25 percent
Data Sources	**Numerator**	CPI Report
	Denominator	PHO Enrolment Register
Data extracted from Data Sources		CPI Report • PerOrg ID • Reporting period start date • Reporting period end date • "CVD risk recorded in the last 5 years" data

	(DHX-18/PRX-18/PAX-14) • Age • Gender • Ethnicity • Deprivation Level <u>PHO Enrolment Register</u> • PHO name • PHO ID • Age Category • Gender • Ethnicity • Deprivation Level
Indicator Calculation Process	1. Extract the CPI Report "CVD risk recorded in the last 5 years" data (Numerator) 2. Calculate total number of eligible population using PHO Enrolment Register (Denominator) 3. Divide the numerator by the denominator

1.3 Better help for smokers to quit (15 month period and excluding adjuster)

Purpose		To prompt providers to give Brief Advice[1] to stop smoking to all current smokers and provide evidence-based cessation support[2] or a referral for support to those who wish to stop smoking.
Population Measure		Total Population
Eligible Population		15 to 74 year old enrolled population who have had a smoking status of current smoker within the last 15 months.
Status		Funded
Indicator Description		The percentage of enrolled patients who are current smokers and have been given brief advice and/or given or referred to cessation support services in the last 15 months.
Indicator Definition	**Numerator**	Count of enrolled patients who had a smoking status of current smoker at the beginning of the 12 month period or became a current smoker during the last five quarters, and have been given brief advice and/or given or referred to cessation support services in the last 15 months.
	Denominator	Count of eligible population who have had a smoking

[1] Brief advice to quit would include

1. any documentation that a current smoker was advised to stop smoking
2. if cessation support was documented (see definition in footnote 2) it can be assumed that brief advice was provided
3. documentation that cessation support was offered but refused by the smoker

[2] Cessation support would include any of the following

1. A referral made to a smoking cessation support specialist or programme. This may include any of the following:
   - Hospital Smokefree Team
   - Quit line
   - Aukati kai paipa
   - Other local cessation provider (within the practice or community)
2. Prescribing of any smoking cessation medication
   - Nicotine replacement therapy (transdermal patch, gum, lozenge, inhaler, microtab)
   - Varenicline (Champix)
   - Bupropion (Zyban)
   - Nortriptyline (documented to aid smoking cessation)
3. Provision of behavioral support (face-to-face or via telephone)

		status of current smoker at the beginning of the 12 month period or became a current smoker during the last five quarters.
National Target		90 percent by July 2016
Annual Weighting	**Total Population**	25 percent
Data sources		CPI Report
Data extracted from Data Sources		CPI Report • PHO ID (PerOrg) • Start date for the reporting period • End date for the reporting period • ” Brief advice to stop smoking” data (DHX-9/PRX-9/PAX-5) • “Current smoker within the last 15 months” data (DHX-8/PRX-8/PAX-4) • Age Category • Gender • Ethnicity • Deprivation Level
Indicator Calculation Process (Programme Use Only)		1. Extract the CPI Report ”Brief advice to stop smoking provided in the last 15 months” data (Numerator) 2. Extract the CPI Report ”Current smoker within the last 15 months” data’ (Denominator) 3. Divide the numerator by the denominator Refer to the reference document ‘Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard’ for the list of valid codes.
Further Information		Refer to Appendix M – Smoking Indicators

1.4 Increased immunisation for eight-month-olds

Purpose		Children who receive the complete set of age appropriate vaccinations are less likely to become ill from certain diseases.
Population Measure		Total Population
Eligible Population		All children who are within the 8 month old cohort during the reporting period who are enrolled with the PHO at the beginning of the qualifying quarter
Status		Funded
Indicator Definition	**Numerator**	Count of PHO enrolled children who turn eight months old within the reporting period being measured who have received their final dose (fully immunised) vaccination by eight months of age for the full set of vaccines included in the national immunisation schedule and health target
	Denominator	Count of PHO enrolled children who turned eight months old within the reporting period being measured
National Target		95 percent
Annual Weighting	**Total Population**	15 percent
Data Sources		National Immunisation Register (NIR) Data Warehouse PHO Enrolment Register
Data Extracted From Data Sources		NIR Data Warehouse • Patient NHI • Fully Vaccinated (Yes or No) PHO Enrolment Register (applicable at the beginning of the reporting quarter • Enrolment quarter • Lead DHB name • PHO ID (PerOrg) • PHO name • PHO practice • PHO practice ID • NHI • Date of birth • Ethnicity codes • Deprivation quintile

	Conditions: • Where age cohort = children who fall within the 8 month old cohort within the reporting period
Indicator Calculation Process	1. Extract the data according to the above specification for the reporting quarter 2. Join the data sets by NHI to identify those enrolled children at the beginning of the reporting quarter that were fully vaccinated by 8 months of age 3. Identify for each child that was enrolled at the beginning of the quarter, which children turned 8 months old in the quarter. 4. Divide the enrolled children who had been fully vaccinated by 8 months of age by those enrolled children that turned 8 months old within the reporting period. (step 2 / step 3)
Further Information	Refer to Appendix J – Increased Immunisation Considerations

1.5 Increased immunisation for two-year-olds

Purpose		Children who receive the complete set of age appropriate vaccinations are less likely to become ill from certain diseases.
Population Measure		Total Population
Eligible Population		All children who had their second birthday within the reporting period who are enrolled with the PHO at the beginning of the qualifying quarter
Status		Funded
Indicator Definition	**Numerator**	Count of enrolled children as of the first day of the reporting quarter whose second birthday fell during the reporting period who had received their final dose (fully immunised) vaccination on or before their second birthday for the full set of vaccines included in the national immunisation schedule.
	Denominator	Count of the enrolled children as of the first day of the reporting quarter whose second birthday fell within the reporting period.
National Target		95 percent
Annual Weighting	**Total Population**	10 percent
Data Sources		National Immunisation Register (NIR) Data Warehouse PHO Enrolment Register
Data Extracted From Data Sources		NIR Data Warehouse • Patient NHI • Fully Vaccinated (Yes or No) PHO Enrolment Register (applicable at the beginning of the reporting quarter) • Enrolment quarter • Lead DHB name • PHO ID (PerOrg) • PHO name • PHO practice • PHO practice ID • NHI • Date of birth • Ethnicity codes

	• Deprivation quintile Conditions: • Where age cohort = children who have their second birthday within the reporting period
Indicator Calculation Process	1. Extract the data according to the above specification for the reporting quarter 2. Join the data sets by NHI to Identify those enrolled children at the beginning of the quarter that were fully vaccinated by their second birthday 3. Identify for each child that was enrolled at the beginning of the quarter, which children had their second birthday in the quarter. 4. Divide the enrolled children who had been fully vaccinated by their second birthday by those enrolled children that had their second birthday within the reporting period. (step 2 / step 3)
Further Information	Refer to Appendix J – Increased Immunisation Considerations

Disaggregated Reporting for IPIF Measures

The following table lists the **disaggregated reporting** that will be available for the IPIF measures during the transition period from PPP to IPIF;

IPIF Measure	**Description**	**Ethnicity**
Cervical screening	% of enrolled women 25 to 69 years who have **received a cervical smear** in the past three years	No
More heart and diabetes checks	% of enrolled people within the eligible population who have had a **CVD risk recorded** within the last five years	Yes
Better help for smokers to quit	% of enrolled patients who are current smokers and have been **given brief advice and/or given or referred to cessation support** in the last 15 months	Yes
Increased immunisation for eight-month-olds	% of children within the eligible population who are **fully immunised** (with the three primary vaccinations scheduled at six weeks, three and five months) **by eight months** of age	Yes
Increased immunisation for two-year-olds	% of children within the eligible population who have **received their final dose (fully immunised)** vaccination on or before their second birthday for the full set of vaccines included in the National Immunisation Schedule	Yes

Note: From July 2014 only the Total Population will be funded for the IPIF measures and incentive funding will not be available for the disaggregated reporting of the IPIF measures (as outlined above).

Historical Indicators Under PPP

% of enrolled women 25 to 69 years who have **received a cervical smear** in the past three years
% of enrolled people within the eligible population who have had a **CVD risk recorded** within the last five years
% of enrolled patients who are current smokers and have been **given brief advice and/or given or referred to cessation support** in the last 15 months
% of children within the eligible population who are **fully immunised** (with the three primary vaccinations scheduled at six weeks, three and five months) **by eight months** of age
% of children within the eligible population who have **received their final dose (fully immunised)** vaccination on or before their second birthday for the full set of vaccines included in the National Immunisation Schedule
% of enrolled women 50 to 69 years who have **received a screening mammogram** from a BreastScreen Aotearoa provider in the past two years (also reported for 50 to 64 years and 45 to 69 years)
% of enrolled people within the eligible population with **Ischaemic CVD coded**
% of enrolled people within the eligible population **coded with Diabetes**
% of enrolled people with a record of a **Diabetes Annual Review** during the reporting period
% of enrolled persons 65 years and over who have **received an influenza vaccination** during the most recent influenza campaign
% of eligible population who have ever had a **smoking status recorded**
% of eligible population whose most recent smoking status is recorded as **current smoker**
% of **current smokers who have been given brief advice** in the last 12 months
% of **current smokers who have been given or referred to cessation support services** in the last 12 months

% of enrolled patients who are current smokers and have been seen in general practice and have been **given brief advice and/or given or referred to cessation support** in the last 12 months
Inhaled corticosteroids – total beclomethasone equivalent doses of inhaled corticosteriods
Investigation of **thyroid function** – ratio of the number TSH tests claimed versus the number of FT4 tests claimed
Measurement of the **acute phase response** – ratio of the number ESR tests claimed versus the number of CRP tests claimed
Simultaneous testing of acute phase response – number of ESR and CRP tests ordered simultaneously on the same referral (test form)
Metformin:Sulphonylureas – ratio of number of dispensings for Metformin verses number of dispensing for sulphonylureas
Utilisation by high need enrollees – doctor consultations
Utilisation by high need enrollees – nurse consultations
Utilisation by high need enrollees – doctor and nurse consultations
GP referred **laboratory expenditure**
GP referred **pharmaceutical expenditure**
% of **Diabetes patients with HbA1c test result of 8% or less or 64mmol/mol** or less in the last year

1.6 Breast screening coverage

Purpose		Early detection and treatment of breast cancer lowers the rate of premature mortality among women. The available international evidence suggests that women within the targeted age band should be screened for breast cancer once every two years. This indicator measures screening rates for the three age groups.
Population Measure		Total Population and High Need for women aged 50 to 69 years, 45 to 69 years and 50 to 64 years.
Eligible Population		All women in each of the reported age groups who are enrolled with a PHO
Status		Historical
Indicator Definition	**Numerator**	Count of enrolled women in each of the reported age groups who have received a screening mammogram from a Breast Screening Aotearoa provider in the past two years
	Denominator	Count of women in each of the reported age groups who are enrolled with a PHO
Target		N/A
Data Sources		PHO Enrolment Register NSU Breast Screening Database
Data Extracted From Data Sources		PHO Enrolment Register • Enrolment Quarter • Lead DHB Name • PHO ID (PerOrg) • PHO Name • PHO Practice • PHO Practice ID • NHI • Date of Birth • Gender • Ethnicity • Deprivation Level Conditions: • Where age is in each of the reported age groupsas at the beginning of the PHO enrolment quarter • Where gender is female

	• Where the PHO enrolment register used is the most recent collected register prior to the last month where complete breast screening transactions are available NSU Breast Screening Database • NHI • Date of Last Screening • Date of Birth Conditions: • Where date of screening occurred in the 2 years prior to the end of the reporting period
Indicator Calculation Process	1. Extract the data according to the above specification 2. Join the data sets by NHI 3. Identify those women in each of the reported age groups who have had a mammogram in the past two years 4. Divide the results of step 3 by the count of enrolled women in each of the reported age groups
Further Information	Refer to Appendix G – Breast Screening Indicator Considerations

1.7 Ischaemic cardiovascular disease

Purpose		To determine what proportion of the population estimated to have ischaemic CVD (definition provided in Appendix B – Ischaemic CVD Definition) have been diagnosed
Population Measure		Total Population and High Need (refer to Appendix A – Indicator Demographic Definitions)
Eligible Population		All people aged 30 to 79 years at the end of the reporting period and enrolled with the PHO
Status		Historical
Indicator Definition	**Numerator**	Count of enrolled people in the PHO with Ischaemic CVD (definition provided in Appendix B - Ischaemic CVD Definition) coded at the end of the reporting period
	Denominator	Number of enrolled people in the PHO estimated to have ischaemic CVD, using the CVD Prevalence Estimate Data (as per data extract described below)
Target		N/A
Data Sources	**Numerator**	Clinical Performance Indicator (CPI) report
	Denominator	CVD Prevalence Estimate Data (refer to Appendix C – Method for Calculating NZ National Ischaemic CVD Prevalence)
Data extracted from Data Sources		CPI Report • PerOrg ID • Reporting period start date • Reporting period end date • "Ischaemic CVD ever recorded" data (DHX-17/PRX-17/PAX-13) • Age • Gender • Ethnicity • Deprivation Level Refer to the reference document 'Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard' for the list of valid codes. CVD Prevalence Data (refer to Appendix C - Method for

	Calculating NZ National Ischaemic CVD Prevalence) • PHO ID • Practice • Age • Gender • Ethnicity • Deprivation level • Expected CVD
Indicator Calculation Process	1. Extract the CPI Report "Ischaemic CVD ever recorded" data (Numerator) 2. Extract data from the CVD Prevalence Estimate Data (Denominator) 3. Divide the numerator by the denominator

1.8 Diabetes Detection

Purpose		To determine what proportion of the population estimated to have Diabetes have been diagnosed. Where the definition for Diabetes is: • Type1 • Type2 • Diabetes that could clinically be either type 1 or type 2, but there are not clinical indications for the diagnostic tests to determine the type • Gestational diabetes is excluded
Population Measure		Total Population and High Need (refer to Appendix A – Indicator Demographic Definitions)
Eligible Population		All people aged 15 to 79 years at the end of the reporting period and enrolled with the PHO
Status		Historical
Indicator Definition	**Numerator**	Count of enrolled people in the PHO coded with Diabetes
	Denominator	The number of enrolled people in the PHO who would be expected to have diagnosed diabetes, using the Diabetes Prevalence Estimate Data
Target		N/A
Data Sources	**Numerator**	CPI Report
	Denominator	Diabetes Prevalence Estimate Data (refer to Appendix E – Method for Calculating NZ National Diabetes Prevalence)
Data extracted from Data Sources		<u>CPI Report</u> • PerOrg ID • Reporting period start date • Reporting period end date • ” Diabetes ever recorded” data (DHX-11/PRX-11/PAX-7) • Age • Gender • Ethnicity • Deprivation Level Refer to the reference document ‘Code Mappings for Data Transfer

	Specification and Clinical Performance Indicator Data Format Standard' for the list of valid codes. Diabetes Prevalence Data (refer to Appendix E - Method for Calculating NZ National Diabetes Prevalence) • PHO ID • Practice • Age • Gender • Ethnicity • Deprivation level • Observed diabetes
Indicator Calculation Process	1. Extract the CPI Report "Diabetes ever recorded" data (Numerator) 2. Extract data from the Diabetes Prevalence Estimate Data (Denominator) 3. Divide the numerator by the denominator

1.9 Diabetes Follow-up After Detection

Purpose		To determine what proportion of the population expected to have diagnosed diabetes have had a diabetes annual review. The definition of an annual diabetes review is: • A diabetes eye check (check of your retinas) within the last two years • The sensation and circulation of your feet checked • Your blood pressure checked • An HBA1c level done (this checks your average blood glucose levels over the previous six weeks) • Your cholesterol levels checked • Your height and weight checked • Your kidney function checked
Population Measure		Total Population and High Need (refer to Appendix A – Indicator Demographic Definitions)
Eligible Population		All people aged 15 to 79 years at the end of the reporting period and enrolled with the PHO
Status		Historical
Indicator Definition	**Numerator**	Count of enrolled people in the PHO with a record of a Diabetes Annual Review during the reporting period
	Denominator	The number of enrolled people in the PHO who would be expected to have diagnosed diabetes, using the Diabetes Prevalence Estimate Data
Target		N/A
Data Sources	**Numerator**	CPI Report
	Denominator	Diabetes Prevalence Estimate Data (refer to Appendix E – Method for Calculating NZ National Diabetes Prevalence)
Data extracted from Data Sources		CPI Report • PerOrg ID • Reporting period start date • Reporting period end date • ” Diabetes follow up” data (DHX-12/PRX-12/PAX-8) • Age • Gender

	• Ethnicity • Deprivation Level Diabetes Prevalence Data (refer to Appendix E - Method for Calculating NZ National Diabetes Prevalence) • PHO ID • Practice • Age • Gender • Ethnicity • Deprivation level • Expected Diabetes
Indicator Calculation Process	1. Extract the CPI "Diabetes follow up" data (Numerator) 2. Extract data from The Diabetes Prevalence Estimate Data (Denominator) 3. Divide the numerator by the denominator

1.10 65 years + influenza vaccination coverage

Purpose		The complications of influenza in the elderly can be serious or life threatening. As a result the government funds the cost of influenza vaccines and their administration for persons 65 years and over, and persons of any age with certain chronic conditions.
Population Measure		Total Population and High Need
Eligible Population		All people aged 65 years and over enrolled with the PHO
Status		Historical
Indicator Definition	**Numerator**	Count of enrolled persons 65 years and over who have received an influenza vaccine during the most recent influenza campaign
	Denominator	Count of the enrolled 65 years and over population where age is set as at the beginning of the most recent campaign period
Target		N/A
Data Sources		PHO Enrolment Register Sector Services Proclaim database
Data Extracted From Data Sources		<u>PHO Enrolment Register</u> • Enrolment quarter • Lead DHB name • PHO ID (PerOrg) • PHO name • PHO practice • PHO practice ID • NHI • Date of birth • Ethnicity codes • Deprivation quintile Conditions: • Where age > = 65 as at the beginning of the flu campaign period <u>Sector Services Database</u> • NHI • Date of service

	• Date of birth • Immunisation code • Practitioner registration Conditions: • Where date of service is on or before 30 September of the flu season being measured • Where the PHO enrolment register used is that submitted in the month of April
Indicator Calculation Process	1. Extract the data according to the above specification 2. Join the data sets by NHI 3. Identify those persons 65 and older that have had a vaccine in the flu campaign period 4. Divide the result of step 3 by the total enrolled population 65 and over
Further Information	Refer to Appendix I – 65 Years + Influenza Vaccination Coverage Indicator Considerations

1.11 Smoking status recorded

Purpose		To prompt providers to ask about smoking status[3]
Population Measure		Total Population, High Needs Population and Other Population
Eligible Population		15 to 74 year old enrolled patients in the PHO
Status		Historical
Indicator Description		The percentage of eligible population who have ever had a smoking status recorded
Indicator Definition	**Numerator**	Count of enrolled patients who have ever had a smoking status recorded
	Denominator	Count of eligible population
Target		N/A
Data sources		CPI Report
		PHO Enrolment Register
Data extracted from Data Sources		<u>CPI Report</u> • PHO ID (PerOrg) • Start date for the reporting period • End date for the reporting period • "Smoking status ever recorded" data (DHX-6/PRX-6/PAX-2) • Age Category • Gender • Ethnicity • Deprivation Level
		<u>PHO Enrolment Register</u> • PHO Name • PHO ID (PerOrg) • Age Category • Gender • Ethnicity • Deprivation Level
Indicator Calculation Process (Programme Use Only)		1. Extract the CPI Data Report "Smoking status ever recorded" data (Numerator)

[3] Refer to New Zealand Smoking Cessation Guidelines ABC – "Ask"

	2. Calculate total number of eligible population using the PHO Enrolment Register (Denominator) 3. Divide the numerator by the denominator Refer to the reference document 'Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard' for the list of valid codes.
Further Information	Refer to Appendix M – Smoking Indicators

1.12 Current smoker status

Purpose		To encourage PHOs to take a population health approach to decreasing smoking rates
Population Measure		Total Population, High Need Population and Other Population
Eligible Population		15 to 74 year old enrolled patients who have had a smoking status recorded
Status		Historical
Indicator Description		The percentage of eligible population whose most recent smoking status is recorded as current smoker
Indicator Definition	**Numerator**	Number of eligible population with system codes indicating they have a most recent smoking status as current smoker (CPI report)
	Denominator	Number of eligible population with system codes indicating they have a smoking status recorded
Target		N/A
Data sources		CPI Report
Data extracted from Data Sources		CPI Report • PHO name • PHO ID (PerOrg) • Start date for the reporting period • End date for the reporting period • "Current smoking status recorded" data (DHX-7/PRX-7/PAX-3) • "Smoking status ever recorded" data (DHX-6/PRX-6/PAX-2) • Age category • Gender • Ethnicity • Deprivation level
Indicator Calculation Process (Programme Use Only)		1. Extract the CPI Data Report "Current Smoker Status Recorded" data (Numerator). 2. Extract the CPI Data Report "Smoking status ever recorded" data (Denominator). 3. Divide the numerator by the denominator

	Refer to the reference document 'Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard' for the list of valid codes.

1.13 % Brief advice for smokers in the last 12 months

Purpose		To prompt providers to give Brief Advice[4] to stop smoking to all current smokers
Population Measure		Total Population, High Need Population and Other Population
Eligible Population		15 to 74 year old enrolled population who have a most recent smoking status as current smoker
Status		Historical
Indicator Description		The percentage of current smokers who have been given brief advice in the last 12 months
Indicator Definition	**Numerator**	Count of enrolled patients who had a smoking status of current smoker at the beginning of the 12 month period or became a current smoker during the last 12 months, and have been given brief advice in the last 12 months
	Denominator	Number of eligible population who had a smoking status of current smoker at the beginning of the 12 month period or became a current smoker during the last 12 months
Target		N/A
Data sources		CPI Report
Data extracted from Data Sources		CPI Report • PHO name • PHO ID (PerOrg) • Start date for the reporting period • End date for the reporting period • "Brief advice to stop smoking" data (DHX-9/PRX-9/PAX-5) • "Current smoker within the last 15 months" data (DHX-8/PRX-8/PAX-4)

[4] Brief advice to quit would include

1. any documentation that a current smoker was advised to stop smoking
2. if cessation support was documented (see definition in footnote 2) it can be assumed that brief advice was provided
3. documentation that cessation support was offered but refused by the smoker

	• Age category • Gender • Ethnicity • Deprivation level
Indicator Calculation Process (Programme Use Only)	1. Extract the CPI Data Report 'Brief advice to stop smoking provided' data (Numerator) 2. Extract the CPI Data Report "Current smoker within the last 15 months" data (Denominator) 3. Divide the numerator by the denominator Refer to the reference document 'Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard' for the list of valid codes.

1.14 Cessation support for smokers in the last 12 months

Purpose		To prompt providers to provide evidence-based cessation support[5] or referrals to support those who wish to stop smoking
Population		Total Population, High Need Population and Other Population
Eligible Population		15 to 74 year old enrolled population who have a most recent smoking status as current smoker
Status		Historical
Indicator Description		The percentage of current smokers who have been given or referred to cessation support services in the last 12 months
Indicator Definition	**Numerator**	Count of enrolled patients who had a smoking status of current smoker at the beginning of the 12 month period or became a current smoker during the last 12 months, and have been given or referred to cessation support services in the last 12 months
	Denominator	Number of eligible population who had a smoking status of current smoker at the beginning of the 12 month period or became a current smoker during the last 12 months
Target		N/A
Data sources		CPI Report
Data extracted from Data Sources		CPI Report • PHO name

[5] Cessation support would include any of the following

1. A referral made to a smoking cessation support specialist or programme. This may include any of the following:
    - Hospital Smokefree Team
    - Quit line
    - Aukati kai paipa
    - Other local cessation provider (within the practice or community)
2. Prescribing of any smoking cessation medication
    - Nicotine replacement therapy (transdermal patch, gum, lozenge, inhaler, microtab)
    - Varenicline (Champix)
    - Bupropion (Zyban)
    - Nortriptyline (documented to aid smoking cessation)
3. Provision of behavioral support (face-to-face or via telephone)

	• PHO ID (PerOrg) • Start date for the reporting period • End date for the reporting period • "Smoking cessation support or referral" data (DHX-10/PRX-10/PAX-6) • "Current smoker within the last 15 months" data (DHX-8/PRX-8/PAX-4) • Age category • Gender • Ethnicity • Deprivation level
Indicator Calculation Process (Programme Use Only)	1. Extract the CPI Data Report "Smoking cessation support or referral" data (Numerator) 2. Extract the CPI Data Report "Current smoker within the last 15 months" data (Denominator) 3. Divide the numerator by the denominator Refer to the reference document 'Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard' for the list of valid codes.

1.15 Better help for smokers to quit (12 month period and including adjuster)

Purpose		To prompt providers to give Brief Advice[6] to stop smoking to all current smokers and provide evidence-based cessation support[7] or a referral for support to those who wish to stop smoking
Population Measure		Total Population
Eligible Population		15 to 74 year old enrolled population who have had a smoking status of current smoker within the last 15 months. Adjusted for the proportion of 15 to 74 year olds presented to general practice in the last 12 months
Status		Historical
Indicator Description		The percentage of enrolled patients who are current smokers and have been seen in general practice and have been given brief advice and/or given or referred to cessation support services in the last 12 months.
Indicator Definition	**Numerator**	Count of enrolled patients who had a smoking status of current smoker at the beginning of the 12 month period or became a current smoker during the last five quarters, and have been given brief advice and/or given or referred to cessation support services

[6] Brief advice to quit would include

1. any documentation that a current smoker was advised to stop smoking
2. if cessation support was documented (see definition in footnote 2) it can be assumed that brief advice was provided
3. documentation that cessation support was offered but refused by the smoker

[7] Cessation support would include any of the following

1. A referral made to a smoking cessation support specialist or programme. This may include any of the following:
   - Hospital Smokefree Team
   - Quit line
   - Aukati kai paipa
   - Other local cessation provider (within the practice or community)
2. Prescribing of any smoking cessation medication
   - Nicotine replacement therapy (transdermal patch, gum, lozenge, inhaler, microtab)
   - Varenicline (Champix)
   - Bupropion (Zyban)
   - Nortriptyline (documented to aid smoking cessation)
3. Provision of behavioral support (face-to-face or via telephone)

		in the last 12 months
	Denominator	Count of eligible population who have had a smoking status of current smoker at the beginning of the 12 month period or became a current smoker during the last five quarters.
National Target		90 percent
Data sources		CPI Report
		PHO Enrolment Register
Data extracted from Data Sources		<u>CPI Report</u> • PHO ID (PerOrg) • Start date for the reporting period • End date for the reporting period • ” Brief advice to stop smoking” data (DHX-9/PRX-9/PAX-5) • “Current smoker within the last 15 months” data (DHX-8/PRX-8/PAX-4) • Age Category • Gender • Ethnicity • Deprivation Level
		<u>PHO Enrolment Register (to calculate Adjuster)</u> • PHO Name • PHO ID (PerOrg) • Message Control ID • Date of Last Consultation
Indicator Calculation Process (Programme Use Only)		1. Extract the CPI Report ”Brief advice to stop smoking provided” data (Numerator) 2. Extract the CPI Report ”Current smoker within the last 15 months” data’ and multiply this by the Adjuster to estimate the number of 15 to 74 year old smokers that have presented to general practice in the last 12 months (Denominator) 3. Divide the numerator by the denominator <u>Adjuster Calculation using PHO Enrolment Register</u> a) Count of enrolled patients whose most recent

	'Date of Last Consultation' is within the 12 months prior to the 'Message Control ID' date (Numerator) b) Count of enrolled patients (Denominator) c) Divide the numerator by the denominator to ascertain Adjuster Refer to the reference document 'Code Mappings for Data Transfer Specification and Clinical Performance Indicator Data Format Standard' for the list of valid codes.
Further Information	Refer to Appendix M – Smoking Indicators

1.16 Inhaled corticosteroids

Purpose		Inhaled corticosteroids have been shown to be prescribed at doses in excess of that recommended by guidelines as being adequate to control asthma for most people. Some of the high doses being prescribed may be as a result of confusion relating to the different potencies of the inhaled corticosteroids. The purpose of this indicator is to provide feedback to practitioners and PHOs on the average daily dose of inhaled corticosteroids prescribed for adults once the different types of inhaled corticosteroid are converted to a beclomethasone equivalent dose (BED).	
Population Measure		Total Population	
Eligible Population		>17 years	
Status		Historical	
Indicator Definition	**Numerator**	Total beclomethasone equivalent doses of inhaled corticosteroids	
	Denominator	Total days	
Target		N/A	
Data sources		NZHIS Pharmhouse	
		PHO Practitioner database	
Data extracted from Data Sources		NZHIS Pharmhouse	Required Fields: Provider Number (dispensings) Provider Type (dispensings) Formulation ID Date dispensed Units Dispensed Total Days Supply Conditions: Outliers *equal to* "normal" Patient Category *not in list* "Y","J" Date dispensed within reporting quarter (year dispensed, quarter dispensed)

		Reimbursement? = "govt subsidy" NSS Flag in list "I,O" Provider Type (dispensings) in list "1,2"
	PHO Practitioner database	Required Fields: Doctor_med_council_number Practice_name PHO_Perorg (PHO_ID) Pho_name DHB_ID DHB_name Doctor_started Doctor_left
Indicator Calculation Process (Programme Use Only)	1. Add PHO and practice to a pharmacy data extract for each NZMC, ensuring that new and leaving GPs are correctly allocated using start and end dates. 2. Create a list of all NZMCs with PHO and practice. 3. For each NZMC determine: a. Sum all beclomethasone equivalent doses by NZMC b. Sum total days supply by NZMC 4. Add this information as 2 new columns to the list 5. Calculate indicator for PHO: a. The average daily dose of inhaled corticosteroid = (Sum of a)/(Sum of b)	

1.17 Investigation of Thyroid Function

<table>
<tr><td colspan="2">Purpose</td><td colspan="2">This ratio measures that TSH is ordered more frequently than FT4. Guidelines recommend TSH should be used as the sole initial test of thyroid function. TSH has been adopted as the initial test of thyroid function, as it is both more specific and more sensitive than FT4 to alterations of thyroid status in patients with primary thyroid disease. FT4 could be used in the follow up of cases of thyroid disease or those on treatment.</td></tr>
<tr><td colspan="2">Population Measure</td><td colspan="2">Total Population</td></tr>
<tr><td colspan="2">Eligible Population</td><td colspan="2">All</td></tr>
<tr><td colspan="2">Status</td><td colspan="2">Historical</td></tr>
<tr><td rowspan="2">Indicator Definition</td><td>Numerator</td><td colspan="2">The number of TSH tests claimed</td></tr>
<tr><td>Denominator</td><td colspan="2">The number of FT4 tests claimed.</td></tr>
<tr><td colspan="2">Target</td><td colspan="2">N/A</td></tr>
<tr><td colspan="2" rowspan="2">Data sources</td><td colspan="2">NZHIS Laboratory data warehouse</td></tr>
<tr><td colspan="2">PHO Practitioner database</td></tr>
<tr><td colspan="2" rowspan="2">Data extracted from Data Sources</td><td>NZHIS Laboratory data warehouse</td><td>Required fields:
Date visited
Provider Code
Provider Type
Provider Name
Laboratory test code
Number of tests

Conditions:
Date visited within the reporting quarter
Laboratory test code (BT1=TSH and BT2=FT4)
Provider Type in list “1,2”</td></tr>
<tr><td>PHO Practitioner database</td><td>Required fields:
Doctor_med_council_number
Practice_name</td></tr>
</table>

		Pho_name Dhb_name Doctor_started Doctor_left
Indicator Calculation Process (Programme Use Only)	1. Add PHO and practice to labs data extract for each NZMC, ensuring that new and leaving GPs are correctly allocated using start and end dates. 2. Create a list of all NZMCs with PHO and practice. 3. For each NZMC determine: a. Count total TSH by NZMC b. Count total FT4 by NZMC 4. Add this information as 2 new columns to the list 5. Calculate indicator for PHO: a. Divide (Sum of a) by (Sum of b) b. Multiply the result by 10 to determine ratio "*x*:10"	

1.18 Measurement of Acute Phase Response | Simultaneous Testing

Purpose		This indicator measures the ratio of utilisation of ESR:CRP. Changes in the serum concentration of the acute phase reactants reflect the presence and intensity of inflammation, and they have long been used as a clinical guide to diagnosis and management. For this purpose, in the majority of patients determination of serum C-reactive protein (CRP) has advantages over the traditional strategy of measuring the erythrocyte sedimentation rate (ESR). Simultaneous measurement of ESR and CRP rarely provides additional useful information over the measurement of either ESR or CRP alone.	
Population Measure		Total Population	
Eligible Population		All	
Status		Historical	
Indicator Definition	**Numerator**	Total number of ESR tests claimed	
	Denominator	Total number of CRP tests claimed	
Additional Measure		Number of ESR and CRP tests ordered simultaneously on the same referral (test form).	
Target		N/A	
Data sources		NZHIS Laboratory data warehouse	
		PHO Practitioner database	
Data extracted from Data Sources		NZHIS Laboratory data warehouse	Required Fields: Laboratory test code Date visited Provider code Provider type Referral Id Number of tests Conditions: Laboratory test code in list "D21,H01" Date visited within reporting quarter

		Provider Type in list "1,2"
	PHO Practitioner database	Required Fields: Doctor_med_council_number Practice_name PHO_Perorg (PHO_ID) Pho_name DHB_ID DHB_name Doctor_started Doctor_left
Indicator Calculation Process (Programme Use Only)	1. Add PHO and practice to labs data extract for each NZMC, ensuring that new and leaving GPs are correctly allocated using start and end dates. 2. Create a list of all NZMCs with PHO and practice. 3. For each NZMC determine: a. Count all simultaneous tests by NZMC (i.e. where referral id is the same) b. Count total ESR by NZMC c. Count total CRP by NZMC 4. Add this information as 3 new columns to the list 5. Calculate indicators for PHO: a. Divide (Sum of b) by (Sum of c) b. Multiply result by 10 to determine ratio "*x*:10" c. Ordering of ESR and CRP simultaneously = Sum of a	

1.19 Metformin:Sulphonylureas

Purpose		Historically metformin was not the drug of choice for treatment of type 2 diabetes. Recent evidence has demonstrated that metformin in most instances should be the medication of choice.	
Population Measure		Total Population	
Eligible Population		All	
Status		Historical	
Indicator Definition	**Numerator**	Number of dispensings for Metformin	
	Denominator	Number of dispensings for Sulphonylureas	
Target		N/A	
Data sources		NZHIS Pharmhouse	
		PHO Practitioner Database	
Data extracted from Data Sources		NZHIS Pharmhouse	Required fields: Chemical ID Chemical name Date dispensed Provider Number (dispensings) Provider Type (dispensings) No of items 2. Conditions: Chemical ID in (1567,1568,1569,1794) Date dispensed within reporting quarter (year dispensed, quarter dispensed) Reimbursement? = "govt subsidy" NSS Flag in list "I,O" Provider Type (dispensings) in list "1,2"
		PHO Practitioner Database	Required Fields: Doctor_med_council_number Practice_name PHO_Perorg (PHO_ID) PHO_name

		DHB_ID DHB_name Doctor_started Doctor_left
Indicator Calculation Process (Programme Use Only)	1. Add PHO and practice to labs data extract for each NZMC, ensuring that new and leaving GPs are correctly allocated using start and end dates. 2. Create a list of all NZMCs with PHO and practice. 3. For each NZMC determine: a. Sum all Metformin (1794) items by NZMC b. Sum all Sulphonylureas (1567,1568,1569) by NZMC 4. Add this information as 2 new columns to the list 5. Calculate indicator for PHO: a. Divide (Sum of a) by (Sum of b) b. Multiply result by 10 to determine ratio "*x*:10"	

1.20 Utilisation by high need enrolees

Purpose		Given their overall poor health status, one would expect that high need persons would require more consultations with their GP on average than most other types of persons. However, historically levels of utilisation by Maori, Pacific Islanders, and deprived persons have been at or below those of the mainstream population. One of the fundamental aims of the Primary Health Care Strategy is to improve access to health services for those who are in most need of care and who have historically missed out.
Population Measure		Total Population
Eligible Population		All
Status		Historical
Indicator Definition	**Numerator**	Age standardised count of GP and nurse consultations for enrolled high need persons
	Denominator	Age standardised count of GP and nurse consultations for enrolled non high need
Target		N/A
Data sources		PHO service utilisation reports
Data extracted from Data Sources	PHO service utilisation reports	Required fields: PHO name PHO ID (PerOrg) Age category Gender Ethnicity Deprivation level GP and nurse consultations (numerator) Enrolled persons (denominator)
Indicator Calculation Process (Programme Use Only)		1. Calculate the number of GP and nurse consultations per high need persons and per non high need by age and gender. 2. Standardise these per head rates by age using

	the latest population projections from Statistics New Zealand. 3. Calculate the ratio of consultations per head for high need to consultations per head for non-high need.

1.21 GP referred laboratory expenditure

Purpose		Laboratory test expenditures are influenced by various factors (age, gender, ethnicity and deprivation). One of the aims of the Primary Health Care Strategy is to ensure that expected expenditure is equitably set based on the needs of the enrolled population. This indicator measures how actual PHO laboratory test expenditures relate to expected expenditure determined by reference to standardised expenditure rates.
Population Measure		Total Population
Eligible Population		All
Status		Historical
Indicator Definition	**Numerator**	Estimated (indicative) value of PHO practitioner referred laboratory tests
	Denominator	Standardised benchmark value of PHO practitioner referred laboratory tests
Target		N/A
Data Sources		PHO enrolment database PHO practitioner template MOH Lab data warehouse
Data Extracted From Data Sources		**Benchmark Expenditure** PHO enrolment register • DHB Id • PHO Id • Gender • Ethnicity(Maori, Pacific, Other) • Quintile • Ageband • Enrolment • Year & Quarter of enrolment register MOH Lab data warehouse • Date visited • Gender • Age Band • Ethnicity (Maori, Pacific, Other)

	• Quintile • Provider registration number • Estimated value of claims **Actual Expenditure** PHO Practitioner Template • PHO Id • Practice Id • Practice Name • NZMC number • NZMC Name • LOCUM • NZMC Start Date • NZMC End date MOH Lab data warehouse • Provider Type • Provider registration number • Patient NHI number • Number of tests • Value of Claims • Date visited • Funding type code ('B' – Bulk funding) • Estimated value of claims PHO enrolment register • DHB Id • PHO Id • Patient NHI number
Indicator Calculation Process	1. Extract the data according to the above specification 2. Calculate standardised benchmark expenditure by applying the average expenditure rates per demographic group to the PHO enrolled population 3. Calculate actual expenditure using NHI level matching as per the cube tool logic to merge data from MOH Labhouse, PHO enrolment register and PHO Practitioner Template 4. Divide the actual expenditure by the benchmark expenditure

Further Information	Standardised benchmark expenditure will be recalibrated each quarter using national average rates per demographic group for PHO practitioner ordered tests.

1.22 GP referred pharmaceutical expenditure

Purpose		Pharmaceutical expenditures are influenced by various factors (age, gender, ethnicity and deprivation). One of the aims of the Primary Health Care Strategy is to ensure that expected expenditure is equitably set based on the needs of the enrolled population. This indicator measures how actual PHO pharmaceutical expenditures relate to expected expenditure determined by reference to standardised expenditure rates.
Population Measure		Total Population
Eligible Population		All
Status		Historical
Indicator Definition	**Numerator**	Reimbursement value of PHO practitioner prescribed community pharmaceuticals
	Denominator	Standardised benchmark reimbursement value of PHO practitioner prescribed community pharmaceuticals
Target		N/A
Data Sources		PHO enrolment database PHO practitioner template MOH Pharmhouse MoH Pharmaceutical expenditure benchmark forecast
Data Extracted From Data Sources		**Benchmark Expenditure** PHO enrolment database • DHB Id • PHO Id • Gender • Ethnicity(Maori, Pacific, Other) • Quintile • Ageband • Enrolment • Year & Quarter of enrolment register MoH Pharmaceutical expenditure benchmark forecast (Pharm Rate) • Date dispensed • Gender

	• Age Band • Ethnicity (Maori, Pacific, Other) • Quintile • Provider number • Reimbursement cost (excluding GST) **Actual Expenditure** PHO Practitioner Template • PHO Id • Practice Id • Practice Name • NZMC number • NZMC Name • LOCUM • NZMC Start Date • NZMC End date MOH Pharmhouse • Provider Type • Provider Number (dispensing) • Patient NHI Number • Reimbursement cost (excluding GST) • Claimant number • Date dispensed • Subsidy type ("Govt Subsidy") • NSS flag (with values of I or O) MOH Pharmhouse - Dr Zero Rates Calculation • Calendar year dispensed • Calendar quarter number dispensed • Funding DHB Name • Claimant number • Claimant name • Dr Zero • NHI reported • Reimbursement cost (excluding GST) PHO enrolment register • DHB Id • PHO Id

	• Patient NHI number
Indicator Calculation Process	1. Extract the data according to the above specification. 2. Calculate Dr Zero rates by DHB. 3. Calculate standardised benchmark expenditure by applying the average expenditure rates per demographic group to the PHO enrolled population. 4. Calculate actual expenditure using NHI level matching as per the cube tool logic to merge data from MOH Pharmhouse, PHO enrolment register and PHO Practitioner Template. Add the Dr Zero rate adjustment. 5. Divide the actual expenditure by the benchmark expenditure.
Further Information	Standardised benchmark reimbursement costs will be recalibrated each quarter using national average rates per demographic group for PHO practitioner prescribed community pharmaceuticals. The actual expenditure can be further broken down using the cube tool.

1.23 Diabetes Patients HbA1c Test Results

Purpose		To determine what proportion of the population diagnosed with Diabetes have an HbA1c test result of 8% or less or 64mmol/mol or less at their last annual review
Population Measure		Total Population and High Need (refer to Appendix A – Indicator Demographic Definitions)
Eligible Population		All people aged 15 to 79 years at the end of the reporting period and enrolled with the PHO
Status		Historical
Indicator Definition	**Numerator**	Count of enrolled people in the PHO with a record of a Diabetes Annual Review during the reporting period whose HbA1c test result is 8% or less or 64mmol/mol or less
	Denominator	Count of enrolled people in the PHO who have diagnosed Diabetes
Target		N/A
Data Sources		CPI Report
Data extracted from Data Sources		CPI Report • PerOrg ID • Reporting period start date • Reporting period end date • "Diabetes patients with HbA1c test result less than 64mmol/mol (8%)" data (DHX-13/PRX-13/PAX-9) • " Diabetes ever recorded" data (DHX-11/PRX-11/PAX-7) • Age • Gender • Ethnicity • Deprivation Level
Indicator Calculation Process		1. Extract the CPI Report "Diabetes patients with HbA1c test result less than 64mmol/mol (8%)" data (Numerator) 2. Extract the CPI Report "Diabetes ever recorded" data (Denominator) 3. Divide the numerator by the denominator

IPIF Measures In Development

1.24 Early Registration with a Lead Maternity Carer

Purpose		An integrated system is one that engages women with appropriate services early in their pregnancy in order to facilitate delivery of best practice maternity care. Registration with a lead maternity carer in the first trimester ensures an appropriately qualified health professional can provide continuity of maternity care, advice and education throughout a woman's pregnancy, birth and post-natal period.
Population Measure		Total Population
Eligible Population		All women who are recorded as pregnant during the reporting quarter.
Status		In Development
Indicator Definition	**Numerator**	Count of accepted first lead maternity carer registration claims where date of registration is within the first 12 weeks of pregnancy (calculated from Expected Delivery Date).
	Denominator	Count of accepted first LMC registration claims within the same period.
National Target		N/A
Data Sources		Maternity database
Data Extracted From Data Sources		TBD
Indicator Calculation Process		TBD
Further Information		This measure is continuing to be defined.

1.25 Early Enrolment with a PHO and general practice

Purpose		An integrated system is one that supports families with new babies to engage with their chosen primary care provider soon after birth in order to establish a primary care home and facilitate timely immunisation and easy access to other primary care services. Enrolment with a PHO and general practice by six weeks of age supports pre-call processes to ensure timely six week immunisation and supports handover from primary maternity services to a general practice team.
Population Measure		Total Population
Eligible Population		All babies who were born in the previous quarter.
Status		In Development
Indicator Definition	**Numerator**	Count of newborns who were born in the previous quarter as held on the national immunisation register that are pre enrolled or enrolled with a PHO within six weeks of birth (B or E code).
	Denominator	Count of newborns who were born in the previous quarter as held on the national immunisation register.
National Target		N/A
Data Sources		National Immunisation Register (NIR) Data Warehouse PHO enrolment database
Data Extracted From Data Sources		TBD
Indicator Calculation Process		TBD
Further Information		This measure is continuing to be defined.

1.26 Polypharmacy

Purpose		There is strong international and New Zealand based evidence that polypharmacy is a major risk factor for poor outcomes for the elderly. It increases the risk of drug interactions and side effects, and results in avoidable hospital admissions. The current age standardised rate is increasing at 1.5% per annum and there is significant variation around the country. Both the rate of polypharmacy and the rate of increase in the last three years are higher for Maori and Pacific people than for those of other ethnicity.
Population Measure		Total Population
Eligible Population		All people aged 65 years and over during the reporting quarter
Status		In Development
Indicator Definition	**Numerator**	Count of patients aged 65 years and over that have been dispensed 11 or more long term medications in each of two consecutive quarters
	Denominator	Count of DHB population age/sex standardised to NZ population that are 65 years and over
National Target		N/A
Data Sources		MOH Pharmhouse PHO enrolment register
Data Extracted From Data Sources		TBD
Indicator Calculation Process		TBD
Further Information		Data for this measure will be drawn from the Pharmaceutical Collection, which contains claim and payment information from community pharmacists for subsidised dispensings. A long-term medicine is defined as the same chemical being dispensed in two consecutive quarters. It should be noted that the data collection used for this measure does not capture unsubsidised or over-the-counter medicines; neither does it indicate whether people actually took the medicine. This measure is continuing to be defined.

Appendices

Appendix A – Indicator Demographic Definitions

High Need Definition

The high need definition for all of the Programme indicators is an enrollee who is Maori, Pacific or NZDep decile 9 or 10.

Other Definition

The other definition for all of the Programme indicators is an enrollee who is not categorised as high need.

Ethnicity

The Programme will source the following ethnicity information either from the Clinical Performance Indicator (CPI) report for the CVD and Diabetes indicators, or the PHO Enrolment Database for the breast screening, cervical screening and influenza indicators. With regards to the CVD and Diabetes indicators, the ethnicity information will then be aggregated to meet the high need definition requirements and individual indicator ethnicity requirements.

Report Value	Description
10	European (Not Further Defined)
11	New Zealand European / Pakeha
12	Other European
21	NZ Maori
30	Pacific Island (Not Further Defined)
31	Samoan
32	Cook Island Maori
33	Tongan
34	Nuiean

35	Tokelauan
36	Fijian
37	Other Pacific Island
40	Asian (Not Further Defined)
41	South East Asian
42	Chinese
43	Indian
44	Other Asian
51	Middle Eastern
52	Latin American / Hispanic
53	African (or cultural group of African origin)
54	Other
99	Not stated

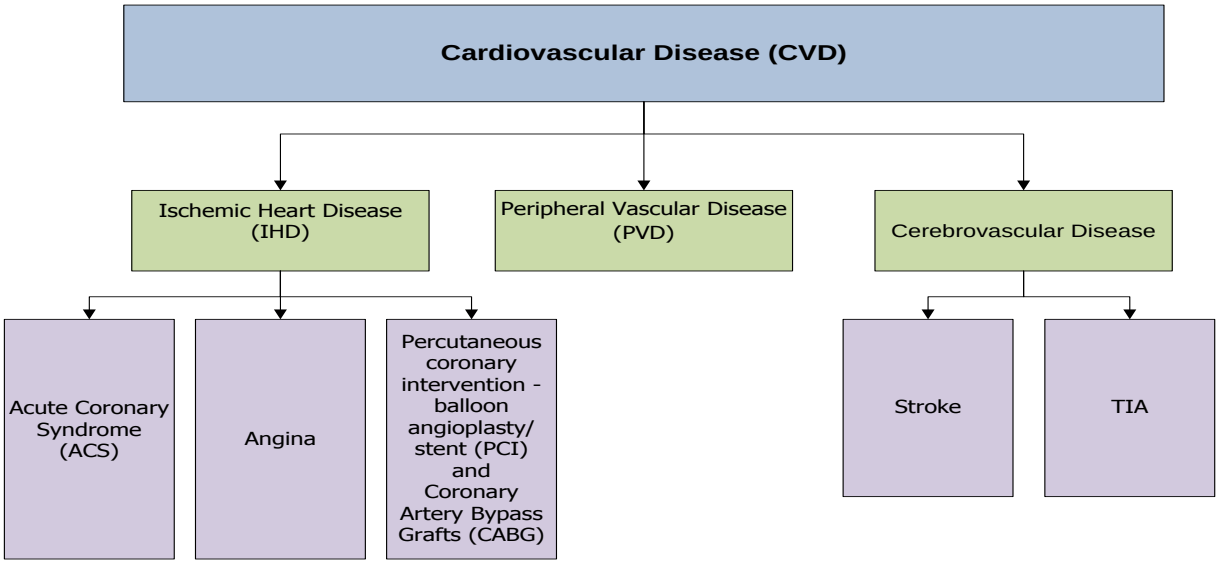
Deprivation Information

The Programme will be provided the following deprivation information either from the Clinical Performance Indicator (CPI) report or the PHO Enrolment Database.

Report Value	Description
Quintile 0	Not geo-coded
Quintile 1	Decile 1 or 2 (least deprived)
Quintile 2	Decile 3 or 4
Quintile 3	Decile 5 or 6
Quintile 4	Decile 7 or 8
Quintile 5	Decile 9 or 10 (most deprived)

Appendix B – Ischaemic CVD Definition

The definition for Ischaemic CVD is a confirmed medical diagnosis now or in the past of:



Only ischaemic CVD events are included in this indicator: Cardiac failure is not included because of variable access to diagnostic testing. Individuals aged between 30-79 years with a CVD event are included.

The Root READ codes that will be used by practitioners in PMS applications for the main diagnosis of CVD are:

Diagnosis	Root Read Code
Ischaemic Heart Disease	G3.00
Cerebrovascular disease	G6.00
Peripheral Vascular Disease	G 70-73

Other relevant diagnoses are included under these root codes although 'procedural' codes are different again e.g. CABG or PCI. However one would expect that patients receiving these interventions would have an existing disease code from above.

Appendix C – Method for Calculating NZ National Ischaemic CVD Prevalence

Inclusion criteria of the study population (i.e. the numerator)

1. New Zealand "health service contact" population refers to people who had any form of health services contact in New Zealand from 1st July 2009 to 30th June 2010 or who were actively enrolled with a PHO, as documented in at least one of the following NHI-linked national datasets:

    a. On a PHO Enrolment Register (GP Consult date or current PHO enrolment – there will be a small number of people who are not resident but are enrolled, but they are greatly out weighted by including people enrolled with no contact in the last 12 months),

    b. NMDS Public Hospital Event (Admission or Discharge date),

    c. NMDS Private Hospital Event (Admission or Discharge date),

    d. National Health Index list (last updated date),

    e. National Mental Health Collection (service start, service end and contact dates),

    f. Laboratory Testing Claims,

    g. Community Pharmaceutical Dispensing.

    h. People with a health system contact in at least one of the four quarters were included unless they were without residency status and then they were excluded (domicile code was not used as criteria for exclusion).

2. Ethnicity recordings were taken from the 1 January 2010 PHO enrolment database. If an ethnicity recording was unavailable, it was taken from the latest version of NMDS or NHI. Ethnicity was stratified by Maori (ethnic code 21), Pacific people (30–37), 'South Asian' (43), and 'Other' New Zealanders.

    Note that the best map for 'South Asian' ethnicity (as specified in the New Zealand Guidelines Group guidelines) using 2 -digit ethnicity codes was determined to be code 43.

3. Socioeconomic status was measured using the NZDep2001 index of deprivation by quintile at the census area unit (CAU 2001) level for the DHB of domicile extract and at meshblock (MB 2001) level for the PHO extract.

4. In the PHO and practice extracts the definition of the DHB is based on the DHB the PHO is in. The PHO and practice come from the 1 January 2010 PHO enrolment register. The DHB extract is based on the DHB of domicile and includes all live and resident NHIs, not just those enrolled with a PHO.

Definition of People with Ischaemic CVD (i.e. the denominator)

5. Within the health service contact population defined above: people were defined as having Ischaemic CVD if they had at least one previous CVD related hospitalisation (primary and secondary diagnostic codes shown below) or had received 2 or more anti-anginal pharmaceutical dispensings as defined below.

    i. ICD hospitalisation codes for coronary heart disease, ischaemic stroke atherosclerotic cerebrovascular disease, peripheral vascular disease,

    ii. ICD procedure codes including coronary artery bypass graft, coronary angioplasty or stenting, and peripheral vascular procedures such as peripheral arterial bypass, endarterectomy.

    Note: Anti-anginals used to identify people with CVD are glyceryl trinitrate, isosorbide dinitrate, isosorbide mononitrate, nicorandil, and perhexiline.

National Ischaemic CVD Prevalence Estimates

6. The prevalence of diagnosed CVD is estimated as the numerator (people with Ischaemic CVD as defined above) divided by the denominator (the 'health service contact' population as defined above).

7. The expected number of people with diagnosed CVD in a specified population (a DHB or PHO was calculated by applying the national average prevalence of diagnosed CVD (as defined above) by age, gender and ethnicity to a specified DHB or PHO population.

8. The observed prevalence of diagnosed CVD was simply the number of people with diagnosed CVD, as defined above, in a specified DHBs, PHO or practice.

9. The observed prevalence for a specified population was then compared with the expected prevalence.

10. Of note, these methods eliminate numerator-denominator bias commonly found in estimates of prevalence or incidence derived from national data sets as both the numerator and denominator are derived from the same 'health contact' datasets.

Method For Calculating PHO Performance Targets For CVD

The expected prevalence for a specified population based on national averages by age, gender, and ethnicity(calculated from step 6) were used to generate a PHO performance target for each PHO based on the demography of the particular enrolled population (i.e. accounting for age structure, gender and ethnicity mix).

Analyses of expected versus observed prevalence for smaller populations, such as at the practice level, should be interpreted with considerable caution given the influence of random error in small populations. At the practice level it will be difficult to differentiate between random error and under-diagnosis as the cause of any significant differences between observed and expected prevalence

Appendix D – Population Eligible for a CVD Risk Assessment

Definition for eligibility for CVD risk assessment is based on the "Assessment and Management of CVD risk"; NZGG; Dec 2003. This eligible population is:

Populations included in CVD risk assessment indicator
Maori, Pacific and Indian subcontinent MEN aged 35-74
Maori, Pacific and Indian subcontinent WOMEN aged 45-74
All other ethnicities MEN aged 45-74
All other ethnicities WOMEN aged 55-74

It is acknowledged that, while this definition covers the vast majority of those eligible, the NZ Guidelines also recommend the screening of males with known cardiovascular risk factors or at high risk of developing diabetes (irrespective of ethnicity) from age 35 and females fulfilling the same criteria from age 45.

Indian sub-continent

The definition of Indian subcontinent that the Programme will use for the CVD indicators is a person enrolled with the PHO with a self-identified "Indian" ethnicity (Report value 43 - refer to ethnicity table in Appendix A).

Ethnicity codes commonly recorded with 2 digits (as in Appendix A) cannot be mapped to specifically identify people from the Indian sub-continent. The PHO Performance Program has established that "Indian" (report value 43) is the most accurate code for this indicator.

Appendix E – Method for Calculating NZ National Diabetes Prevalence

Inclusion criteria of the study population (i.e. the numerator)

1. New Zealand "health service contact" population refers to people who had any form of health services contact in New Zealand from 1st July 2009 to 30th June 2010 or who were actively enrolled with a PHO, as documented in at least one of the following NHI-linked national datasets:

    a) On a PHO Enrolment Register (GP Consult date or current PHO enrolment – there will be a small number of people who are not resident but are enrolled, but they are greatly out weighted by including people enrolled with no contact in the last 12 months),

    b) NMDS Public Hospital Event (Admission or Discharge date),

    c) NMDS Private Hospital Event (Admission or Discharge date),

    d) National Health Index list (last updated date),

    e) National Mental Health Collection (service start, service end and contact dates),

    f) Laboratory Testing Claims,

    g) Community Pharmaceutical Dispensing.

    h) People with at health system contact in at least one of the four quarters were included unless they were without residency status and then they were excluded (domicile code was not used as criteria for exclusion).

2. Ethnicity recordings were taken from the 1 January 2010 PHO enrolment database. If an ethnicity recording was unavailable, it will be taken from the latest version of NMDS or NHI. Ethnicity was stratified by Maori (ethnic code 21), Pacific people (30–37), 'South Asian' (43), and 'Other' New Zealanders.
   Note that the best map for 'South Asian' ethnicity (as specified in the New Zealand Guidelines Group guidelines) using 2 -digit ethnicity codes was determined to be code 43.

3. Socioeconomic status was measured using the NZDep2001 index of deprivation by quintile at the census area unit (CAU 2001) level for the DHB of domicile extract and at meshblock (MB 2001) level for the PHO extract.

4. In the PHO and practice extracts the definition of the DHB is based on the DHB the PHO is in. The PHO and practice come from the 1 January 2010 PHO enrolment register. The DHB extract is based on the CHD of domicile and includes all live and resident NHIs, not just those enrolled with a PHO.

Definition of people with diabetes (i.e. the denominator)

5. Within the health service contact population defined above: people were defined as having diabetes if they had at least one previous diabetes related hospitalisation (primary and secondary diagnostic codes shown below) or attended diabetes clinics in hospital outpatients, or had received 2 or more diabetes-related pharmaceutical dispensings or had 4 or more Hba1c tests and one or more albumin creatinine ration tests as defined below:

    a. ICD codes for hospitalisation from 1998 to 2008 were ICD 10: E10-E14 (diabetes codes), O24.0 to O24.3 (referring to pre-existing diabetes in pregnancy), ICD 9: 250 (diabetes codes); but not ICD 10:O24.4 (diabetes arising from pregnancy).

    b. Hospital outpatients (from 2006 to 2008) were identified by the purchase units within the National Non-admitted Patient Collection (NNPAC), namely M20006 to M2007 covering clinics for diabetes education and management and retinal screening (no other diabetes specific purchase units were included e.g. High Risk Type I Diabetes Support; High Risk Type I Diabetes Support for up to 18 year olds).

    c. Diabetes related pharmaceutical dispensings (from July 2001 to December 2009) of two or more scripts including all subsidised forms of insulin, and oral hypoglycaemic and glucagon. However, dispensing of glucose test strips and insulin needles were not included (we did not exclude dispensing in the younger age groups in this extract) and dispensing of metformin to women of 12 to 45 years of age was not included as criteria.

    d. 4 or more Hba1c testing undertaken for an individual between 1 July 1996 and 31 December 2009 and one or more albumin creatinine ratio tests during the same two year period.

National diabetes prevalence estimates

6. The Virtual Diabetes Registry from which observed prevalence have been calculated counts individuals who had:

a) Diabetes coded in hospital admissions from July 1999 to December 2010 (NMDS) *Comment: Admissions with a specific code for gestational diabetes are not included.*

b) Diabetes 'education and management' attendance July 2003 to December 2010 **excluding** 2003 | 2004 data for Northland DHB due to data quality concern (NNPAC and PHNCW)

c) Diabetes retinal (Fund Us) screening July 2003 to December 2010 (NNPAC and PHNCW)

d) Insulin or oral hypoglycaemic agents dispensed on two or more occasions between January 2009 to December 2010, **excluding** women aged between 12 and 45 years of age that were dispensed Metformin only (specifically they do not meet other criteria in inpatient admissions, Diabetes 'education and management'; Diabetes retinal screening (July 2003 to June 2010); Diabetes pharmaceuticals dispensed other than Metformin; 4 or more HbA1c tests (January 2009 to December 2010) *Comment: This is intended to exclude women aged between 12 and 45 years of age who may have polycystic ovary syndrome treated with Metformin.*

e) Patients who attended Diabetes specialist clinics | endocrinology clinics between July 2003 to December 2010 **and** meeting one or more other Diabetes criteria; inpatient admissions; Diabetes education and management clinic; Diabetes retinal screening (July 2003 to December 2010); Diabetes pharmaceuticals dispensed two or more times; four or more HbA1c tests (January 2009 to December 2010) *Comment: People attending these clinics are not counted unless there is another criteria suggesting they have Diabetes.*

f) Patients who have four or more HbA1c tests between January 2009 to December 2010 **and** a urine Albumin Creatinine Ratio (ACR) test *Comment: People with multiple HbA1c tests are not counted unless they also have a urine ACR. This is intended to count people with Diabetes managed in primary care on diet alone, but should not count people with obesity or impaired glucose tolerance (for whom ACR is not indicated).*

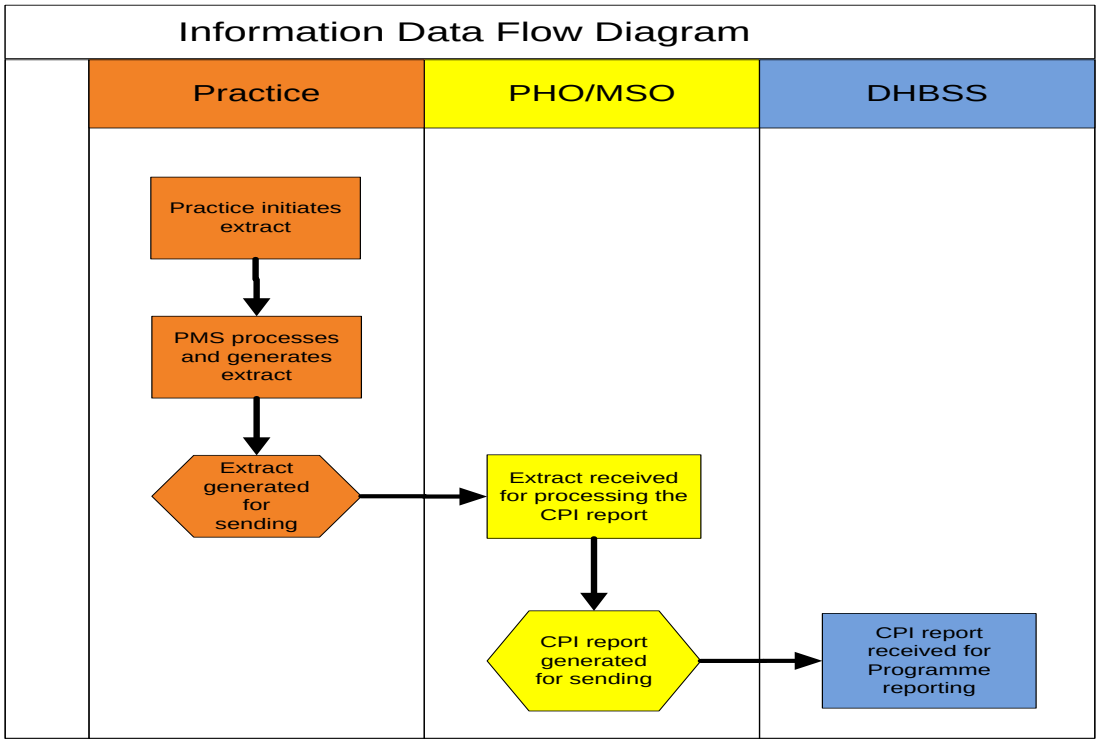
Note: For the national Health Target and the PHO Performance Programme, people known to have died before 1 January 2011 are removed from the count; and people who are not enrolled in a PHO on 1 January 2011 are not included in the 'expected' Diabetes prevalence for DHB Diabetes target denominators.

Method in calculating PHO performance targets for diabetes

7. The observed prevalence for a specified population based on national averages by age, gender, and ethnicity(calculated from step 6) were used to generate a PHO performance target for each PHO based on the demography of the particular enrolled population (i.e. accounting for age structure, gender and ethnicity mix).

8. Analyses of expected versus observed prevalence for smaller populations, such as at the practice level, should be interpreted with considerable caution given the influence of random error in small populations. At the practice level it will be difficult to differentiate between random error and under-diagnosis as the cause of any significant differences between observed and expected prevalence.

Appendix F – CPI Report Information Data Flow



Data for the CVD and Diabetes indicators will be derived from the Clinical Performance Indicator (CPI) report which is provided to the Programme by PHOs (at DHB of practice, practice level or patient level). The CPI report is populated using information generated from the PHO affiliated practices' Practice Management Systems.

The extract mechanism that will be used by the Practice to send the information to the PHO is captured in the Data Transfer Specification (DTS) document, which is a reference document of the PHO agreement.

The DTS provides information detailing:

- how the data is extracted;
- what data fields from the PMS application will be extracted; and
- what the format (standardised) the PHO should receive the data in.

Appendix G - Breast Screening Indicator Considerations

NHI

This approach relies on matching by NHI number. If the NHI number is not supplied in the enrolment register, then a match cannot occur and the coverage rate may be lower than expected. The breast screening data is provided to the National Screening Unit by Breast Screen Aotearoa providers. All women in the breast screening database have an NHI. The NHIs in the breast screening database are validated by the Ministry of Health in a manner similar to the validation that occurs for the NHI in the PHO enrolment register.

Gender

There are some records in PHO patient registers where the gender is 'unknown.' The record is accepted; however, the gender is converted to male. This conversion takes place because the capitation payment rate tables include only male and female rates. In measuring breast screening coverage, a screen that would appear to have taken place on a male will not be counted. This disadvantages a PHO that has submitted a number of cases where gender is unknown. The PHO and its component practices control gender assignment on the patient register; hence, it seems appropriate that they bear the consequences of failing to assign gender.

Enrolment

This approach is based on matching the current PHO enrolment with events that took place during a prior period. This could disadvantage a PHO if a screening occurred on a woman who was on the PHO's register when the measurement period began who enrolled with another PHO during the measurement period. However, it advantages a PHO because it will count a screening for a woman who enrolled with the PHO during the measurement period. This process can influence the enrolment strategy of the PHO such it is careful to enrol only those women whom it intends on providing with comprehensive preventative and curative services.

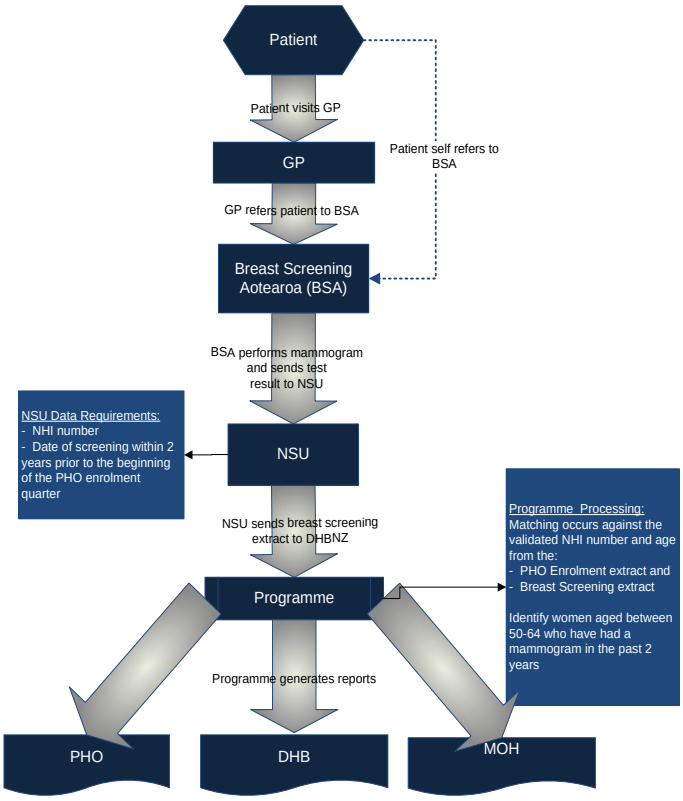
Numerator

Only those mammograms taken by a Breast Screening Aotearoa provider count in the coverage rate. The Ministry is keen to support screenings that occur through the public system because it has an assurance of the quality of the mammogram provided and the advice given[8]. However, it does mean that the breast screening rates may appear lower than they actually are and will have

[8] This is not a negative reflection on the quality of the mammogram or advice given privately, simply a positive reflection on the care given under the public programme.

a disproportionate impact on certain regions (e.g., Auckland). However, this should not affect a PHO's performance score in that performance is measured based on improvement over its starting point, not achievement of an absolute figure.

Data Flow



Data Timeliness

The breast screening data in the National Screening Unit is meant to be no more than 3 months old; that is, all screenings that took place 3 months prior to the date of the data extract should be recorded in the database. The data extract is sent to the Programme every month and includes transactions for 24 months where the last complete transaction month is the one that is 3 months prior to the date of the extract.

Declines

Women who decline to be screened are not "counted" as having had a mammogram (indicator numerator). Declines are counted in the indicator denominator. Given a PHOs performance is measured based on movement from Baseline towards Target, the PHO is not disadvantaged by declines. The indicator target also allows for a PHO not reaching 100% due to declines.

Appendix H – Cervical Screening Indicator Considerations

NHI

This IPIF Measure relies on matching by NHI number. If the NHI number is not supplied in the PHO enrolment register, then a match cannot occur and the coverage rate may be lower than expected. The cervical screening data is provided to the National Screening Unit by community laboratories. Laboratories generally supply the National Screening Unit with the NHI information provided by the smear taker. All women in the National Screening Unit database have an NHI. The National Screening Unit engages in a process with the Ministry of Health where the NHIs provided to it are validated against the NHI master database held by the Ministry of Health. The same validation process used for the PHO enrolment register is used in this process. The result of the validation process is that the NHI on the National Screening Unit is the primary NHI for the person.

Gender

There are some records in PHO patient registers where the gender is 'unknown.' The record is accepted; however, the gender is converted to male. This conversion takes place because the capitation payment rate tables include only male and female rates. In measuring cervical screening coverage, a screen that would appear to have taken place on a male will not be counted.

Enrolment

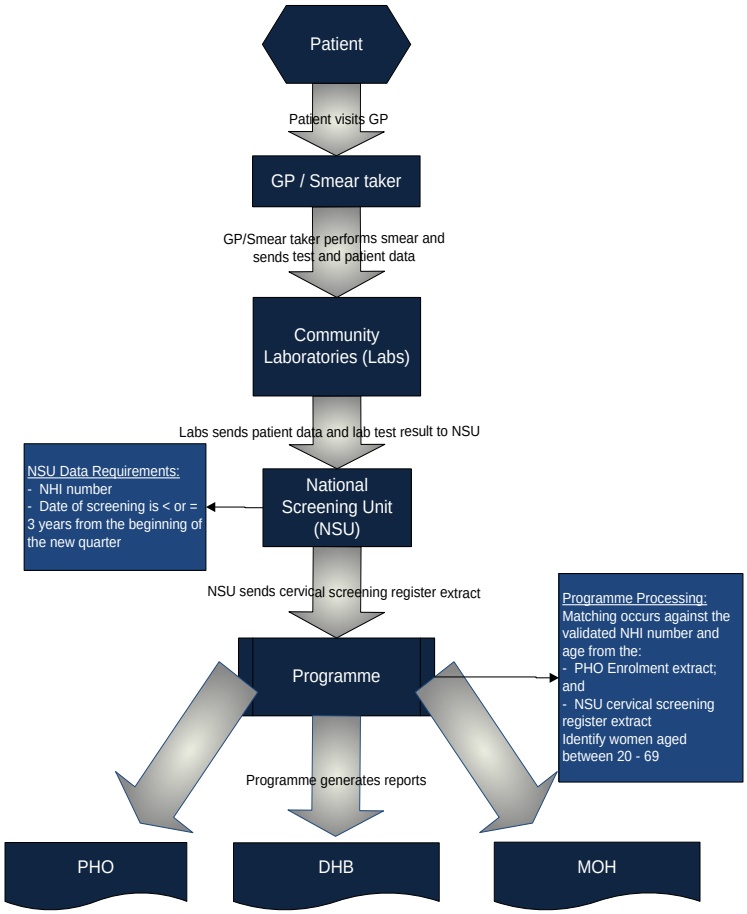
This indicator is based on the current PHO enrolment register and matching this with events that took place during a prior period. This could disadvantage a PHO if a smear was taken on a woman who subsequently enrolled with another PHO. However, it advantages a PHO because it will count a smear taken on a woman who enrolled with the PHO during the measurement period. This process can influence the enrolment strategy of the PHO such it is careful to enrol only those women whom it intends on providing with comprehensive preventative and curative services.

The screening counts regardless of whether the smear taker was a practitioner with the PHO where the woman is enrolled. To do otherwise would result in a much lower coverage rate than the actual because many smear takers are not GPs and/or may not be affiliated with any PHO. This approach advantages a PHO that affiliates with cervical screening outreach programmes.

Declines / Opting off

The coverage rates will not reflect those women who opted off the national register. Women who decline to be screened are not "counted" as having had a smear (indicator numerator). Declines are counted in the indicator denominator.

Data Flow



Data Timeliness

The cervical screening data in the National Screening Unit is meant to be no more than three months old; that is, all samples that were tested three months prior to the date of the data extract should be recorded in the database. The data extract is sent to the Programme every three months and includes transactions for 39 months where the last complete transaction month is the one that is 3 months prior to the date of the extract.

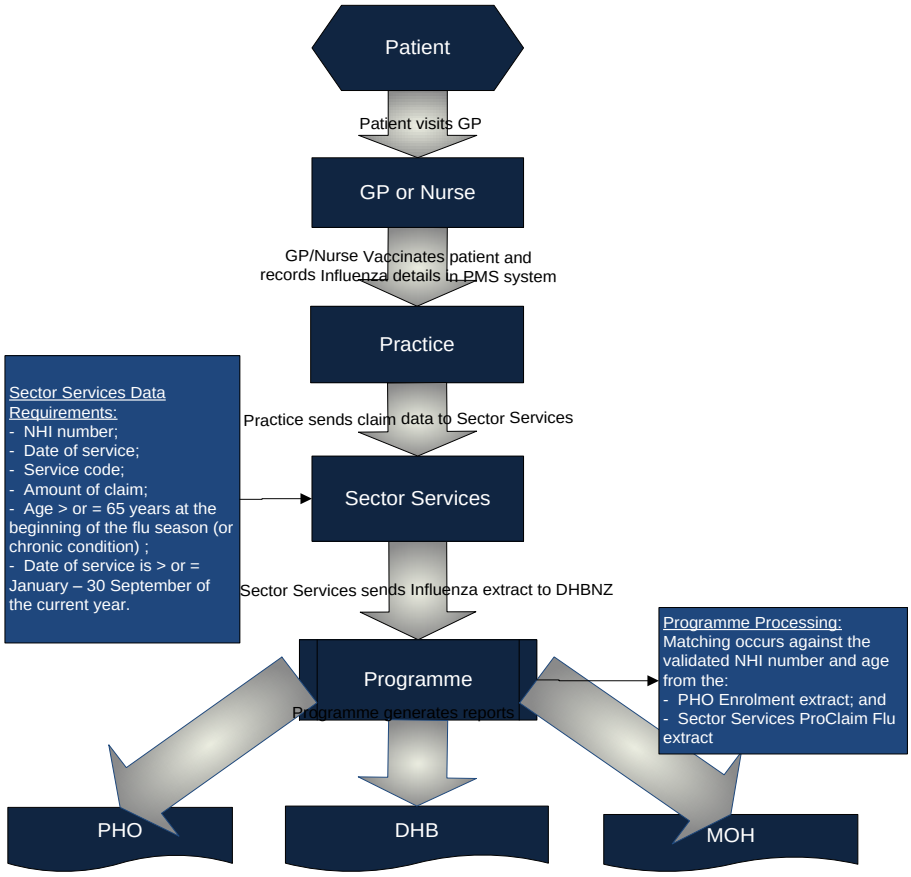
Hysterectomy Algorithm

The National Screening Unit has developed an algorithm by age based on the number of hysterectomies provided since 1987. The hysterectomy adjustment algorithm is currently as follows:

Age group	Adjustment factor (multiplied by the women in the age group)
20 – 24	0.997
25 – 29	0.991
30 – 34	0.982
35 – 39	0.963
40 – 44	0.932
45 – 49	0.897
50 – 54	0.860
55 – 59	0.810
60 – 64	0.750
65 – 69	0.704

Appendix I – 65 Years + Influenza Vaccination Coverage Indicator Considerations

Data Flow



Data Timeliness

Based on Sector Services experience with this type of claiming, it is expected that all or almost all influenza vaccine claims are paid for within 3 months of the date of service. Sector Services provides paid claims for the most recent flu season period being measured. The data is then organised such that there are dates of service within a flu campaign period. The calculation of the 65+ population will be based on those who were 65 or over at the beginning of the campaign period.

NHI

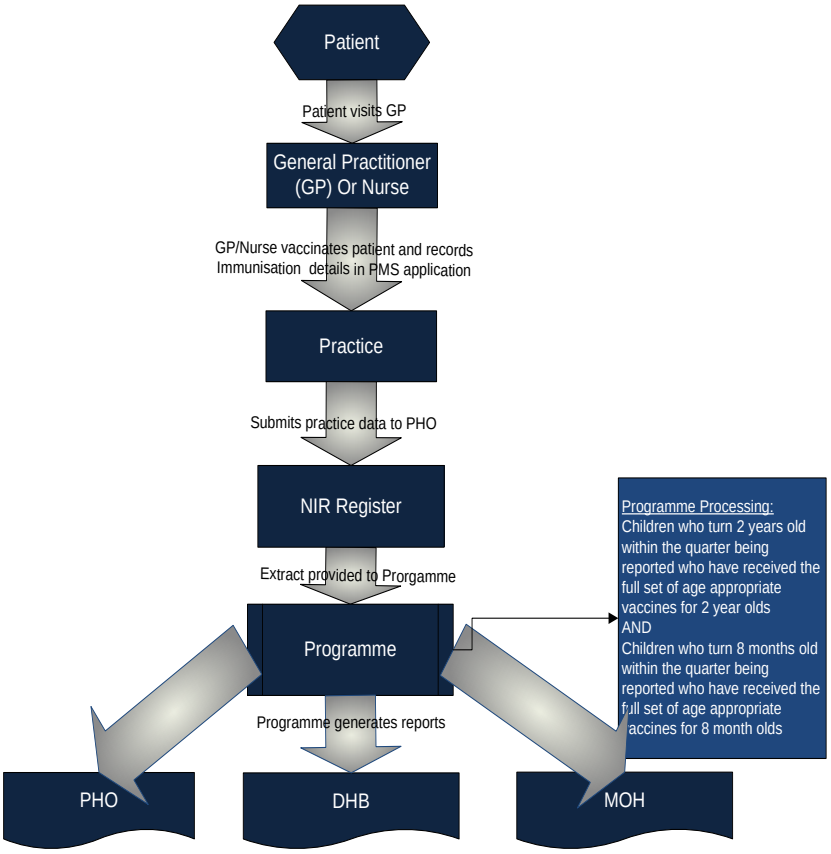
This approach relies on matching by NHI number. If the NHI number is not supplied on claims or is not supplied in the PHO enrolment register, then a match cannot occur and the coverage rate may be lower than expected. The NHI in the claiming database is validated against the NHI database in a similar manner to the way the NHI on the PHO enrolment database is validated.

Claims Data

This measurement relies on claims processed by Sector Services. There might be circumstances where an influenza vaccine is provided but a claim is not filed. All PHOs are required by contract to file claims on a fee for service basis. This measurement also means that 'declines' are not counted.

Appendix J – Increased immunisation Considerations

Data Flow



National Immunisation Register (NIR) Extract

The NIR Extract is provided to the Programme by the Ministry of Health on a monthly and quarterly frequency. The reliability of the data is dependent on the submission of immunisation information from the practices to the NIR.

The benefit of the NIR extract is that it provides information on all vaccinations administered to a child regardless of the provider and therefore ensures a more complete set of information relating to the child's immunisation schedule.

The Programme matches the NHI supplied in the NIR Extract against an NHI from the PHO enrolment register that applied at the beginning of the quarter to confirm who the patient was enrolled with and populates the practice, PHO, DHB level information in the Programme reports.

Declines

Children of parents who decline to immunise are not "counted" in the indicator numerator. Declines are however counted in the indicator denominator.

Appendix K – Provider to PHO Allocation

During a reporting period a practitioner may join or leave a practice or PHO, they may work for multiple practices within a PHO or multiple PHOs, and they may also work outside PHOs i.e. hospice, family planning clinic or prison. An adjustment for non-full time practitioners has therefore been developed. This adjustment impacts the calculation of the following indicators:

- Metformin:Sulphonylureas ratio
- Inhaled Corticosteroid Prescribing
- ESR:CRP
- Investigation of Thyroid function
- GP referred Pharmaceutical expenditure
- GP referred Laboratory expenditure

Methodology

The definition of non-full time practitioners must be derived from existing information collected. Key information we have is start and end dates, locum flag (Y or N) and the ability to look across PHOs for where a practitioner appears multiple times in the same period.

Without information on a practitioner's full-time equivalent (FTE) status it is not possible to accurately split their expenditure into each PHO they belong to. It is also not possible to track where they prescribed a particular prescription or referred for laboratory tests. If non-full time practitioners are excluded the total expenditure/number for PHOs that use a large number of non-full time practitioners will be artificially low.

Below is a mathematic table of how FTEs are derived for each GP in each practice. This is then followed by examples and a flow diagram describing how the practitioner-based expenditure/number for each PHO is derived.

	GP is non-full time and associates with only one practice	GP is non-full time and associates with more than one practice	GP is non-full time in no practices	GP is non-full time in some practices
FTE split for non-permanent practice	0.75	$\frac{R}{N}$		$\frac{0.5R}{N+P}$

FTE split for permanent practice			$\frac{R}{P}$	$\frac{0.5R}{N+P}+\frac{0.5R}{P}$

Non-permanent = Locum flag Y

Permanent = not shown as a Locum

N = number of non-permanent practices

P = number of permanent practices

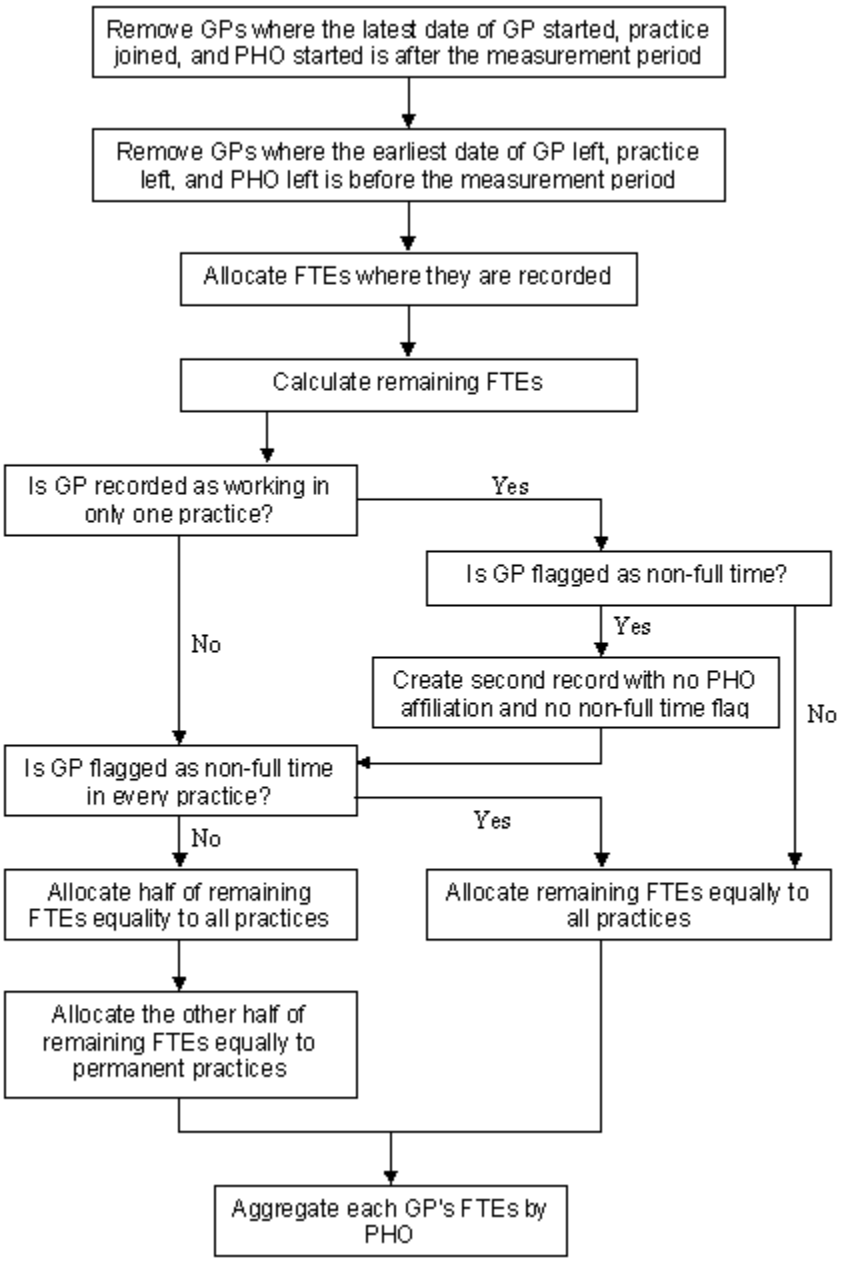
R = remaining FTEs (1 – sum of recorded FTEs)

To simplify the math behind the last column, 50% of costs are allocated to permanent practices and the remaining 50% allocated across all practices (permanent and non-permanent).

Example 1: If a GP works in two practices across two PHOs and is not recorded as a non-full time practitioner in any of the two practices, 50% of their expenditure will be assigned to PHO A and 50% of the expenditure will be assigned to PHO B.

Example 2: If a GP is working in their home practice in PHO A and working as a non-full time practitioner in one other practice in PHO B (locum flag Y), then 75% of their expenditure will be assigned to PHO A and 25% of the expenditure will be assigned to PHO B.

Example 3: If a GP is working in their home practice in PHO A and working as a non-full time practitioner in three other practices in PHO B, then 62.5% (50% + (50%/4)) of their expenditure will be assigned to PHO A and 37.5% (50%/4*3) of the expenditure will be assigned to PHO B.



This method assumes that the expenditure/number of the non-full time practitioner is evenly associated with each practice. This even distribution can be adjusted for individual non-full time practitioners if the proportion in each practice or PHO is provided by the PHO or the DHB.

Appendix L – Dr Zero

Adjustment for Dr Zero – GP referred Pharmaceutical expenditure

If indicators are measured by NZMC number, it will not be possible to identify claims that have no NZMC number or an invalid NZMC. For PHOs that have a high percentage of Dr Zero this will result in a slightly lower expenditure than PHOs that have a low percentage of Dr Zero.

Any adjustment for Dr Zero will have to include both GP and non-GP transactions as it is not possible to separate GP related Dr Zero and non-GP related Dr Zero of the transaction without the NZMC number recorded.

By not adjusting for Dr Zero, an assumption is made that all PHOs have the same level of Dr Zero and/or that Dr Zero applies only to non-PHO or non-GP prescriptions.

After consideration of the variations cross DHBs, the RSM formula technical group recommended that a *Dr Zero adjustment be made to the actual expenditure for each PHO, based on the Dr Zero level of the DHB the PHO belongs to*. In this case, the assumption is that PHOs in the same DHBs share the same level of Dr Zero.

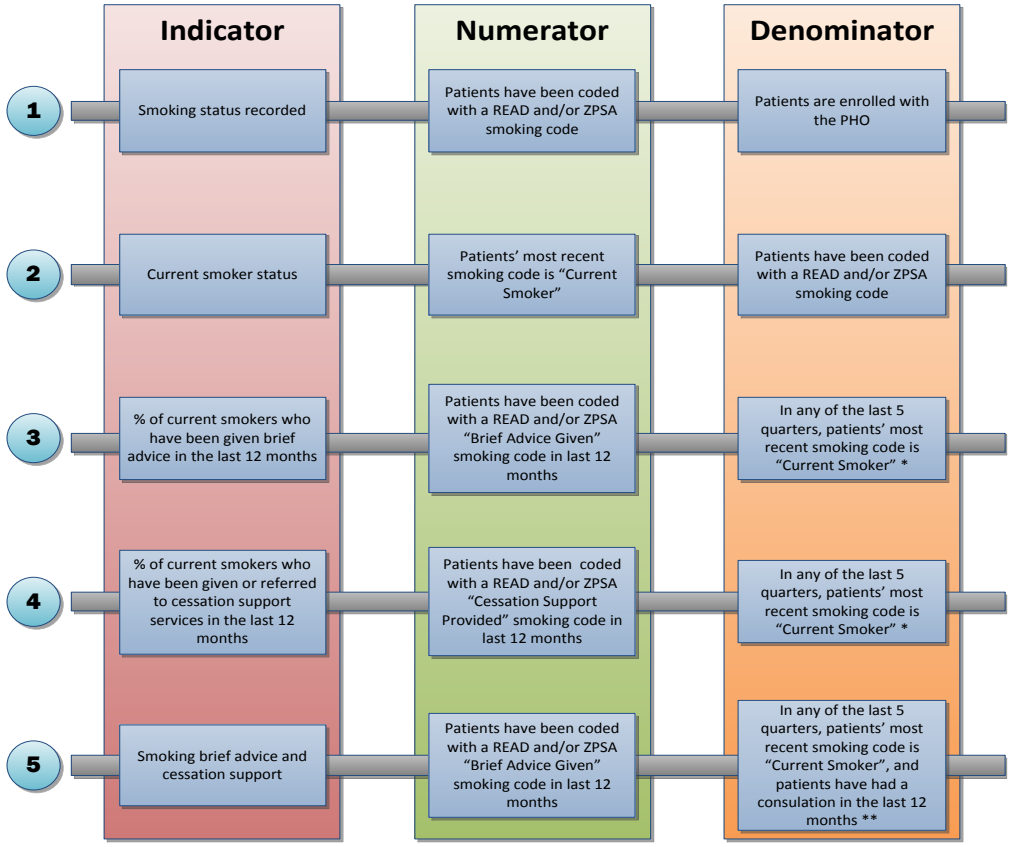
The Dr Zero level of the DHB is calculated according to where the pharmacy submitting the claim resides[9]*.*

It is recommended that the Dr Zero adjustment only be made for the Pharmaceutical expenditure indicator. Using location of Laboratory to determine a DHB or PHO level Dr Zero for laboratory indicators is too inaccurate and there is no other means to determine the Dr Zero %. Both the Metformin:Sulphonylureas and Inhaled Corticosteroid indicators are ratios, and adjusting both the numerator and denominator by a Dr Zero % will yield the same ratio, therefore a Dr Zero adjustment is also not recommended for these pharmaceutical indicators.

[9] Note that two wholesale pharmacies are excluded from the Dr Zero % calculation due to an unusual problem that results in them having 100% Dr Zero.

Appendix M – Smoking Indicators

Smoking Indicator Set Overview



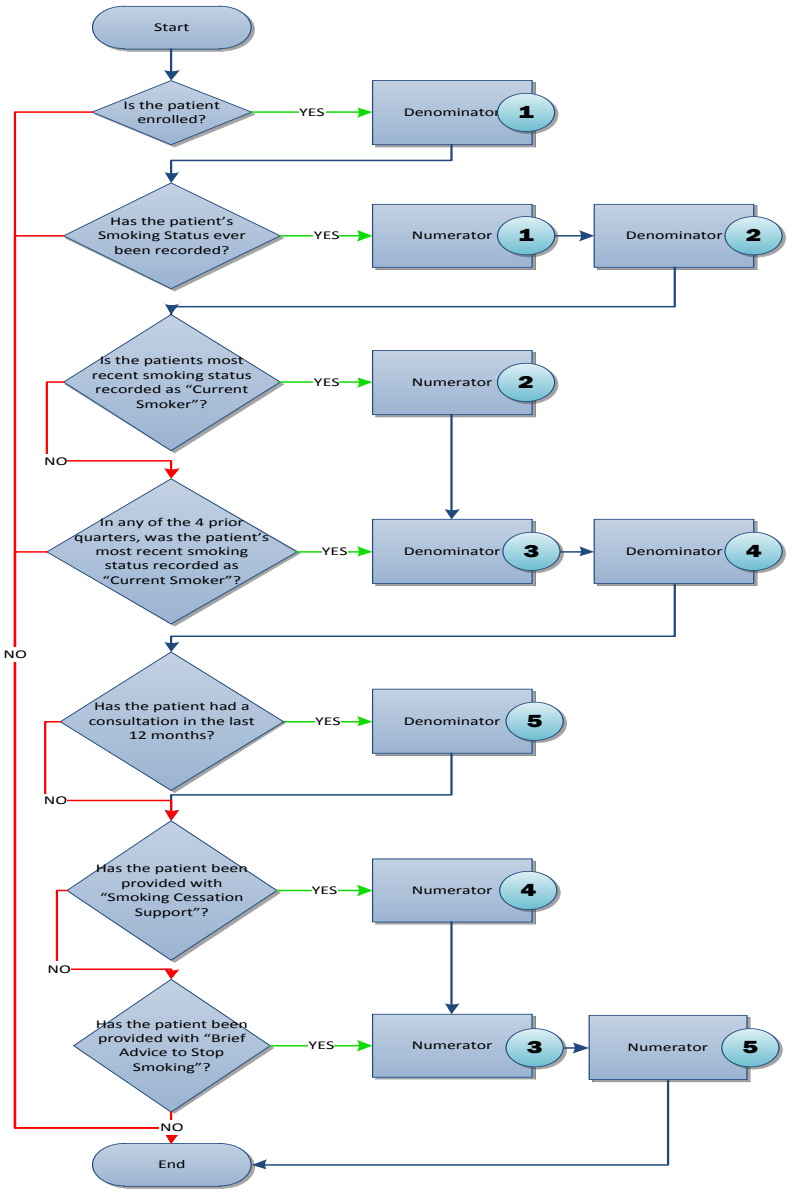
* Indicators 3 and 4 measure the population who have been identified as smokers and have been given Brief Advice/Cessation Support in the last 12 months. For a patient to be counted in the numerator for indicators 3 and 4 they must be counted in the denominator first, as logically you would only give advice and support to somebody who is currently a smoker or trying to quit.

To measure these indicators PPP needs to know if a patient is a smoker at the beginning of the 12 month period, or has started smoking during the last 12 months (this is the denominator). PHO software systems evaluate the system codes (READ/ZPSA) recorded for a patient and determine on the last day of each quarter whether or not the patient is currently a smoker. PPP requires information on whether the patient is a smoker at the beginning of a 12 month period, however each patient's smoking status is actually evaluated at the end of a quarter. PHOs therefore have to look at the quarter's data prior to the beginning of the 12 month period to determine their smoking status. Hence this is why 5 quarters of PHO data are used to calculate the denominators for indicators 3 and 4.

** Indicator 5 measures the population that are identified as smokers, have been to see their GP in the last year, and have been given brief advice and/or smoking cessation support. There is no data set available to PPP that specifies which smokers have had a consultation with their GP practice in the last year. Therefore, an adjuster is applied to the denominator for indicator 3 and this is then used as the denominator for indicator 5. The adjuster applied is 'the percentage of the PHOs population that have visited their practice in the last year', which is calculated by PPP using the "Date of Last Visit" field from the PHOs enrolment register for each enrolled patient.

Data Flow

The following flowchart details how patient smoking data (that is recorded in General Practice) contributes toward each of the PPP smoking indicators:



END