



# nKPI Technical Documentation

June, 2024 | Version 1.0

## DOCUMENT CONTROL

### Version History

Version	Date	Author	Relevant MD Insights release
1.0	June, 2024	MedicalDirector	MD Insights 1.9.0

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# Introduction

This purpose of this document is to guide you through the process of accurately recording data points during a clinical consult to ensure effective nKPI reports can be created.

## Frequent Definitions

### Aboriginal Patient Definition

A client who is recorded in the clinical software identifying as Aboriginal or Torres Strait Islander.

Patient Details ×

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Indigenous status is defined by whether a person identifies as being of Aboriginal or Torres Strait Islander origin.

Permissible values are:

- Aboriginal but not Torres Strait Islander origin
- Torres Strait Islander but not Aboriginal origin
- Both Aboriginal and Torres Strait Islander origin
- Neither Aboriginal nor Torres Strait Islander origin
- Not stated/inadequately described

Note: Categories 1, 2 and 3 are classified as Indigenous.

Category 4 is classified as Non-Indigenous.

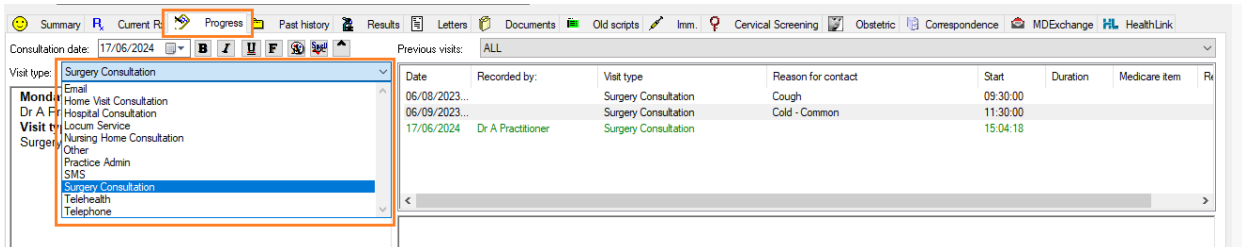
The nKPI report includes only Indigenous clients for all the indicators.

### Regular Patient Definition

A client who has 3 or more visits within the previous 2 years recorded in the clinical software. Note: This does not include Deceased and Inactive patients.

Visit Type	
Counted as a visit	Not counted as a visit
<ul style="list-style-type: none"> <li>• Home visit consultation</li> <li>• Hospital consultation</li> <li>• Hostel</li> <li>• Locum service</li> <li>• Nursing home consultation</li> <li>• Other</li> <li>• RACF (residential aged care facility) consultation</li> <li>• Surgery consultation</li> <li>• Telehealth (clinical)</li> </ul>	<ul style="list-style-type: none"> <li>• Email</li> <li>• Non-visit</li> <li>• Out of office</li> <li>• Practice admin</li> <li>• SMS</li> <li>• Telephone (non-clinical)*</li> </ul>

A Visit can be added as shown below:



The screenshot shows a software interface for adding a visit. A dropdown menu is open, listing various visit types. 'Surgery Consultation' is highlighted. In the background, a table lists previous visits:

Date	Recorded by:	Visit type	Reason for contact	Start	Duration	Medicare item	Ri
06/08/2023		Surgery Consultation	Cough	09:30:00			
06/09/2023		Surgery Consultation	Cold - Common	11:30:00			
17/06/2024	Dr A Practitioner	Surgery Consultation		15:04:18			

The following steps are to record a patient as inactive or deceased:

- 1) Search the patient from the list

Select Patient From List

Enter patient surname, chart number, phone number or D.O.B. (dd/mm/yyyy)

Include  
 Inactive patients  
 Deceased  
 Next of Kin and Emergency Contact

Search on  
 Chart number  
 Phone number

Name	Age	Gender	Chart Number	Address	Phone Number
Test 1121w, Test 1121w	34yrs ...	M		Aa. Alexandria Mc 2004	
Test_1661645_1, Test_1661645_1	68yrs ...	M		Aa. Abbotsham 7315	
Test 1687, Test 1687	34yrs ...	M		Aa. Melbourne 3000	
Test 1692, Test 1692	34yrs ...	M		Aa. Melbourne 3000	

Context menu for selected row:  
 Open  
 Edit  
 Delete  
 Add  
 New  
 Merge

Status: Active                           

- 2) Right click on the patient
- 3) Click the required option.

Select Patient From List

Enter patient surname, chart number, phone number or D.O.B. (dd/mm/yyyy)

Include  
 Inactive patients  
 Deceased  
 Next of Kin and Emergency Contact

Search on  
 Chart number  
 Phone number

Name	Age	Gender	Chart Number	Address	Phone Number
Test 1121w, Test 1121w	34yrs ...	M		Aa. Alexandria Mc 2004	
Test_1661645_1, Test_1661645_1	68yrs ...	M		Aa. Abbotsham 7315	
Test 1687, Test 1687	34yrs ...	M		Aa. Melbourne 3000	
Test 1692, Test 1692	34yrs ...	M		Aa. Melbourne 3000	

Delete patient

**Do you want to:**

Status: Active

## NATIONAL KEY PERFORMANCE INDICATORS

### PI01 – Birthweight Recorded

#### Description

Proportion of Indigenous babies born within the previous 12 months who attended the organisation more than once whose birthweight has been recorded at your primary health care service.

- The baby is considered Indigenous if one or both parents identify as Indigenous.
- This patient does not need to be defined as a 'Regular' patient.
- If a patient record exists, it will be considered as a live birth.
- Does not include deceased patient records.

#### Business Rules

- Birthweight is defined as the first weight of a baby obtained after birth.
- Only live births are included.
- Results arising from measurements conducted outside of the service, that are known by the service, are included in the calculation of this indicator.
- Where a baby does not have a separate client record, and the mother's record is used as a source of birth details, the baby is considered Indigenous if the mother is Indigenous.

#### Numerator

- Number of Indigenous babies born within the previous 12 months who have had more than one visit and whose birthweight has been recorded at the primary health care service.

#### Denominator

- Total number of Indigenous babies born within the previous 12 months who have had more than one visit and had a medical record at the primary health care service.

#### Records Excluded

- Stillborn babies.
- Babies without a medical record of their own at your organisation, even if their information is recorded in their mother's record.

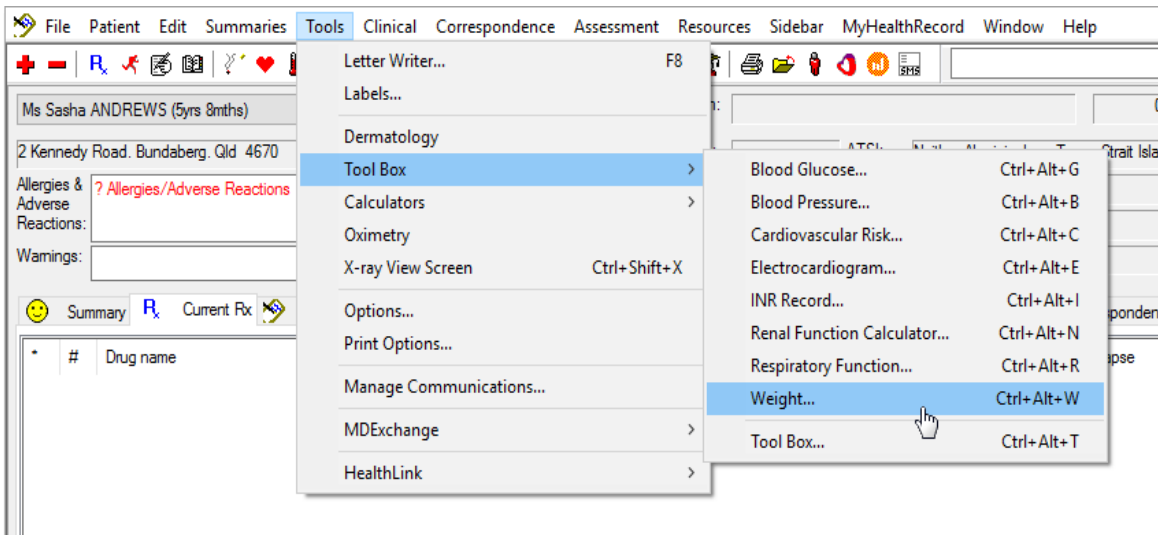
#### Notes

- The birthweight is to be taken from the baby's client record where available.
- Where a baby does not have a separate client record, the mother's record may be used as a source of birth details. (Note that this is a deviation from the METeOR definition).

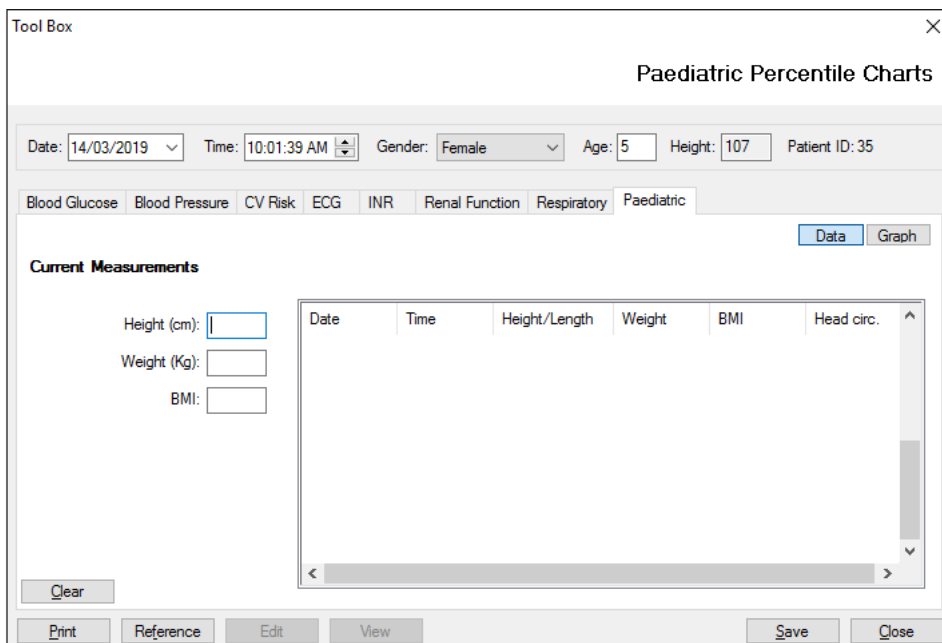
- The date of the weight recorded must match the babies' date of birth. (The date of the recorded weight can be modified in the top left of the window as indicated below in the example).

### Example – Enter A Birth Weight for A Patient

1. Open a patient's record.
2. Select on **Tools > Tool Box > Weight**



3. Paediatric percentile charts will be displayed as below.



4. Enter a value for weight.
  - Note that the date/time fields will autofill to **today's** date and time. Modify this to the patient's date of birth.



5. Click **Save**.

## PI02 – Birthweight Result

### Description

Proportion of Indigenous babies born within the previous 12 months, who attended the organisation more than once whose birthweight results were categorised as one of the following:

Category	Birth Weights
Low	Less than 2,500 grams
Normal	Between 2,500 grams to less than 4,500 grams
High	Equal to or greater than 4,500 grams

### Business Rules

- 'Birth weight' is defined as the lowest weight measurement recorded since patient's DOB.
- This patient does not need to be recorded as 'Regular'.
- Only live births are included.
- Results arising from measurements conducted outside of the service, that are known by the service, are included in the calculation of this indicator.
- Where a baby does not have a separate client record, and the mother's record is used as a source of birth details, the baby is considered Indigenous if the mother is Indigenous.

### Calculation 1: Babies Born with A Low Birthweight

#### Numerator

The number of babies born within the previous 12 months, who have had more than one visit and whose birthweight results were categorised as low.

#### Denominator

Number of indigenous babies with a birthweight recorded and meet the below criteria:

- Only live births as defined in [PI01](#).
- The number of babies born within the previous 12 months, who have had more than one visit and whose birthweight has been recorded. Include all babies with a file, regardless of whether they are regular patients.

### Calculation 2: Babies Born with A Normal Birthweight

#### Numerator

The number of babies born within the previous 12 months, who have had more than one visit and whose birthweight results were categorised as normal.

## Denominator

Number of indigenous babies with a birthweight recorded and meet the below criteria:

- Only live births as defined in [PI01](#).
- The number of babies born within the previous 12 months, who have had more than one visit and whose birthweight has been recorded. Include all babies with a file, regardless of whether they are regular patients.

## **Calculation 3: Babies Born with A High Birthweight**

### Numerator

The number of babies born within the previous 12 months, who have had more than one visit and whose birthweight results were categorised as high.

### Denominator

Number of indigenous babies with a birthweight recorded and meet the below criteria:

- Only live births as defined in [PI01](#).
- The number of babies born within the previous 12 months, who have had more than one visit and whose birthweight has been recorded. Include all babies with a file, regardless of whether they are regular patients.

### Records Excluded

- Multiple births (including twins). Babies born as part of multiple births are more likely to have a lower birthweight.
- Babies with unknown birthweight.
- Babies who were stillborn.
- Babies born before 20 weeks gestation.
- Babies with a birthweight recorded of less than 400 grams.
- Babies without a medical record of their own, even if their information is recorded in their mother's record.

### Notes

- The birthweight is to be taken from the baby's client record where available.
- Where a baby does not have a separate client record, the mother's record may be used as a source of birth details.

### Example - Enter A Birth Weight for A Patient

The birthweight for a patient can be entered following the method outlined in [PI01](#).

### Check

- Total number of Indigenous babies born with birthweight recorded = low birthweight + normal birthweight + high birthweight babies.

**The Denominator is the same for 1, 2 and 3 above.**

The Denominator is equal to or less than the Numerator in PI01 (that is, you cannot have more birthweight results than number of babies with birthweights recorded).

## PI03 – MBS Health Assessment

### Description

Proportion of Indigenous regular clients who have a current completed Indigenous health assessment as indicated by an MBS-rebate Indigenous health assessment:

- In-person MBS-rebate items - MBS items: 715 or 228.
- Telehealth MBS-rebate items - MBS items: 92004 or 92011.

For ages 0–14: an Indigenous health assessment is counted if it was completed within the previous 12 months.  
For ages 15+: an Indigenous health assessment is counted if it was completed within the previous 24 months.

### Business Rules

- Patient must have had at least one MBS claim where the 'date lodged' falls in the previous 12 or 24 months.
- The claim is required to be transmitted to Medicare and the payment report requested and returned.

### Calculation 1: Indigenous regular clients for whom a Medicare Benefits Schedule Health Assessment for Aboriginal and Torres Strait Islander People (MBS Items 715, 228) was claimed

#### Numerator

Number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have a current completed in person MBS-rebate Indigenous health assessment (MBS items: 715 or 228).

Include in the Numerator **only** those patients whose MBS Health Assessment for Aboriginal and Torres Strait Islander People (MBS 715 or 228) was claimed by **your organisation**. See DOH (2018) for more information.

#### Denominator

Total number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]**.

### Calculation 2: Indigenous regular clients for whom a Medicare Benefits Schedule Health Assessment for Aboriginal and Torres Strait Islander People (MBS Items 92004, 92011) was claimed

#### Numerator

Number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have a current completed in-person MBS-rebate Indigenous health assessment (MBS items: 92004, 92011)

Include in the Numerator only those patients whose MBS Health Assessment for Aboriginal and Torres Strait Islander People (MBS 92004, 92011) was claimed by your organisation. See DOH (2018) for more information.

#### Denominator

Total number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]**

### Reporting by Age Group

	Age (years)							
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

## Notes

If your organisation does not claim this MBS item but provides an equivalent level of care, such as a comprehensive health Check that cannot be claimed through the MBS.

For information on recording the visit and transmitting the claim to Medicare please refer to the following help files:

- [Recording a visit.](#)
- [Transmitting bulk claims to Medicare.](#)

## Check

For each age and sex at birth group, you cannot have more patients for whom an MBS Item was claimed than there are regular patients.

When considering the '12 months up to census date' we have 2 dates:

- LastClaimed - which is shared by all claims of the same type used for those items asking for the Days since last claim.
- DateLodged - which is specific to individual claims used to find out when the claim is done.

Both dates are used in the extract.

## PI05 – HbA1c Recorded (Type 2 Diabetes Patients)

### Description

Proportion of regular patients who are Indigenous, have type 2 diabetes and who have had an HbA1c (glycosylated haemoglobin) measurement result recorded at your primary health-care organisation within the previous 6 months **AND** the proportion of regular patients who are Indigenous, have type 2 diabetes and who have had an HbA1c measurement result recorded at your primary health-care organisation within the previous 12 months.

### Business Rules:

- Patients with a history of Type 2 Diabetes are defined as having a condition listed under 'Past History' with one of the below DOCLE codes:
 

diabm@niddm	Diabetes Mellitus - NIDDM
diabm@niddm	Diabetes Mellitus - Type II
diabm@niddm	NIDDM
diabm@niddm	NIDDM (Non-Insulin dependent diabetes mellitus)
diabm@niddm	Non-insulin dependent diabetes mellitus
diabm@niddm&rx%insu	Diabetes Type II requiring insulin
diabm@niddm&rx%insu	NIDDM - requiring insulin
- The latest HbA1c measurement must have been recorded in the previous 6 or 12 months. The minimum value for this calculation is 0 days. This is recorded through the 'Diabetes Assessment' screen.

### Calculation 1: HbA1c Measurement in the 6 Months Up to The Census Date

#### Numerator

Number of regular Indigenous patients who have had an HbA1c measurement result in the past 6 months.

#### Denominator

Number of regular Indigenous patients with type 2 diabetes as recorded in their file as per the below:

- Has Diabetes Type 2 as a 'reason for visit' OR
- Type Diabetes 2 Conditions are listed in the patient's history.

### Calculation 2: HbA1c Measurement in the 12 Months Up to The Census Date

#### Numerator

Number of regular Indigenous patients who have had an HbA1c measurement result in the past 12 months.

#### Denominator

Number of regular Indigenous patients with type 2 diabetes as recorded in their file as per the below:

- Has Diabetes Type 2 as a 'reason for visit' OR

- Type Diabetes 2 Conditions are listed in the patient's history.

### Reporting by Age Group

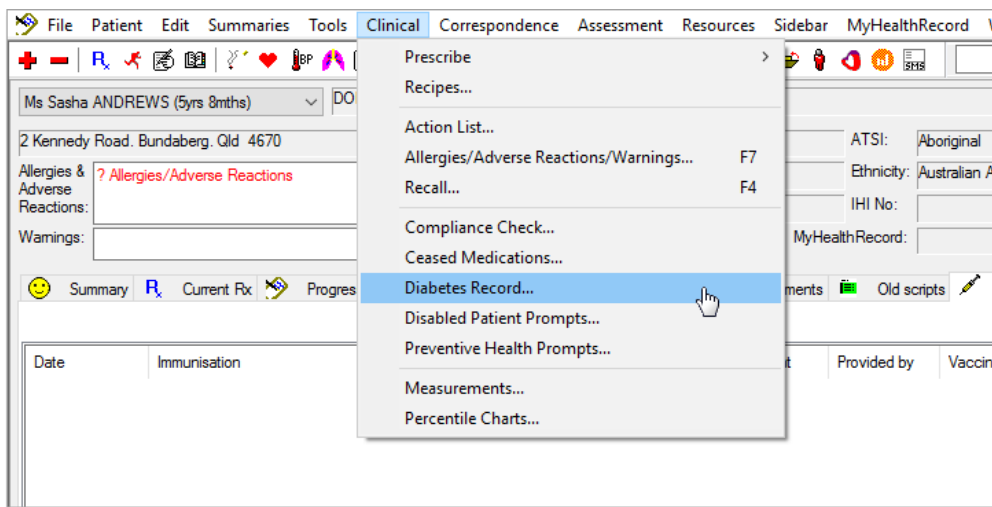
	Age (years)							
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

### Records Excluded

Patients with type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, impaired fasting glucose or impaired glucose tolerance.

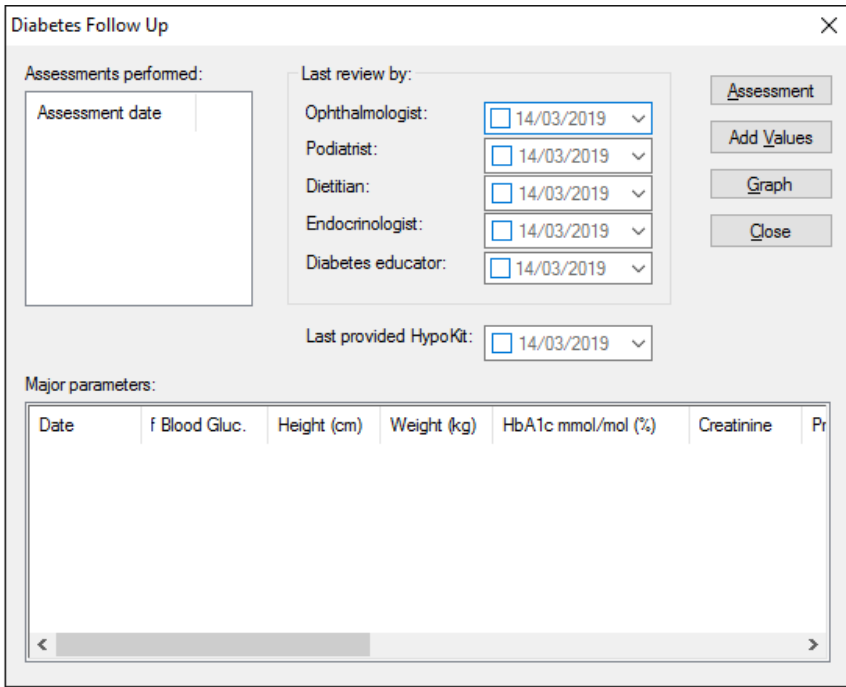
### Example – How to Record HbA1c Value to Patient File

- Open a patient's record.
- Select **Clinical > Diabetes Record**.

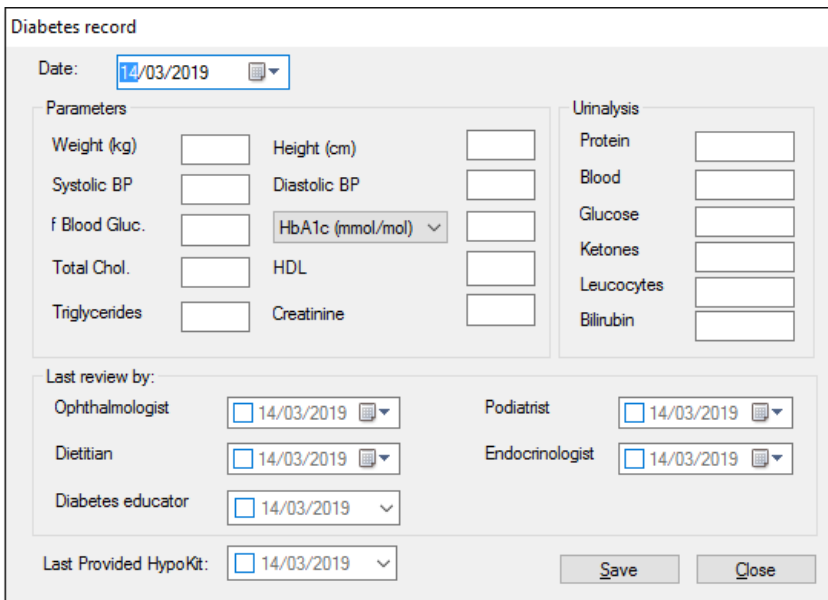




- The **Diabetes Follow Up** window appears.



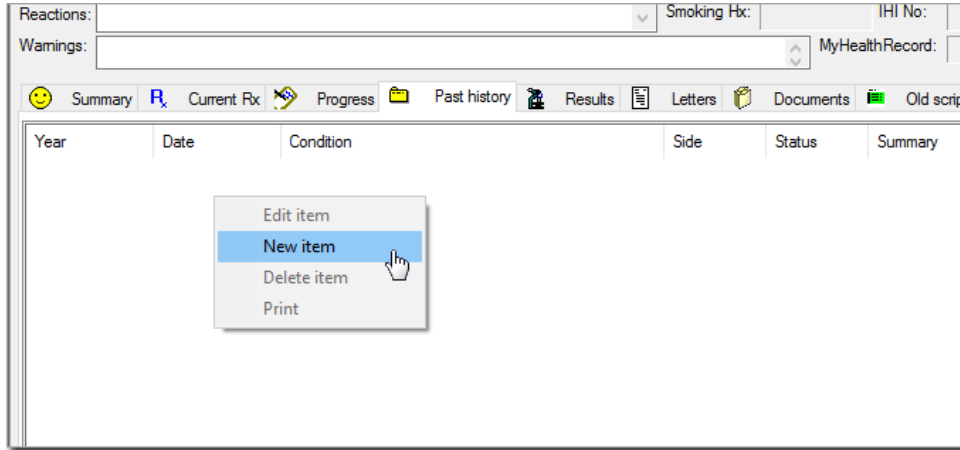
- Click **Add Values**. The Diabetes Record window appears.



- Input a value for HbA1c (either % or mmol/mol).
- Click **Save**.

**Example - Record Type II Diabetes to Patient File in Patient History**

1. Select the **Past History** tab.
2. Right click within the white space to add a new item.



3. The **New History Item** window appears.
4. Fill In the appropriate date and enter **Diabetes Mellitus - Type II** In the condition field.

5. Click **OK**.

### Check

A regular patient who has had a test within the last 6 months should be counted in both the 6-month and 12-month calculations. For example, a regular patient who had a test 5 months ago would be counted in both.

For each age and sex at birth group:

- You cannot have more regular patients who have had HbA1c tests than the total number of regular patients with type 2 diabetes.

- You cannot have more regular patients who have had HbA1c tests in the previous 6 months than the number of regular patients who have had HbA1c tests in the previous 12 months.
- The total number of regular patients with type 2 diabetes should be the same for both the previous 6 months and the previous 12 months for Calculations 1 and 2.
- The total number of regular patients with type 2 diabetes should be the same as the total number of regular patients with type 2 diabetes in each relevant age and sex at birth group in these nKPIs: PI07, PI08, PI15, PI18 and PI23.
- The number of regular patients with type 2 diabetes should not exceed the number of regular patients in each group in these nKPIs: PI03 (adults), PI09 and PI16.

## PI06 – Hba1c Results (Type 2 Diabetes Patients)

### Description

Proportion of regular patients who are Indigenous, have type 2 diabetes and whose HbA1c measurement result was categorised as one of the following:

- less than or equal to 7% (less than or equal to 53 mmol/mol).
- greater than 7% but less than or equal to 8% (greater than 53 mmol/mol but less than or equal to 64 mmol/mol).
- greater than 8% but less than 10% (greater than 64 mmol/mol but less than 86 mmol/mol).
- greater than or equal to 10% (greater than or equal to 86 mmol/mol).

As recorded in the previous 6 months, **AND** as recorded in the previous 12 months.

### Business Rules

- 'Type 2 Diabetes' as defined in PI05.
- The patient's HbA1c % is taken from the most recently recorded measurement. The minimum value for days since HbA1c recorded is 0.

### Calculation 1: Less Than or Equal To 7% In The 6 Months Up to The Census Date

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement **less than or equal to 7%** (less than or equal to 53 mmol/mol) in the **6 months up to the census date**.

Recorded HbA1c matches the following boundary:

- HbA1c  $\leq 7\%$  ( $\leq 53$  mmol/mol).

#### Denominator

The number of regular Indigenous patients that have had an HbA1c measurement result recorded in the **same 6 months** and fulfils the below criteria.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 6 months (Calculated in PI05).

### Calculation 2: Less Than or Equal To 7% In The 12 Months Up to The Census Date

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement **less than or equal to 7%** (less than or equal to 53 mmol/mol) in the **12 months up to the census date**.

Recorded HbA1c% matches the following boundary:

- HbA1c  $\leq 7\%$  ( $\leq 53$  mmol/mol).

#### Denominator

The number of regular Indigenous patients that have had an HbA1c measurement result recorded in the **same 6 months**.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 12 months (Calculated in PI05).

### Calculation 3: More Than 7% But Less Than or Equal To 8% In The 6 Months Up to The Census Date

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement **more than 7% but less than or equal to 8%** (greater than 53 mmol/mol but less than or equal to 64 mmol/mol) in the **6 months up to the census date**.

Recorded HbA1c% matches the following boundary:

- HbA1c >7% and <=8% (>53 but <= 64 mmol/mol)

#### Denominator

The number of regular Indigenous patients that have had an HbA1c measurement result recorded in the **same 6 months**.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 6 months Calculated in PI05).

### Calculation 4: More Than 7% But Less Than or Equal To 8% In The 6 Months Up to The Census Date

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement **more than 7% but less than or equal to 8%** (greater than 53 mmol/mol but less than or equal to 64 mmol/mol) in the **12 months up to the census date**.

Recorded HbA1c% matches the following boundary:

- HbA1c >7% and <=8% (>53 but <= 64 mmol/mol).

#### Denominator

The number of regular Indigenous patients that have had an HbA1c measurement result recorded in the **same 6 months**.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 6 months (Calculated in PI05).

### Calculation 5: More Than 8% But Less Than 10% In The 6 Months Up to The Census Date

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement **more than 8% but less than 10%** (greater than 64 mmol/mol but less than 86 mmol/mol) in the **6 months up to the census date**.

Recorded hba1cPercent matches the following boundary:

- HbA1c >8% and <10% (>64 but <= 86 mmol/mol)

#### Denominator

The number of regular Indigenous patients that have had an HbA1c measurement result recorded in the **same 6 months**.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 6 months (Calculated in PI05).

### **Calculation 6: More Than 8% But Less Than 10% In The 12 Months Up to The Census Date**

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement **more than 8% but less than 10%** (greater than 64 mmol/mol but less than 86 mmol/mol) in the **12 months up to the census date**.

Recorded Hba1c% matches the following boundary:

- HbA1c >8% and <10% (>64 but <86 mmol/mol).

#### Denominator

The number of regular Indigenous patients that have had an HbA1c measurement result recorded in the **same 6 months**.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 12 months (Calculated in PI05).

### **Calculation 7: More Than 10% In The 6 Months Up to The Census Date**

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement of **10% or more** (greater than or equal to 86 mmol/mol) **in the 6 months up to the census date**.

Recorded HbA1c% matches the following boundary:

- HbA1c >=10% (>=86 mmol/mol).

#### Denominator

The number of regular Indigenous patients have had an HbA1c measurement result recorded in the **same 6 months**.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 6 months (Calculated in PI05).

### **Calculation 8: More Than 10% In The 12 Months Up to The Census Date**

#### Numerator

The number of regular Indigenous patients that have had an HbA1c measurement of **10% or more** (greater than or equal to 86 mmol/mol) **in the 12 months up to the census date**.

Recorded Hba1c% matches the following boundary:

- HbA1c >=10% (>=86 mmol/mol).

#### Denominator

The number of regular Indigenous patients that have had an HbA1c measurement result recorded in the **same 6 months**.

- Has Diabetes (See PI05) AND
- Has a record of HbA1c within 12 months (Calculated in PI05).

### Reported by Age Group

	Age (years)							
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

### Records Excluded

- Patients with type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, impaired fasting glucose or impaired glucose tolerance were excluded.

### Notes

- Only the most recently recorded result from an HbA1c test is used. This means that if a patient has had several tests, we only include the result from the most recent test.
- Results from all relevant pathology tests. If your organisation doesn't have a good system for adding pathology results to patient records, you will need to make sure they have been included in the correct field for all patients in this nKPI.

### Example – Recording HbA1c Value to a Patient's File

HbA1c value may be recorded following the method outlined in [PI05](#).

### Example - Record Type 2 Diabetes to a Patient's File

History of diabetes may be recorded following the method outlined in [PI05](#).

### Check

A regular patient who has had a test within the last 6 months should be counted in both the 6-month and 12-month calculations. For example, a regular patient who had a test 5 months ago would be counted in both.

For each age and sex at birth group:

- You cannot have more people with HbA1c test results in each group than the total number of regular patients who've had HbA1c tests recorded.

# PI07 – Chronic Disease Management Plan prepared

## Description

Proportion of Indigenous regular clients who have a chronic disease (Type 2 diabetes) and for whom a Chronic Disease Management Plan was prepared within the previous 24 months as indicated by:

An MBS-rebate Chronic Disease Management Plan:

- In-person MBS-rebate items: 721 or 229.
- Telehealth MBS-rebate items: 92024 or 92055.

At this stage, Type 2 Diabetes is the only chronic disease included for this indicator.

## Business Rules

- 'Type 2 Diabetes' as defined in PI05.
- 'MBS Item' claimed as defined in PI03.

**Calculation 1: Indigenous regular clients with a chronic disease (Type 2 diabetes) for whom a GP Management Plan (MBS items 721, 229) was claimed within the previous 24 months**

## Numerator

Number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have Type 2 diabetes and for whom an in-person MBS-rebate Chronic Disease Management Plan (MBS items: 721 or 229) was prepared within the previous 24 months. (MBS Claimed explained in PI03).

## Denominator

Total number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have Type 2 diabetes.

**Calculation 2: Indigenous regular clients with a chronic disease (Type 2 diabetes) for whom a GP Management Plan (MBS items 92024, 92055) was claimed within the previous 24 months**

## Numerator

Number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have Type 2 diabetes and for whom an in-person MBS-rebate Chronic Disease Management Plan (MBS items: 92024, 92055) was prepared within the previous 24 months. (MBS Claimed explained in PI03).

## Denominator



Total number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have Type 2 diabetes.

### Reporting by Age Group

	Age (years)							
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

### Records Excluded

- Patients with type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, impaired fasting glucose or impaired glucose tolerance.
- Do not include patients who have only had a GP Management Plan review (Medicare Item 732) within the recording period.

### Notes

Include in the Numerator only those patients whose GP Management Plan was claimed by your organisation under MBS Item 721.

- Services taking part in the Health Care Homes Trial: For the duration of the HealthCare Homes trial (currently 1 October 2017 to 30 November 2019), patients who are part of the trial will be deemed to have had an MBS Item 721 claimed if there is evidence of a GP Management Plan recorded.
- While Type 2 Diabetes is the only chronic disease needed for this nKPI, MedicalDirector Insights also reports on: Cardiovascular disease, Chronic Obstructive Pulmonary Disease and Chronic Kidney Disease.

### Example – Creating and Processing a 721 Claim

The method for creating and processing a 721 claim can be seen in PI03.

### Example – Recording History of Type 2 Diabetes

A history of Type 2 Diabetes may be added to the patient file by following the method outlined in PI05.

### Check

For each age and sex at birth group:

- You cannot have more patients for whom an MBS Item (for managing type 2 diabetes) was claimed than there are patients with type 2 diabetes.
- The total number of regular patients with type 2 diabetes should be the same as the total number of regular patients with type 2 diabetes in each relevant age and sex at birth group in these nKPIs: PI05, PI08, PI15, PI18 and PI23.

- The total number of regular patients with type 2 diabetes should not exceed the corresponding number of total regular patients for corresponding groups in these nKPIs: PI03 (adults), PI09 and PI16.

## PI09 – Smoking Status Recorded

### Description

Proportion of regular patients who are Indigenous, aged 11 and over **and** whose smoking status has been recorded at your primary health-care organisation within the previous 24 months.

### Business Rules

- Patient's smoking status is recorded in the smoking tab in the patient's details menu.

### Numerator

The number of regular Indigenous patients aged over 11 that have had their smoking status recorded in the **24 months up to the census date**.

### Denominator

The number of your regular Indigenous patients in each age and sex at birth group.

### Reporting by Age Group

	Age (years)						
	11-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓

### Notes

- Where an Indigenous regular patient's tobacco smoking status does not have an assessment date assigned within the Patient Information Record System (PIRS), smoking status as recorded in the PIRS should be treated as current (that is, as having been updated within the previous 24 months).
- Results arising from measurements conducted outside of the organisation that are known by the organisation should be included.

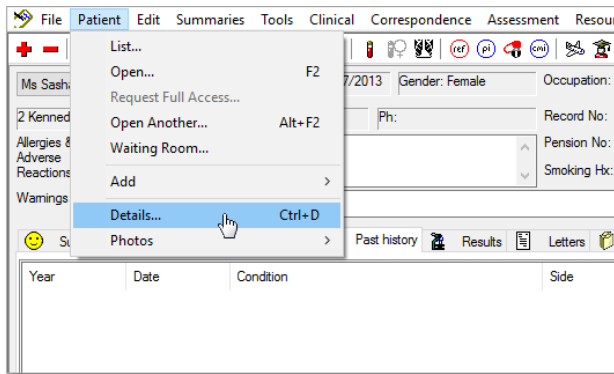
### Check

For each age and sex at birth group:

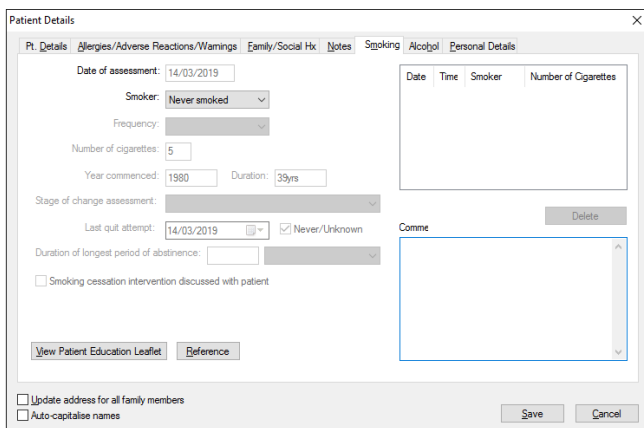
- You cannot have more people with their smoking status recorded than you have patients of the same age and sex at birth.
- The number of regular patients with smoking status recorded should be the same as the total number of regular patients of the same age and sex at birth with their smoking status recorded in this nKPI: PI10.
- The total number of regular patients should be the same as the total number of patients of the same age and sex at birth in these nKPIs: PI03 (adults) and PI16.

### Example – Record Smoking Status

1. Open a patient’s record.
2. Select **Patient > Details**.



3. Select the **Smoking** tab.



4. Set smoking status via the **Smoker** dropdown
5. Click **Save**

### Check

For each age and sex at birth group:

- You cannot have more people with their smoking status recorded than you have clients of the same age and sex at birth.
- The number of regular clients with smoking status recorded should be the same as the total number of regular clients of the same age and sex at birth with their smoking status recorded in this nKPI: PI10.
- The total number of regular clients should be the same as the total number of clients of the same age and sex at birth in these nKPIs: PI03 (adults) and PI16.

# PI10 – Smoking Status Result

## Description

Proportion of regular patients who are Indigenous, aged 11 and over **and** whose smoking status has been recorded within the previous 24 months as one of the following:

- current smoker.
- ex-smoker.
- never smoked.

There's no agreement on how long a person needs to have quit smoking to be considered an ex-smoker rather than a smoker—what is put on the record is a clinical judgement. To be counted as having ever smoked, the person must have smoked more than **100 cigarettes in total (or equivalent)**.

## Business Rules

- 'Smoking status' as defined in PI09.

### Calculation 1: Current Smokers

#### Numerator

The number of regular Indigenous patients that are entered as **current smokers** in the **24 months up to the census date**.

- All patients who are 'daily smoker', 'weekly smoker' and 'irregular smoker'—add them together and count them as 'current smoker'.

#### Denominator

The number of regular Indigenous patients that have their smoking status recorded in the **same 24 months**.

### Calculation 2: Ex-smokers

#### Numerator

The number of regular Indigenous patients that are entered as **ex-smokers** in the **24 months up to the census date**.

#### Denominator

The number of regular Indigenous patients that have their smoking status recorded in the **same 24 months**.

### Calculation 3: Non-smokers

#### Numerator

The number of regular Indigenous patients that are entered as **never smoked** in the **24 months up to the census date**.

#### Denominator

The number of regular Indigenous patients that have their smoking status recorded in the **same 24 months**.

#### Reporting by Age Group

	Age (years)						
	11-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓

#### Notes

Where an Indigenous regular patient's tobacco smoking status does not have an assessment date assigned within the Patient Information Record System (PIRS), smoking status as recorded in the PIRS should be treated as current (that is, as having been updated within the previous 24 months).

#### Example - Record Smoking Status

See example listed in PI09

#### Check

For each age and sex at birth group:

- You cannot have more people with a smoking status (sum of current smokers, ex-smokers and those who never smoked) than you have patients of the same age and sex at birth with any smoking status in their record.
- The total number of regular patients with their smoking status recorded should be the same as the number of regular patients of the same age and sex at birth with their smoking status recorded in PI09.

# PI11 – Smoking During Pregnancy

## Description

Proportion of female regular clients who are Indigenous, who gave birth within the previous 12 months and whose smoking status was recorded during pregnancy as one of the following:

- current smoker.
- ex-smoker.
- never smoked.

There's no agreement on how long a person needs to have quit smoking to be considered an ex-smoker rather than a smoker—what is put on the record is a clinical judgement. To be counted as having ever smoked, the person must have smoked more than **100 cigarettes in total (or equivalent)**.

## Business Rules

- Counts clients with a recorded smoking status, who recorded 3 or more visits within the previous 2 years.
- Includes live births and still births if the birthweight is at least 400 grams OR the gestational age was 20 weeks or more.
- Include only the most recent smoking status recorded prior to the completion of the latest pregnancy. Where a smoking status does not have an assessment date assigned within the CIS, smoking status should not be counted.
- Include results arising from measurements conducted outside of the organisation that are known by the organisation.

## Calculation 1: Current Smoker

### Numerator

How many regular Indigenous female patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months whose most recent smoking status has been recorded as **current smoker**

- All patients who are 'daily smoker', 'weekly smoker' and 'irregular smoker'—add them together and count them as 'current smoker'.
- Note: If smoking status has been recorded, we do not have a date limit on when this data point was recorded.

### Denominator

The number of regular Indigenous female patients aged [*Disaggregation: Age*] gave birth within the previous 12 months who had their smoking status recorded in the **same 12 months**.

## Calculation 2: Ex-smoker

### Numerator

How many regular Indigenous female patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months whose most recent smoking status has been recorded as **ex-smoker**.

Note: Provided smoking status has been recorded we do not have a date limit on when this data point was recorded.

### Denominator

The number of regular Indigenous female patients aged [*Disaggregation: Age*] gave birth within the previous 12 months who had their smoking status recorded in the **same 12 months**.

### Calculation 3: Non-smoker

#### Numerator

How many regular Indigenous female patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months whose most recent smoking status has been recorded as **never smoked**.

Note: Provided smoking status has been recorded we do not have a date limit on when this data point was recorded.

#### Denominator

The number of regular Indigenous female patients aged [*Disaggregation: Age*] gave birth within the previous 12 months who had their smoking status recorded in the **same 12 months**.

### Reporting by Age Group

	Age (years)		
	less than 20 years	20-34	35+
Female	✓	✓	✓

### Notes

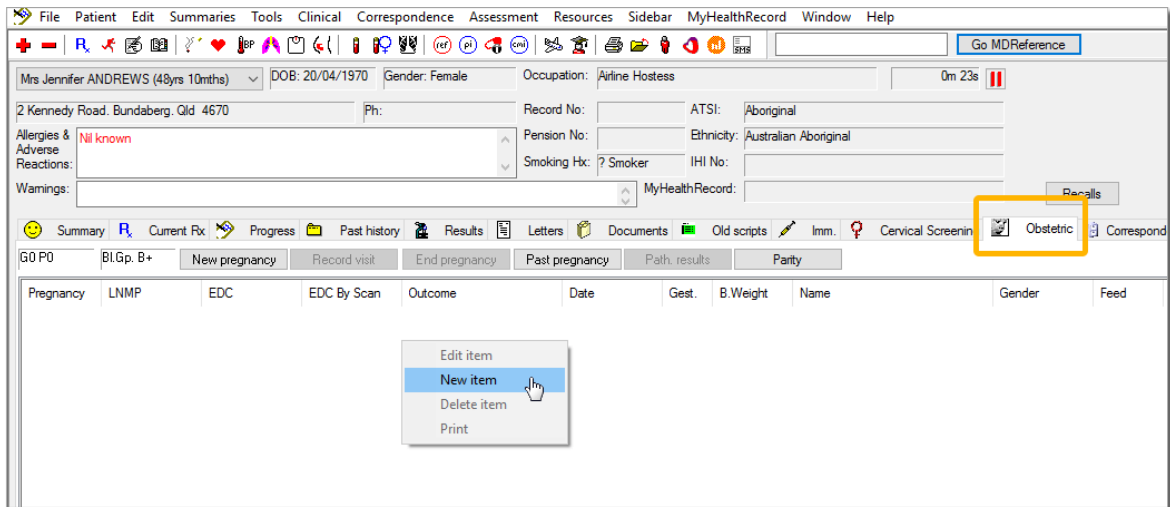
- Live births and stillbirths if the birthweight was at least 400 grams or the gestational age was 20 weeks or more.
- Where an Indigenous regular patient's tobacco smoking status does not have an assessment date assigned within the Patient Information Record System (PIRS), smoking status as recorded in the PIRS should be treated as current (that is, as having been updated within the previous 12 months).

### Example - Recording Pregnancy

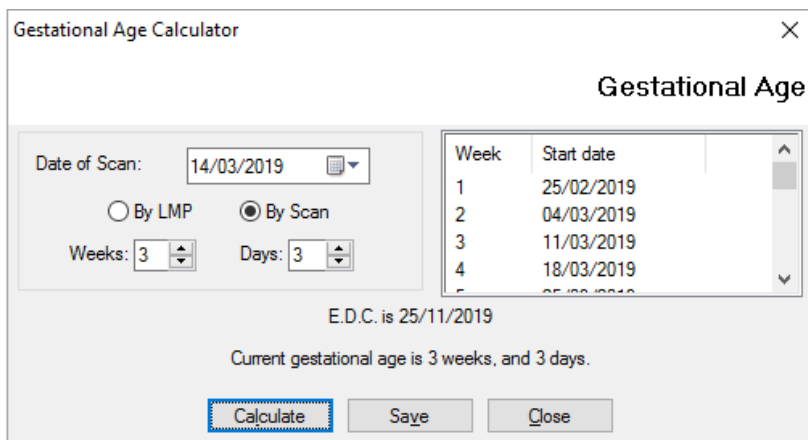
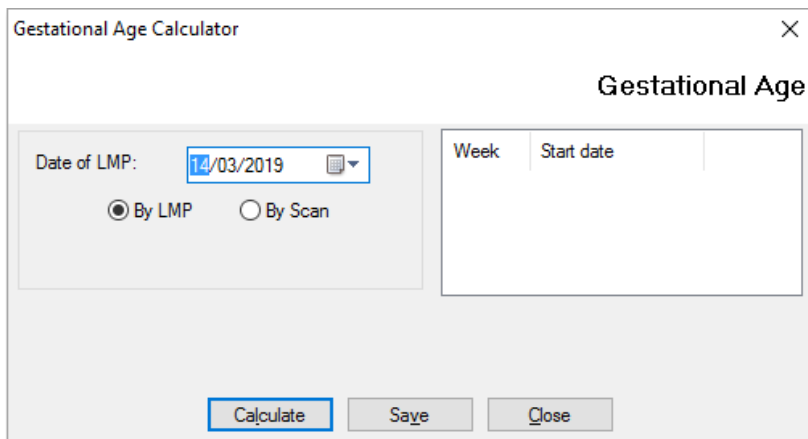
1. Open a female patient's record.
2. Select the **Obstetric** tab.



3. Right-click in the white space to add a **New Item**.

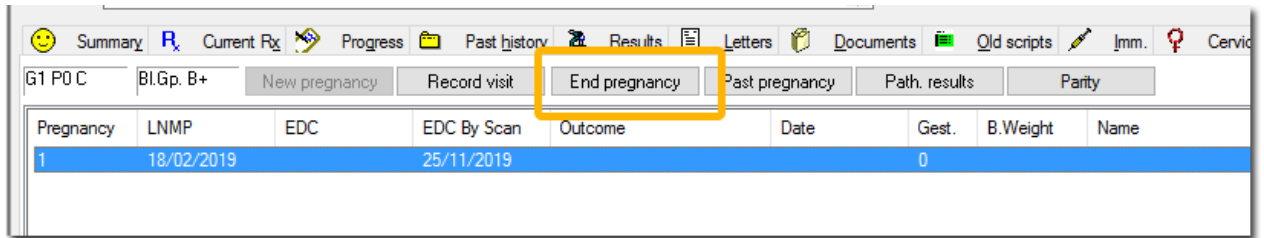


4. Input the value for **Date of LMP** or gestational age by scan and click **Save**.

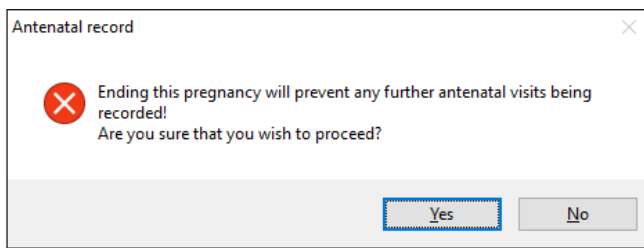


Example - Recording Pregnancy Result

1. Click the **End Pregnancy** button.

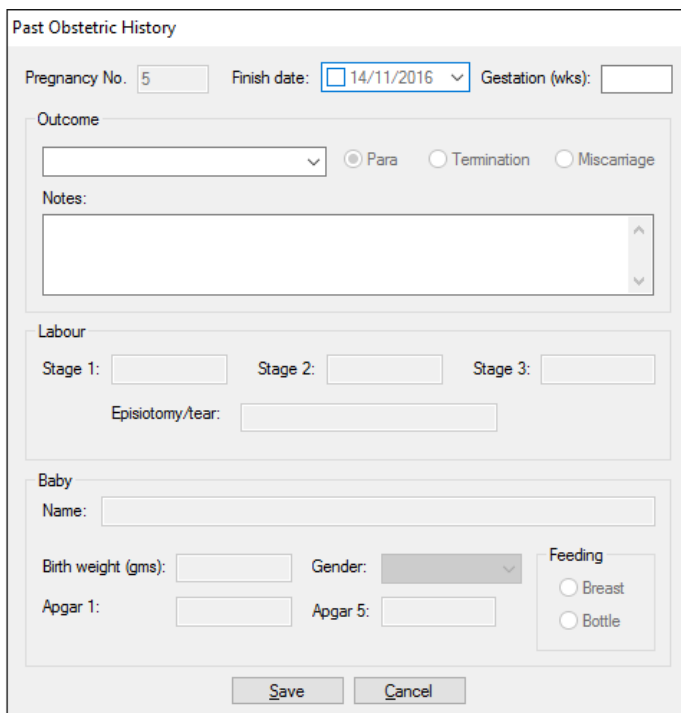


2. When the **Antenatal Record** dialogue box appears, click **Yes**.



3. When the **Past Obstetric History** dialogue box appears:

- Record a **Finish Date**.
- Select an **Outcome** from dropdown list (e.g., Normal vaginal delivery).
- Enter Baby Name, Baby Weight, Baby Sex at Birth.

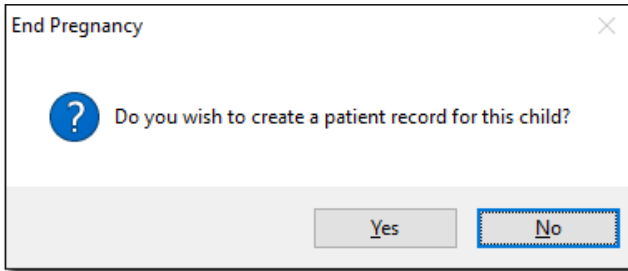


The screenshot shows a dialogue box titled 'Past Obstetric History'. It contains the following fields and options:

- Pregnancy No.: 5
- Finish date: 14/11/2016 (dropdown menu)
- Gestation (wks):
- Outcome: (dropdown menu)
- Para:  (radio button)
- Termination:  (radio button)
- Miscarriage:  (radio button)
- Notes: (text area)
- Labour:
  - Stage 1: (text field)
  - Stage 2: (text field)
  - Stage 3: (text field)
  - Episiotomy/tear: (text field)
- Baby:
  - Name: (text field)
  - Birth weight (gms): (text field)
  - Gender: (dropdown menu)
  - Feeding:
    - Breast:  (radio button)
    - Bottle:  (radio button)
  - Apgar 1: (text field)
  - Apgar 5: (text field)
- Buttons: Save, Cancel

4. Click **Save**.

- When the **End Pregnancy** dialog box appears, select **No** and do not create a patient file.



### Example - Record Smoking Status

Smoking status should be recorded as outlined in PI09

### Check

For each age group (<20, 20–34 and 35 and over):

- You cannot have more people with a smoking status (sum of current smokers, ex-smokers and who never smoked) than you have patients of the same age with any smoking status in their record.
- The number of regular patients who gave birth within the previous 12 months with their smoking status recorded should not be more than the total number of regular patients of the same age and sex at birth with their smoking status recorded in PI09.
- The total number of regular patients who gave birth within the previous 12 months with their smoking status recorded should be equal to or less than the total number of regular patients who gave birth in the previous 12 months in the relevant age groups in PI13 as per the table below:

PI11	PI13
<20	<20
20-34	20-34
35+	35+

## PI12 – Body Mass Index

### Description

Proportion of regular clients who are Indigenous, aged 18 and over who have had their body mass index (BMI) classified as:

- underweight (<18.50).
- normal weight ( $\geq 18.50$  but <25).
- overweight ( $\geq 25$  but <30).
- obese ( $\geq 30$ ).
- not calculated.

Within the previous 24 months.

### Business Rules

- Only the **most recent** BMI is considered.
- Only weight measurements recorded in the last 24 months are considered.
- Only height measurements recorded since the patient turned 18 are considered.
- If any of the above conditions are not met, then the patient is excluded from the calculation.

### Calculation 1: Underweight

#### Numerator

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age] who have had their BMI classified as Underweight (BMI <18.50) within the previous 24 months.

#### Denominator

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age].

### Calculation 2: Normal weight

#### Numerator

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age] who have had their BMI classified as Normal weight (BMI  $\geq 18.50$  AND <25) within the previous 24 months

#### Denominator

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age].

### Calculation 3: Overweight

#### Numerator

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age] who have had their BMI classified as Overweight (BMI  $\geq 25$  and <30) within the previous 24 months.

#### Denominator

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age].

#### **Calculation 4: Obese**

##### **Numerator**

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age] who have had their BMI classified as Obese (BMI  $\geq$  30) within the previous 24 months.

##### **Denominator**

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age].

#### **Calculation 5: Not calculated**

##### **Numerator**

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age] who have not had their BMI classified within the previous 24 months.

##### **Denominator**

The number of indigenous regular [Disaggregation: Sex at Birth] clients aged [Disaggregation: Age].

## Disaggregation

A visual representation of the disaggregation per calculation (overweight, obese, normal weight, underweight and not calculated) can be seen below:

	Age (years)					
	18-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓
Male	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓
Male	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓

## Notes

- 'Body Mass Index (BMI)' – is a measure of an adult's weight (body mass) relative to height used to assess the extent of weight deficit or excess where height and weight have been measured. BMI is the weight in kilograms divided by height in metres squared (WHO 2000).
- 'Constituent Elements of a BMI' – weight in kilograms, recorded within the previous 24 months; height in meters, recorded since the client turned 18 years of age.
- BMI is more likely to be recorded for certain client groups, such as those with diabetes.
- BMI is more likely to be recorded if a client appears underweight, overweight, or obese. This could result in a higher apparent proportion of underweight, overweight, or obese patients.
- If height and weight are recorded for a client, their BMI is also considered as recorded.

## Example – How to Enter BMI

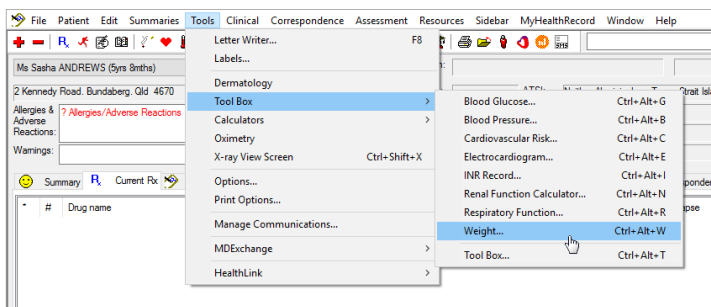
Use height and weight measured based on the following rules:

- A height taken since the client turned 18.
- A weight taken within the previous 24 months.

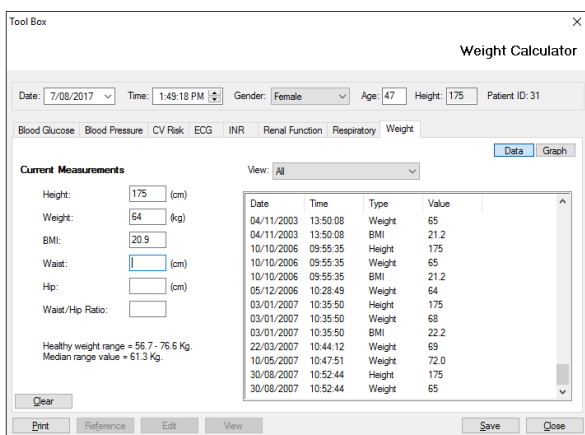
The BMI needs to be recorded in the Weight Calculator per the below steps:

1. Open a patient's record.

2. Select **Tools > Tool Box > Weight.**



3. Input height and weight values.



4. Click **Save.**

**Check:**

For each age and sex at birth group:

- You cannot have more overweight or obese or normal weight or underweight or not calculated regular clients than you have regular clients whose BMI has been recorded.
- The number of regular clients who have had their BMI recorded must be less than in the total number of regular clients in the relevant age and sex at birth groups in these nKPIs: PI03 (adults), PI09 and PI16. The only exception is if you have very few clients in the age or sex at birth group.

## PI13 – First Antenatal Care Visit

### Description

Proportion of female Indigenous regular patients, who gave birth within the previous 12 months and who had gestational age recorded at their first antenatal care visit as one of the following:

- less than 11/40 weeks.
- at or after 11/40 and less than 14/40.
- at or after 14/40 weeks and less than 20/40 weeks.
- at or after 20/40 weeks.
- no result.
- did not attend an antenatal care visit.

### Business Rules

- 'Parity Birth' and 'Gestational Age' is defined as per [PI11](#).

#### Calculation 1: Less Than 11/40 Weeks

**Numerator:** The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months, who had gestational age recorded at their first antenatal care visit with results less than 11/40 weeks of gestation.

**Denominator:** The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months.

#### Calculation 2: At or after 11/40 and less than 14/40 Weeks

**Numerator:** The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months, who had gestational age recorded at their first antenatal care visit with results at or after 11/40 weeks and less than 14/40 weeks of gestation.

**Denominator:** The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months.

#### Calculation 3: At or after 14/40 weeks and less than 20/40 Weeks

**Numerator:** The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months, who had gestational age recorded at their first antenatal care visit with results at or after 14/40 weeks to less than 20/40 weeks of gestation.

**Denominator:** The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months.

#### Calculation 4: At or after 20/40 Weeks

##### Numerator

The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months, who had gestational age recorded at their first antenatal care visit with results at or after 20/40 weeks of gestation.



### Denominator

The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months.

### Calculation 5: No Gestational Age Recorded

#### Numerator

The number of female Indigenous regular patients aged [Disaggregation: Age] who gave birth within the previous 12 months, who had no gestational age recorded at their first antenatal care visit.

#### Denominator

The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months.

### Calculation 6: No Antenatal Visit Recorded

#### Numerator

The number of female Indigenous regular patients aged [Disaggregation: Age] who gave birth within the previous 12 months, who had no antenatal care visit recorded.

#### Denominator

The number of female Indigenous regular patients aged [*Disaggregation: Age*] who gave birth within the previous 12 months.

### Reporting by Age Group

Mother's Age (years)		
Under 20	20-34	35 and over
✓	✓	✓
✓	✓	✓

### Notes

Include live births and still births if the birthweight was at least 400 grams or the gestational age was 20 weeks or more.

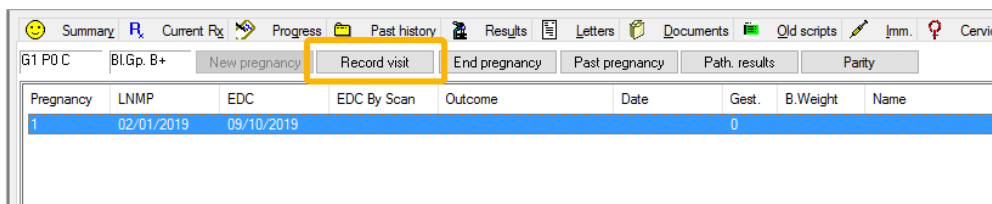
### Example - Add New Pregnancy Record

A new pregnancy can be recorded following the method outlined in PI11

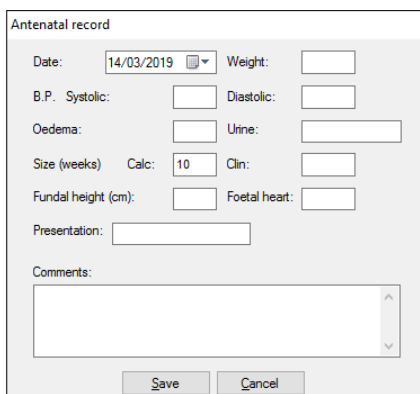
### Example - Record First Antenatal Visit

1. Select a pregnancy record from the list.

2. Click **Record Visit**.



3. Input the date as the visit date.



4. Click **Save**.

### Check

For each age group:

- You cannot have more mothers with gestational age recorded at their first antenatal visit than number of mothers who have given birth.
- You cannot have more mothers with no gestational age recorded at their first antenatal visit than number of mothers who have given birth.
- The number of mothers with any gestational age recorded, the number of mothers without gestational age recorded, and the number of mothers who did not have an antenatal visit should add up to the total number of mothers who've given birth. (Make a note in the submission comments if this is not the case and there is a reason for the difference).

# PI14 – Influenza Immunisation

## Description

Proportion of Indigenous regular clients aged 6 months and over who are immunised against influenza.

## Business Rules

- Patient's Influenza Immunisation status is defined in the 'Immunisation record' under the code 'flu' or description 'Influenzae'. If this is present in the patient's file, the date between the immunisation date and date of reporting is calculated. If this date difference is  $\geq 12$  months, the record is included.

## Numerator

The number of [Disaggregation: Sex at Birth] Indigenous regular clients aged [Disaggregation: Age] who are immunised against influenza in the 12 months up to the census date.

Note: These need to be recorded in the immunisations tab like PI04.

## Denominator

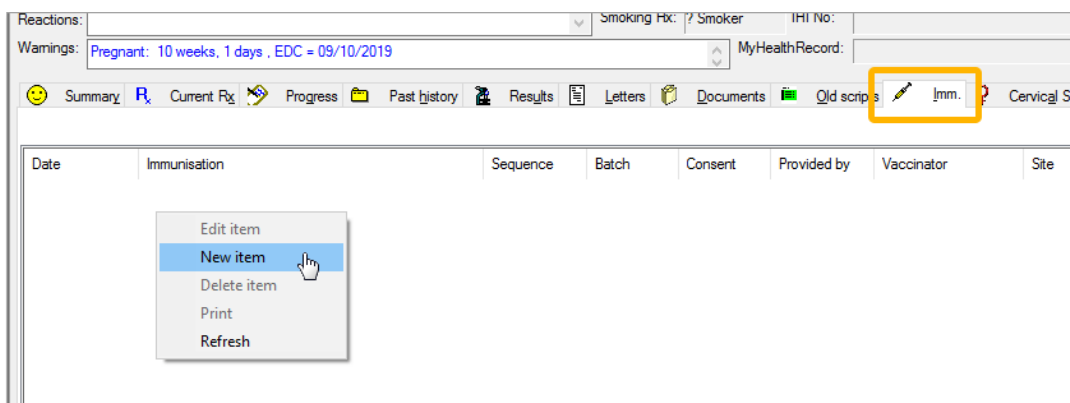
The number of [Disaggregation: Sex at Birth] Indigenous regular clients aged [Disaggregation: Age].

## Records Excluded

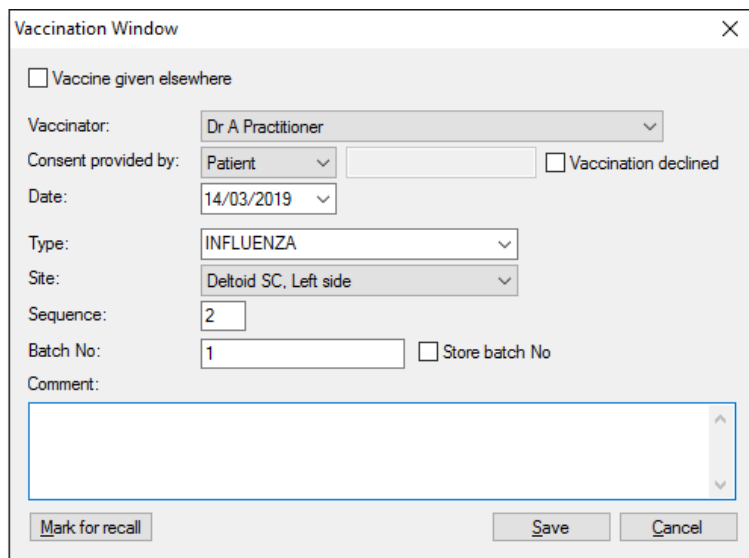
Patients in the Numerator if they have not been vaccinated, regardless of the reason (you will still include them in the Denominator). People who have not been vaccinated are at a higher risk of catching influenza.

## Example - Record Influenza Immunisation

1. Open a patient's record.
2. Select the **Immunisation** tab.
3. Right-click in the white space to add a **New Item**.



4. Enter date, type (Influenza) site and sequence.



5. Click **Save**.

### Check

For your regular patients in the age groups:

- You cannot have more patients being immunised than the total number of patients who fall under that age category.
- You cannot have more men being immunised than the total number of men who fall under that age category.
- You cannot have more women being immunised than the total number of women who fall under that age category.

	Age							
	6 months-4 years	5-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

# PI16 – Alcohol Consumption Recorded

## Description

Proportion of regular patients who are Indigenous, aged 15 and over and who have had their alcohol consumption status recorded at your primary health-care organisation within the previous 24 months.

## Business Rules

Alcohol consumption status recorded is defined as patients for whom an Audit-C measurement exists.

## Numerator

The number of regular Indigenous patients that have had their alcohol consumption status recorded in the 24 months up to the census date.

- Any record of alcohol consumption. This could include a record of:
  - Whether the regular patient consumes alcohol.
  - The amount and frequency of the regular patient’s alcohol consumption.
  - The results of tests such as the AUDIT or AUDIT-C.
- Where an Indigenous regular patient’s alcohol consumption status does not have an assessment date assigned in the Patient Information Record System (PIRS), alcohol consumption status as recorded in the PIRS should be treated as current (that is, as having been updated within the previous 24 months).

## Denominator

The number of your regular Indigenous patients that were there in each age and sex at birth group.

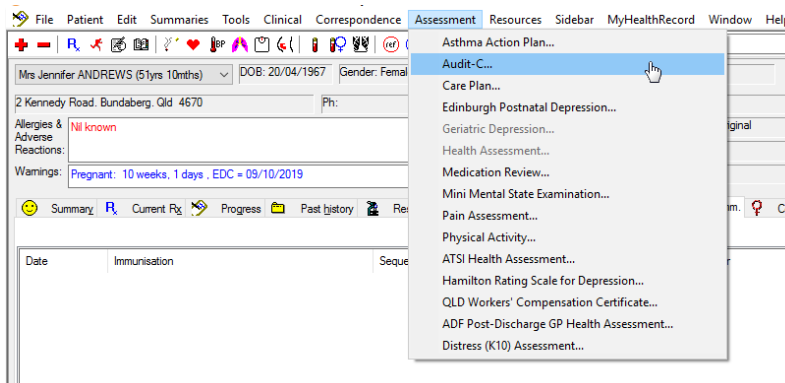
## Reporting by Age Groups

	Age (years)					
	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓

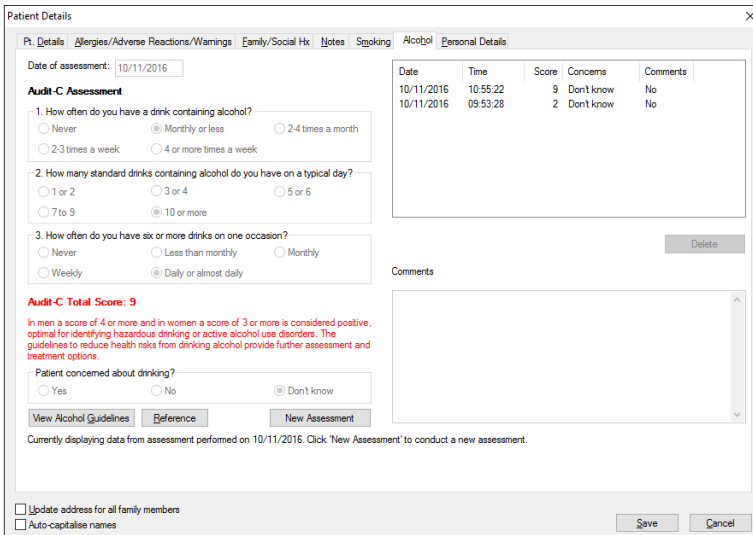
## Example - Recording Alcohol Consumption

1. Open a patient’s record.

2. Select **Assessment > Audit-C**.



3. The **Audit-C Assessment** is presented.



The screenshot shows the 'Patient Details' window with the 'Audit-C Assessment' form. The form includes three questions about alcohol consumption and a table of assessment results.

**Audit-C Assessment**

1. How often do you have a drink containing alcohol?

Never  Monthly or less  2-4 times a month  
 2-3 times a week  4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day?

1 or 2  3 or 4  5 or 6  
 7 to 9  10 or more

3. How often do you have six or more drinks on one occasion?

Never  Less than monthly  Monthly  
 Weekly  Daily or almost daily

**Audit-C Total Score: 9**

In men a score of 4 or more and in women a score of 3 or more is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders. The guidelines to reduce health risks from drinking alcohol provide further assessment and treatment options.

Patient concerned about drinking?  Yes  No  Don't know

View Alcohol Guidelines Reference New Assessment

Currently displaying data from assessment performed on 10/11/2016. Click 'New Assessment' to conduct a new assessment.

Date	Time	Score	Concerns	Comments
10/11/2016	10:55:22	9	Don't know	No
10/11/2016	09:53:28	2	Don't know	No

Update address for all family members  
 Auto-capitalise names

Save Cancel

4. Input data and click Save.

### Check

For each age and sex at birth group:

- You cannot have more regular patients with a record of their alcohol consumption status than the total number of regular patients.
- The number of regular patients who had their alcohol consumption status recorded should be greater than or equal to the total number of regular patients who had an AUDIT-C recorded in this nKPI: PI17.
- The total number of regular patients should be the same as the total number of regular patients in these nKPIs: PI03 (adults) and PI09.

# PI18 – Kidney Function Test Recorded (Type 2 Diabetes or CVD Patients)

## Description

Proportion of regular clients who are Indigenous, who are recorded as having

- Type 2 diabetes OR
- Cardiovascular disease (CVD) OR
- Type 2 diabetes and/or CVD

AND who have had either:

- An estimated glomerular filtration rate (eGFR) AND an albumin/creatinine ratio (ACR) test result recorded.
- Only an eGFR test result recorded.
- Only an ACR test result recorded.
- Neither an eGFR NOR an ACR test result recorded within the previous 12 months.

## Business Rules

- Type 2 Diabetes recorded as outlined in PI05.
- History of CVD recorded is defined as patients with a condition listed as at least one of the docles mentioned in [Docles list \(Appendix A\)](#):
- ACR or other micro albumin test result recorded is defined as patients whose records contain at least one of the following:
  - Pathology results containing one of the following LOINC codes: '14959-1', '32294-1', '30001-2', '30000-4', '9318-7'.
  - A manually recorded ACR measurement of type: 'MALB', 'MALBUN' or 'MALDATE'.
- eGFR recorded is defined as patients whose records contain at least one of the following:
  - Pathology results containing one of the following LOINC codes: '33914-3', '62238-1'.
  - A manually recorded eGFR measurement of type: 'EGFR'.

## Calculation 1: Type 2 Diabetes

### Numerator

The number of Indigenous regular [Disaggregation: Sex at Birth] clients with Type 2 Diabetes aged [Disaggregation: Age] who have had [Disaggregation: Tests] recorded within the previous 12 months.

### Denominator

The number of Indigenous regular [Disaggregation: Sex at Birth] clients with Type 2 Diabetes aged [Disaggregation: Age] (see [PI05](#)).

### Calculation 2: CVD

#### Numerator

The number of Indigenous regular [Disaggregation: Sex at Birth] clients with CVD aged [Disaggregation: Age] who have had [Disaggregation: Tests] recorded within the previous 12 months.

#### Denominator

The number of Indigenous regular [Disaggregation: Sex at Birth] clients with CVD aged [Disaggregation: Age] (see [PI05](#)).

### Calculation 3: Type 2 Diabetes OR CVD

#### Numerator

The number of Indigenous regular [Disaggregation: Sex at Birth] clients with Type 2 Diabetes or CVD aged [Disaggregation: Age] who have had [Disaggregation: Tests] recorded within the previous 12 months.

#### Denominator

The number of Indigenous regular [Disaggregation: Sex at Birth] clients with Type 2 Diabetes or CVD aged [Disaggregation: Age] (see [PI05](#)).

#### Disaggregation

A visual representation of the disaggregation per calculation (Type 2 Diabetes, CVD and Type 2 Diabetes or CVD) can be seen below:

		Age (years)					
		18-24	25-34	35-44	45-54	55-64	65+
eGFR only	Male	✓	✓	✓	✓	✓	✓
	Female	✓	✓	✓	✓	✓	✓
ACR only	Male	✓	✓	✓	✓	✓	✓
	Female	✓	✓	✓	✓	✓	✓
eGFR and ACR	Male	✓	✓	✓	✓	✓	✓
	Female	✓	✓	✓	✓	✓	✓
	Male	✓	✓	✓	✓	✓	✓



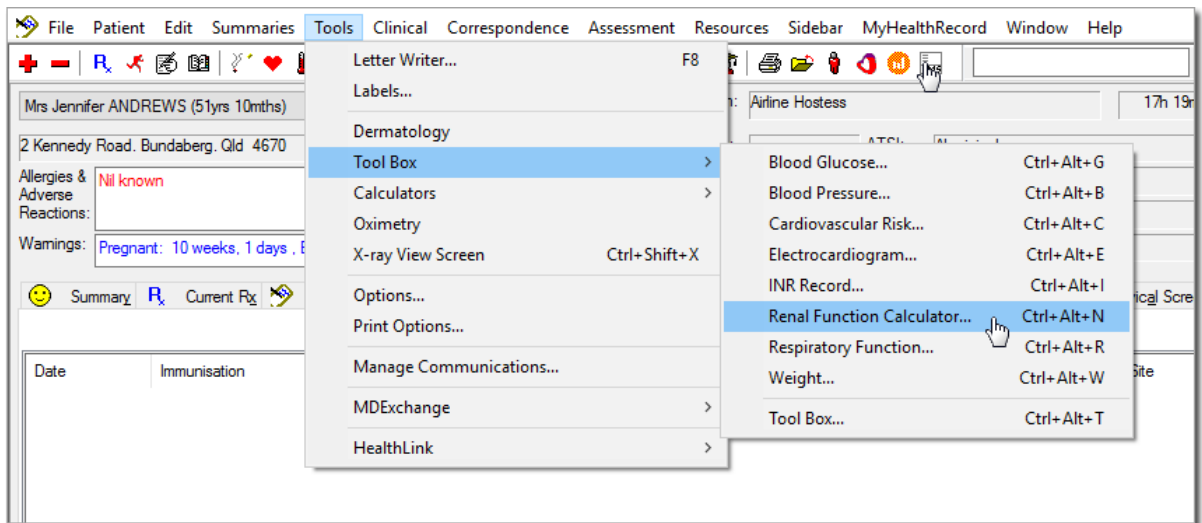
Neither an eGFR nor an ACR	Female	✓	✓	✓	✓	✓	✓
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Notes

- ‘Type 2 diabetes’ – specifically excludes Type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, Impaired fasting glucose, and impaired glucose tolerance CVD
- ‘ACR’ – refers to an albumin/creatinine ratio, or other micro albumin urine test result.
- ‘An eGFR only’ – a recorded eGFR result, where an ACR result HAS NOT been recorded.
- ‘An ACR only’ – a recorded ACR result, where an eGFR result HAS NOT been recorded.
- ‘Both an eGFR and an ACR’ – a recorded eGFR result AND a recorded ACR result.
- ‘Neither an eGFR NOR an ACR’ – an eGFR result AND an ACR result HAS NOT been recorded.

Example - Record Kidney Function Test (eGFR result) Manually

1. Open a patient’s record.
2. Select **Tools > Tool Box > Renal Function Calculator**.



3. The **Renal Function Calculator** window appears.

4. Enter a value for creatine to generate eGFR value and click **Save**.

### Example - Add eGFR/ACR Result from An Existing hl7 File

Please refer to this Online Help Guide: [The Holding File](#)

### Check

For each age and sex at birth group:

- You cannot have more regular patients with type 2 diabetes who've had a test (eGFR, ACR or both) than the total number of regular patients with type 2 diabetes.
- You cannot have more regular patients with CVD who've had a test (eGFR, ACR or both) than the total number of regular patients with CVD.
- The total number of regular patients with type 2 diabetes should be the same as the total number of regular patients in the relevant age and sex at birth groups in these nKPIs: PI05, PI07, PI08, PI15 and PI23.
- You cannot have more regular patients with CVD or type 2 diabetes than the total number of regular patients in these nKPIs: PI03 (adults), PI09 and PI16.

# PI19 – Kidney Function Test Result (Type 2 Diabetes or CVD Patients)

## Description

Proportion of clients with:

- Type 2 Diabetes, OR
- CVD.
- Type 2 Diabetes and/or CVD.

Whose estimated glomerular filtration rate (eGFR) AND albumin/creatinine ratio (ACR) recorded within the previous 12 months were categorised as:

- Normal risk.
- Low risk.
- Moderate risk.
- High risk.

Note: Some risk groups have more than one result classification (See description of risk categories table below).

Description of risk categories:

- Normal risk:
  - eGFR  $\geq$  60 mL/min/1.73 m<sup>2</sup> AND (ACR < 3.5 mg/mmol for females OR ACR < 2.5 mg/mmol for males).
- Low risk:
  - (eGFR  $\geq$  45 mL/min/1.73m<sup>2</sup> and < 60 mL/min/1.73m<sup>2</sup>) AND (ACR < 3.5 mg/mmol for females OR ACR < 2.5 mg/mmol for males) OR
  - (eGFR  $\geq$  60 mL/min/1.73m<sup>2</sup> AND ((ACR  $\geq$  3.5 mg/mmol and  $\leq$  35 mg/mmol for females) OR (ACR  $\geq$  2.5 mg/mmol and  $\leq$  25 mg/mmol for males))).
- Moderate risk:
  - (eGFR  $\geq$  45 mL/min/1.73m<sup>2</sup> and < 60 mL/min/1.73m<sup>2</sup> AND (ACR  $\geq$  3.5 mg/mmol and  $\leq$  35 mg/mmol for females OR ACR  $\geq$  2.5 mg/mmol and  $\leq$  25 mg/mmol for males)) OR
  - (eGFR  $\geq$  30 mL/min/1.73m<sup>2</sup> and < 45 mL/min/1.73m<sup>2</sup>) AND ((ACR  $\leq$  35 mg/mmol for females) OR (ACR  $\leq$  25 mg/mmol for males))).
- High risk:
  - (eGFR  $\geq$  30 mL/min/1.73m<sup>2</sup> AND (ACR > 35 mg/mmol for females OR ACR > 25 mg/mmol for males) OR
  - (eGFR < 30 mL/min/1.73m AND any ACR result).

## Business Rules

- eGFR results recorded in patient file defined per PI18.
- ACR results recorded in patient file defined per PI18.
- Type II Diabetes recorded in patient file defined per PI05.

- CVD recorded in patient file defined per PI18.

### **Calculation 1: Male**

#### **Numerator**

The number of male indigenous regular clients with [Disaggregation: Chronic disease] aged [Disaggregation: Age] whose most recent eGFR and ACR results, recorded within the previous 12 months, were [Disaggregation: Results].

#### **Denominator**

The number of male indigenous regular clients with [Disaggregation: Chronic disease] aged [Disaggregation: Age] who had both an eGFR and ACR result recorded within the previous 12 months.

### **Calculation 2: Female**

#### **Numerator**

The number of female indigenous regular clients with [Disaggregation: Chronic disease] aged [Disaggregation: Age] whose most recent eGFR and ACR results, recorded within the previous 12 months, were [Disaggregation: Results].

#### **Denominator**

The number of female indigenous regular clients with [Disaggregation: Chronic disease] aged [Disaggregation: Age] who had both an eGFR and ACR result recorded within the previous 12 months.

### **Disaggregation**

A visual representation of the disaggregation per calculation (male and female) can be seen below:

		Age (years)					
		18-24	25-34	35-44	45-54	55-64	65+
Type 2 Diabetes	Pathology result categories (see table below)	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓
CVD	Pathology result categories	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓
Type 2 Diabetes OR CVD	Pathology result categories	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓

### **Pathology result categories**

Renal function test result	Range	Applicable sex at birth
Normal Risk	eGFR $\geq$ 60 and ACR <2.5	Male
Normal Risk	eGFR $\geq$ 60 and ACR <3.5	Female
Low Risk	(eGFR $\geq$ 45 and <60 and ACR <2.5) OR (eGFR $\geq$ 60 and ACR $\geq$ 2.5 and $\leq$ 25)	Male
Low Risk	(eGFR $\geq$ 45 and <60 and ACR <3.5) OR (eGFR $\geq$ 60 and ACR $\geq$ 3.5 and $\leq$ 35)	Female
Moderate Risk	(eGFR $\geq$ 45 and <60 and ACR $\geq$ 2.5 and $\leq$ 25) OR (eGFR $\geq$ 30 and < 45 and ACR $\leq$ 25)	Male
Moderate Risk	(eGFR $\geq$ 45 and <60 and ACR $\geq$ 3.5 and $\leq$ 35) OR (eGFR $\geq$ 30 and < 45 and ACR $\leq$ 35)	Female
High Risk	(eGFR $\geq$ 30 and ACR > 25) OR (eGFR < 30 and any ACR result)	Male
High Risk	(eGFR $\geq$ 30 and ACR > 35) OR (eGFR < 30 and any ACR result)	Female

## Notes

- ‘Type 2 diabetes’ – specifically excludes Type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, impaired fasting glucose, and impaired glucose tolerance.
- The report only considers the most recently recorded eGFR test result per patient.
- The report only considers the most recently recorded ACR test result per patient.
- Results taken from relevant pathology results. If your organisation does not have a system for adding pathology results to patient records, ensure the results have been included in the correct fields for this nKPI.
- For correct data entry please see PI05.
- ‘ACR’ – refers to an albumin/creatinine ratio, or other micro albumin urine test result.

## Example - Add eGFR data

eGFR results may be added manually through the Renal Function Calculator or via HL7 file as described in PI18.

## Example - Add history of Type 2 Diabetes or Cardiovascular Disease

Type 2 Diabetes can be recorded via the method shown in PI05.

## Check

For each age and sex at birth group:

- you cannot have more regular patients with type 2 diabetes with eGFR results in each range than the total number of regular patients with type 2 diabetes who had an eGFR result recorded.
- you cannot have more regular patients with CVD with eGFR results in each range than the total number of regular patients with CVD who had an eGFR result recorded.
- the total number of regular patients with type 2 diabetes who had an eGFR recorded should be the same as the sum of the number of regular patients with type 2 diabetes who had an eGFR only recorded and both eGFR and ACR recorded in this nKPI: PI18.

- the total number of regular patients with CVD who had an eGFR recorded should be the same as the number of regular patients with CVD who had an eGFR recorded in this nKPI: PI18.
- you cannot have more regular male patients with type 2 diabetes with ACR results in each specified ranged than the total number of regular male patients with type 2 diabetes who had an ACR result recorded.
- the total number of regular male patients with type 2 diabetes with an ACR result recorded should be the same as the sum of the number of regular male patients with type 2 diabetes who had an ACR only recorded and both eGFR and ACR recorded in this nKPI: PI18.
- you cannot have more regular female patients with type 2 diabetes with ACR results in each specified ranged than the total number of regular female patients with type 2 diabetes who had an ACR result recorded.
- the total number of regular female patients with type 2 diabetes with an ACR result recorded should be the same as the sum of the number of regular female patients with type 2 diabetes who had an ACR only recorded and both eGFR and ACR recorded in this nKPI: PI18.

# PI20 – Cardiovascular Disease (CVD) Risk Assessment

## Description

Proportion of Indigenous regular patients with no known cardiovascular disease (CVD), aged 35 to 74, with information available to calculate their absolute CVD risk.

## Business Rules

- CVD recorded per PI18.
- Smoking status recorded per PI09.
- Diabetes recorded per PI05.
- Absolute CV risk is defined as patients with a measurement type of 'ACVRISK'. These results are collated into low, medium, and high by the below calculations:
  - $0 \leq \text{measurement value} < 10$ : set element value as 3 (low).
  - $10 \leq \text{measurement value} \leq 15$ : set element value as 2 (medium).
  - $15 < \text{measurement value}$ : set element value as 1 (high).
- High-Density Lipoprotein Cholesterol recorded is defined as patients with a measurement type of 'LIPIDDATE' or 'HDL'.

## Numerator

Number of regular Indigenous patients whose:

- Smoking Status has been recorded, AND
- Diabetes status, BP, Total cholesterol, and High-Density Lipoprotein Cholesterol have been measured and recorded within the last 24 months.

## Denominator

Number of regular Indigenous patients **NOT CODED** with CVD (As we want Check for risk factors after) (See PI07).

## Records Excluded

- Patients coded with CVD.
- Patients without known CVD if information is not available for all risk factors (tobacco smoking, diabetes, systolic blood pressure, total cholesterol and HDL cholesterol levels, age, sex).

## Reporting by Age Group

Separate the results for males and females into each of the following age groups:

Age (years)			
35-44	45-54	55-64	65-74

Male	✓	✓	✓	✓
Female	✓	✓	✓	✓

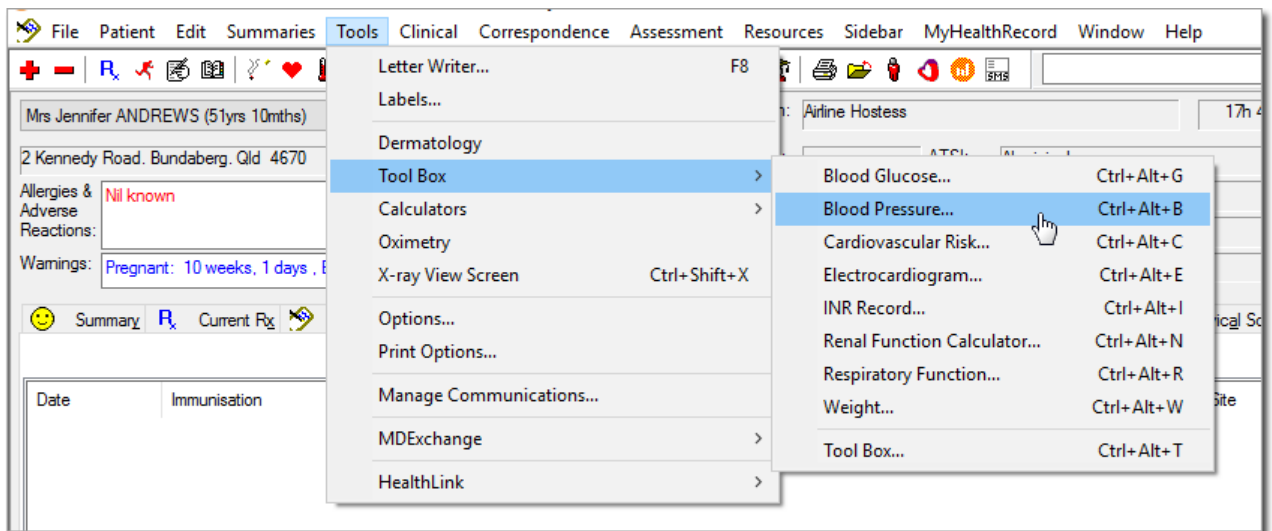
### Notes

Ensure information on the diabetes status from the most recent record is included regardless of how old that record is.

Where a patient's tobacco smoking status and/or sex does not have an assessment date assigned within the Patient Information Record System (PIRS), smoking status and/or sex as recorded in the PIRS should be treated as current (that is, as having been updated within the previous 24 months).

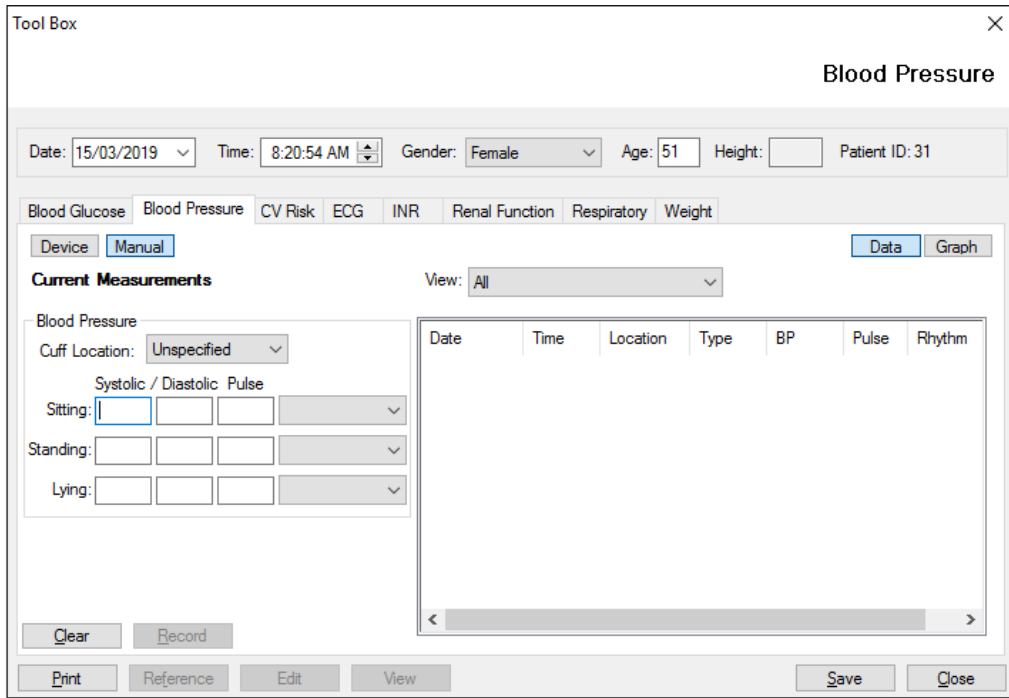
### Example - Record Blood Pressure

1. Open a patient's record.
2. Select **Tools > Tool Box > Blood Pressure**





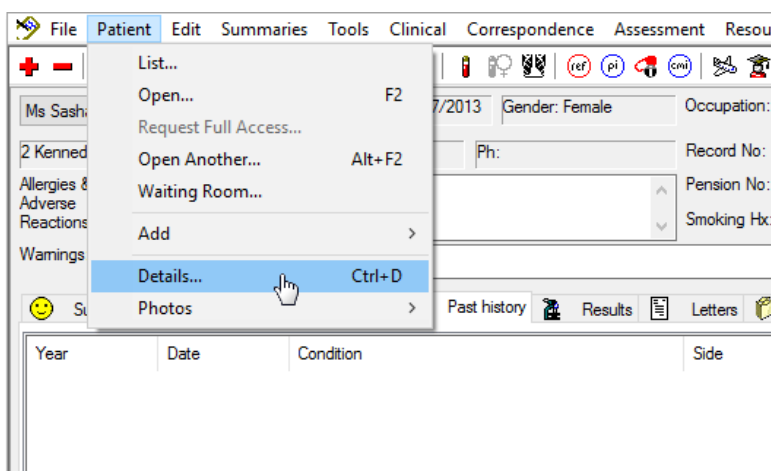
- The Blood Pressure module appears.



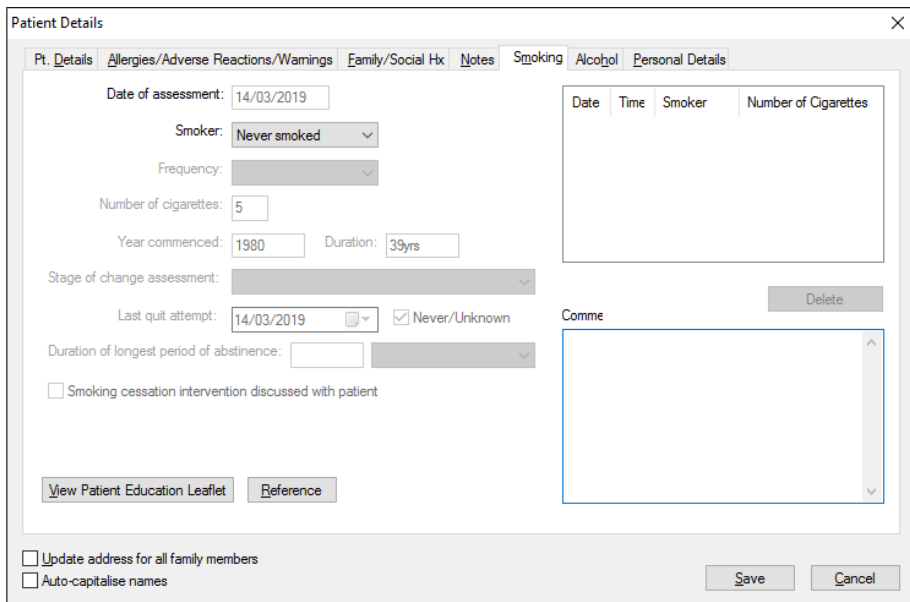
- Enter values for blood pressure and then click **Save**

### Example - Record Smoking Status

- Open a patient's record.
- Select **Patient > Details**.



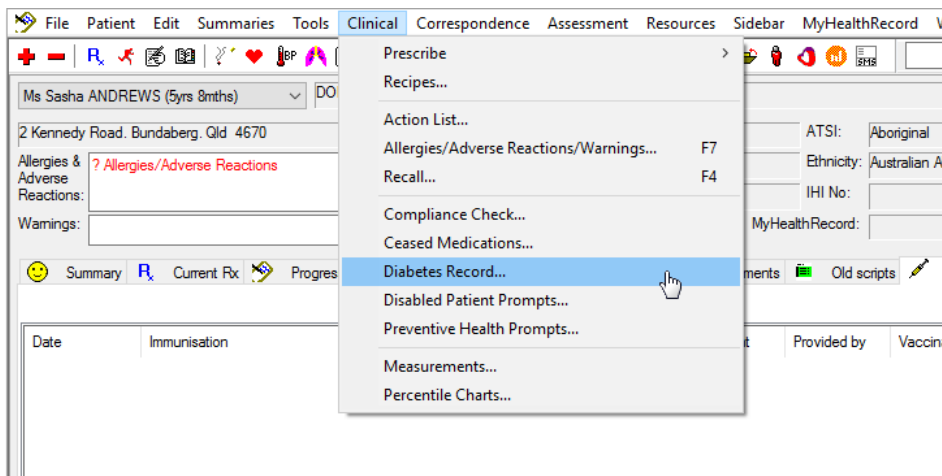
3. Select the **Smoking** tab.



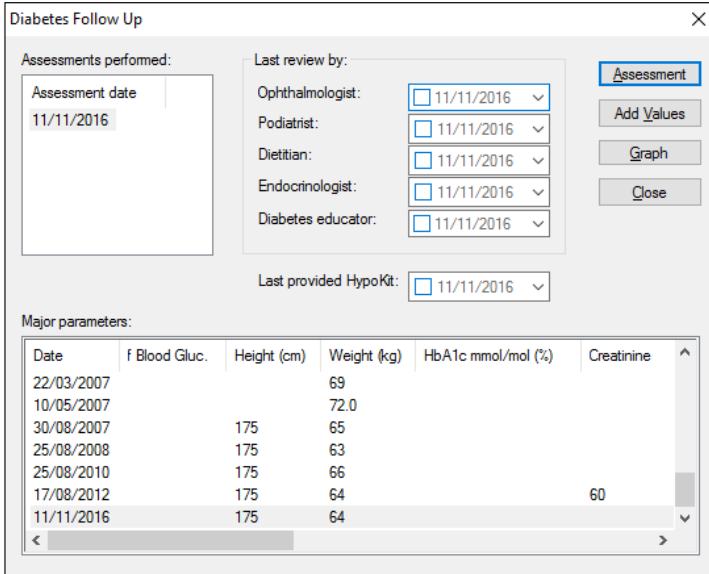
4. Select the smoking status from the **Smoking** drop-down list and click **Save**.

### Example - Record Total Cholesterol and HDL

1. Open a patient's record.
2. Select Clinical > Diabetes Record.



- The **Diabetes Follow Up** window appears.



**Diabetes Follow Up**

Assessments performed:

Assessment date: 11/11/2016

Last review by:

Ophthalmologist: 11/11/2016

Podiatrist: 11/11/2016

Dietitian: 11/11/2016

Endocrinologist: 11/11/2016

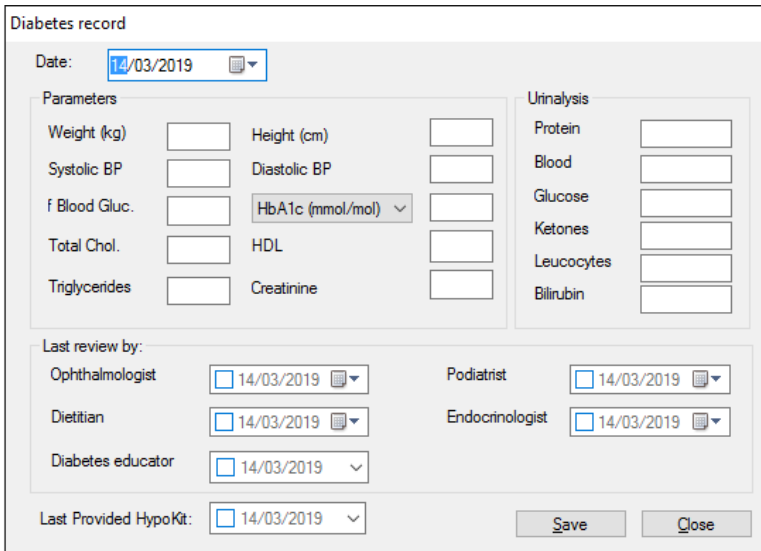
Diabetes educator: 11/11/2016

Last provided HypoKit: 11/11/2016

Major parameters:

Date	f Blood Gluc.	Height (cm)	Weight (kg)	HbA1c mmol/mol (%)	Creatinine
22/03/2007			69		
10/05/2007			72.0		
30/08/2007		175	65		
25/08/2008		175	63		
25/08/2010		175	66		
17/08/2012		175	64		60
11/11/2016		175	64		

- Click **Add Value**. The **Diabetes Record** window appears.



**Diabetes record**

Date: 14/03/2019

Parameters:

Weight (kg):

Height (cm):

Systolic BP:

Diastolic BP:

f Blood Gluc.:

HbA1c (mmol/mol):

Total Chol.:

HDL:

Triglycerides:

Creatinine:

Urinalysis:

Protein:

Blood:

Glucose:

Ketones:

Leucocytes:

Bilirubin:

Last review by:

Ophthalmologist: 14/03/2019

Podiatrist: 14/03/2019

Dietitian: 14/03/2019

Endocrinologist: 14/03/2019

Diabetes educator: 14/03/2019

Last Provided HypoKit: 14/03/2019

Save Close

- Enter the value for total cholesterol and HDL, then click **Save**.

## Check

For each age and sex at birth group:

- You cannot have more regular patients with all the following information recorded (tobacco smoking, diabetes, systolic blood pressure, total cholesterol and HDL cholesterol levels, age, sex), than the total number of regular patients without known CVD recorded.
- You cannot have more regular patients without known CVD than the total number of regular patients.

- The total number of regular patients without known CVD should be equal to the total number of regular patients in the relevant age and sex at birth groups in these nKPIs: PI03, PI09 and PI16, minus the total number of regular patients with CVD in the relevant age and sex at birth groups in this nKPI: PI18.

# PI21 – Cardiovascular Disease (CVD) Risk Assessment Results

## Description

Proportion of Indigenous regular patients with no known cardiovascular disease (CVD), aged 35–74, who have had an absolute CVD risk assessment recorded within the previous 24 months and whose CVD risk was categorised as one of the following:

Category	% Chance of CV Event in The Next 5 Years
Low	Less than 10% chance of a cardiovascular event in the next 5 years
Moderate	10%–15% chance of a cardiovascular event in the next 5 years
High	Greater than 15% chance of a cardiovascular event in the next 5 years

## Business Rules

- CVD recorded in patient file per PI18.
- Absolute CVD risk assessment recorded per PI20.

## Calculation 1: Patients with High CV Risk

### Numerator:

The number of regular Indigenous patients who have had an absolute CVD risk assessment recorded in the 24 months up to the census date with risk assessed as high (greater than 15% over the next 5 years).

### Denominator

Number of regular Indigenous patients identified in the Denominator include:

- Patients NOT CODED with CVD (See PI07) AND
- Having Absolute CVD risk measured within the last 24 months AND
- Aged 35 – 74.

### Calculation 2: Patients with Moderate CV Risk

#### Numerator:

The number of regular Indigenous patients that have had an absolute CVD risk assessment recorded in the 24 months up to the census date with risk assessed as moderate (10%–15% over the next 5 years).

#### Denominator

Number of regular Indigenous patients identified in the Denominator include:

- Patients **NOT** CODED with CVD (See PI07) AND
- Having Absolute CVD risk measured within the last 24 months AND
- Aged 35 – 74.

### Calculation 3: Patients with Low CV Risk

#### Numerator:

The number of regular Indigenous patients that have had an absolute CVD risk assessment recorded in the 24 months up to the census date with risk assessed as low (less than 10% over the next 5 years).

#### Denominator:

Number of regular Indigenous patients identified in the Denominator include:

- Patients NOT CODED with CVD (See PI07) AND
- Having Absolute CVD risk measured within the last 24 months AND
- Aged 35 – 74.

### Reporting by Age Group:

Separate the results for males and females into each of the following age groups:

	Age (years)			
	35-44	45-54	55-64	65-74
Male	✓	✓	✓	✓
Female	✓	✓	✓	✓

### Records Excluded

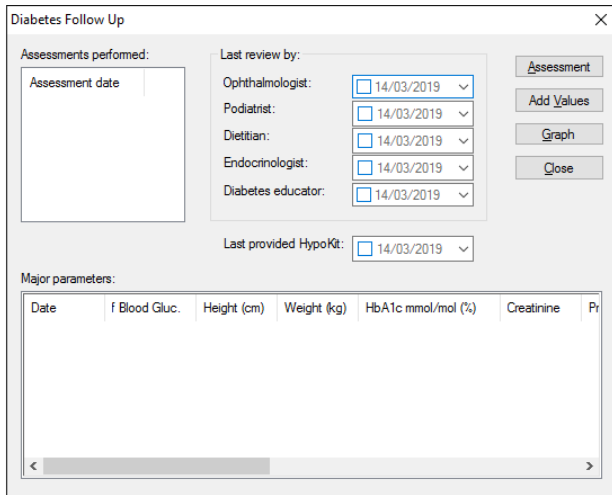
- Patients coded with CVD.
- Patients aged under 35.
- Patients aged 75 or over.

## Notes

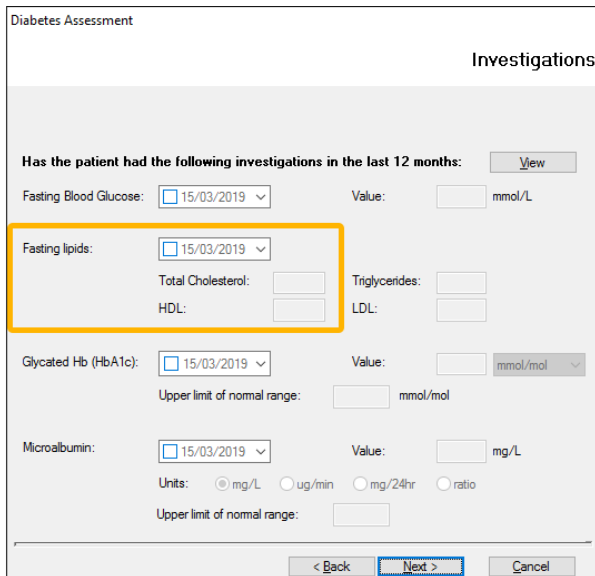
Only the most recently recorded result from an absolute CVD risk assessment. This means that if a patient has had several assessments, then include only the results from the most recent test.

## Examples of Recording Risk Factors

1. From within the Clinical Window, select **Clinical > Diabetes Record**. The **Diabetes Follow Up** window appears.



2. An assessment may be conducted, or alternatively values may be added directly.



3. From within the Clinical Window, select **Tools > Toolbox > Blood Pressure**. The Blood Pressure module appears. Record Blood Pressure from within this window.

Tool Box
✕

Blood Pressure

---

Date: 15/03/2019
Time: 8:20:54 AM
Gender: Female
Age: 51
Height: 
Patient ID: 31

Blood Glucose
Blood Pressure
CV Risk
ECG
INR
Renal Function
Respiratory
Weight

Device: Manual
Data
Graph

**Current Measurements**
View: All

**Blood Pressure**

Cuff Location: Unspecified

Systolic / Diastolic Pulse

Sitting:  /

Standing:  /

Lying:  /

Date	Time	Location	Type	BP	Pulse	Rhythm

Clear
Record

Print
Reference
Edit
View
Save
Close

## Check

For each age and sex at birth group:

- You cannot have more regular patients without known CVD with absolute CVD risk assessment results in each range than the total number of regular patients without known CVD who had an absolute risk assessment recorded.
- You cannot have more regular patients without known CVD than the total number of regular patients.
- The total number of regular patients without known CVD who had an absolute risk assessment recorded should be less than or equal to the number of patients without known CVD who had all the following information (tobacco smoking, diabetes, systolic blood pressure, total cholesterol and HDL cholesterol levels, age, sex) recorded in this nKPI: PI20.



## PI22 – Cervical Screening Recorded

### Description

Proportion of female regular patients who are Indigenous, aged 25–74, who have not had a hysterectomy and who have had a cervical screening (human papillomavirus (HPV)) test within the previous 5 years.

This indicator has been revised to align with the new National Cervical Screening Program (NCSP) where the previous Pap test is replaced by an HPV test from 1 December 2017. For the nKPIs these changes take effect from June 2018 reporting period.

The key changes are:

- Data is to be collected on patients who had a human papillomavirus (HPV test) conducted from 1 December 2017.
- The HPV test can be based on a sample collected by a health practitioner or on a self-collected sample.
- The age range for this nKPI indicator has been revised to 25–74 for a transitional period.
- Data is to be disaggregated by age group (see specifications below).

### Business Rules

- Cervical screening as recorded a record present in the 'Cervical Screening' tab.
- No history of hysterectomy is defined as patients whose medical file does not contain the below DOCLE codes:

cxyz	Hysterectomy
cxyz	Surgery - Uterus - Hysterectomy
cxyz	Uterus - removal of
cxyz	Hysterectomy - Abdominal
cxyz	Hysterectomy - Vaginal
cxyz	Vaginal Hysterectomy
cxyz	Hysterectomy - Vaginal with vaginal repair
cxyz	Hysterectomy - Laparoscopic
cxyz	Laparoscopic hysterectomy
cxyz	Hysterectomy - ovary(ies) spared
cxyz	Hysterectomy - Subtotal
cxyz	Hysterectomy - Total
cxyz	Subtotal hysterectomy
cxyz	Hysterectomy & BSO - Abdominal

### Numerator

Number of female Indigenous patients with cervical screening done within the previous 5 years.

### Denominator

Number of regular Indigenous female patients with no history of hysterectomy aged 25 – 74.

### Records Excluded

- Patients whose last screening was more than 5 years ago.
- Patients with hysterectomy present in their record as a history item or reason for visit. See above for hysterectomy DOCLE Codes.

### Reporting by Age Group

Results should be separated into the below age groups:

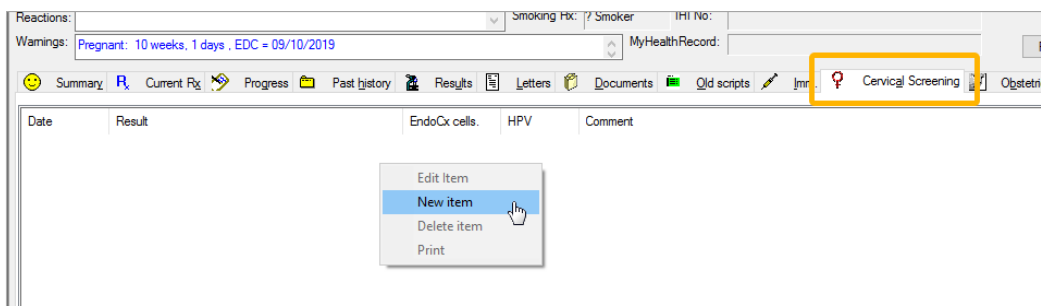
	Age (years)				
	25-34	35-44	45-54	55-64	65-74
Female	✓	✓	✓	✓	✓

### Notes

Include patients who had HPV tests conducted from 1 December 2017, HPV tests where the sample is either collected by a health practitioner or self-collected and results from other organisations (where possible).

### Example – Adding a Cervical Screening Result

1. Open a female patient’s record.
2. Select the **Cervical Screening** tab.
3. Right-click in the white space and select **New Item**.



4. The **Record Cervical Screening Result** window appears. Enter the date of the result, select the result from the drop down and tick the 'Endocervical cells present?' and/or HPV changes present?' checkboxes as required.

The screenshot shows a web form titled "Record Cervical Screening Result" for a patient named Jennifer ANDREWS. The form includes the following fields and options:

- DOB: 20/04/1967
- Record No: (empty)
- Screening Result section:
  - Date: 15/03/2019 (dropdown menu)
  - Result: Negative (dropdown menu)
  - Endocervical cells present? (checkbox, unchecked)
  - HPV changes present? (checkbox, unchecked)
- Comment: (text area)
- Buttons: Add Recall, Add, Cancel
- Link: [View AMBS 2004 Comparison Table](#)

5. Click **Add**.

### Check

- The number of female regular patients aged 25–74 with a cervical screening should not exceed the total number of female regular patients aged 25–74 who have not had a hysterectomy.

## PI23 – Blood Pressure Recorded (Type 2 Diabetes Patients)

### Description

Proportion of regular patients who are Indigenous, have type 2 diabetes and who have had a blood pressure measurement result recorded at the primary health-care organisation within the previous 6 months.

### Business Rules

- Type 2 Diabetes recorded as per PI05.
- Blood pressure measurement recorded as per patient's whose file's contain measurements of types 'Systolic' and 'diastolic' as recorded in the 'Blood pressure' toolbox.

### Numerator

Number of Indigenous patients with BP recorded within the past 6 months, separated into the below age groups (See PI20).

### Denominator

Number of Indigenous patients with Diabetes Type 2 (See PI05).

### Records Excluded

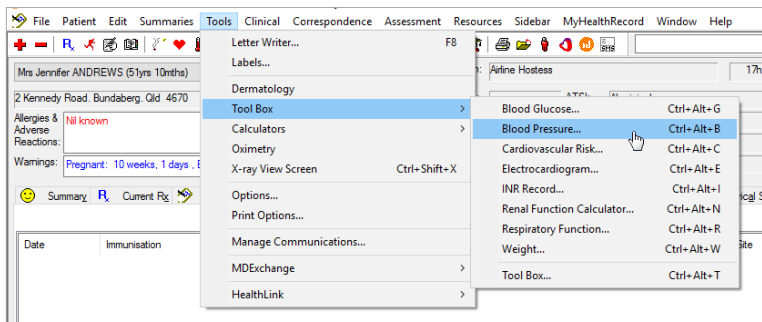
Patients with type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, impaired fasting glucose or impaired glucose tolerance.

### Reporting by Age Group

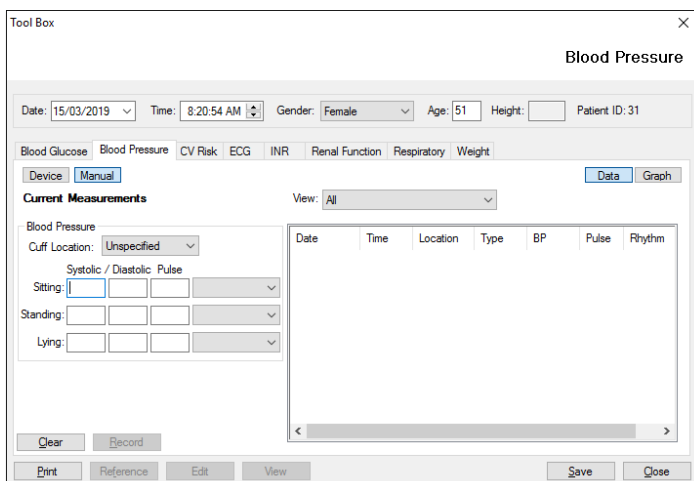
	Age (years)							
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

### Example - Record Blood Pressure

1. Open a patient's record.
2. Select **Tools > Tool Box > Blood Pressure**.



3. The **Blood Pressure** module appears.



4. Enter values for Systolic and Diastolic and click **Save**

### Check

For each age and sex at birth group with type 2 diabetes:

- you cannot have more regular patients with type 2 diabetes who've had a blood pressure test in the past 6 months than the total number of regular patients with type 2 diabetes.
- The number with type 2 diabetes who've had a blood pressure test should be the same as the total number of regular patients with type 2 diabetes who had a blood pressure test in this nKPI: PI24.
- The total number of regular patients with type 2 diabetes should be the same as the total number of regular patients with type 2 diabetes in the relevant age and sex at birth groups in these nKPIs: PI05, PI07, PI08, PI15 and PI18.
- The total number of regular patients with type 2 diabetes cannot be more than the total number of regular patients in these nKPIs: PI03 (adults), PI09 and PI16.

## PI24 – Blood pressure less than or equal to 140/90 mmHg (type 2 diabetes patients)

### Description

Proportion of regular patients who are Indigenous, have type 2 diabetes and whose blood pressure measurement result, recorded within the previous 6 months, was less than or equal to 140/90 mmHg.

### Business Rules

- Type 2 Diabetes as recorded in PI05.
- Blood pressure recorded per PI23.

### Numerator

Number of male and female indigenous patient records in each age group below, with a recorded blood pressure of 140/90mmHg or less in the 6 months up to the census date.

### Denominator

Number of indigenous patient records identified in the Denominator include:

- Patients with Diabetes Type 2 (See PI05) AND
- Has BP recorded within the past 6 months? (See PI20).

### Reporting by Age Group

	Age (years)							
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

### Records Excluded

Any patients whose systolic or diastolic reading is above the threshold (140 and 90, respectively) in the Numerator. (They will be counted in the total number who have had a blood pressure test.)

- Patients with type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, impaired fasting glucose or impaired glucose tolerance.

### Notes

- Only the most recently recorded blood pressure test result. This means that if a patient has had their blood pressure measured several times in the past 6 months, then include only the results from the most recent measurement.

## Check

For each age and sex at birth group of regular patients with type 2 diabetes:

- The number whose blood pressure is 140/90mmHg or less cannot be more than the number who've had their blood pressure tested.
- The total number with type 2 diabetes who had a blood pressure test should be the same as the number of regular patients with type 2 diabetes who had a blood pressure test in this nKPI: PI23

## PI25 – STI Result Recorded

### Description

Proportion of Indigenous regular clients aged 15 to 34 years who had a STI(s) result recorded (chlamydia and/or gonorrhoea) within the previous 12 months.

### Business Rules

- Patients with either a Chlamydia or Gonorrhoea test result recorded is defined as patients whose records contain a pathology result with a relevant LOINC codes (Appendix B) or Wild card search for a valid test name (Appendix C).

### Numerator

Number of male and female indigenous patient records in each age group below, who have had a chlamydia and/or gonorrhoea test result recorded within the previous 12 months.

### Denominator

Number of male and female indigenous patient records in each age group below.

### Reporting by Age Group

	Age (years)			
	15-19	20-24	25-29	30-34
Male	✓	✓	✓	✓
Female	✓	✓	✓	✓

### Check

For each age and sex at birth group of regular patients with an STI result recorded:

- The number of tests recorded in each cell cannot be more than the number of patients in each age group.



## PI26 – Ear Health Check

### Description

Proportion of Indigenous regular clients who, in the previous 12 months, have had a completed check, that was recorded and classified into

- Appearance of both ear canals and eardrums
- Movement of both eardrums
- Appearance of both ear canals and ear drums AND movement of both\* ear drums

### Business Rules

- Clients may be counted in one or all parts of the indicator.
- A recorded ear health check in the last 12 months is determined from the following workflow, in the following order:
  - i. Ear check recorded in the ear health section or ‘module’ in the CIS – if recorded here do not count ‘ii’ and ‘iii’
  - ii. Ear health procedures as defined in the ear health coding framework (Appendix A) – if recorded here do not count ‘iii’
  - iii. Ear health conditions as defined in the ear health coding framework (Appendix A) – if not recorded here then no ear health check is recorded.
- Count only conditions and procedures recorded in the last 12 months.
- For workflow ‘ii’ and ‘iii’, count procedures and/or conditions against either Appearance, Movement or BOTH Appearance and Movement as defined in the ear health coding framework.
- Currently, MDInsights supports workflow ii and iii.

### Calculation 1: Patients with Appearance of both ear canals and eardrums

#### Numerator:

Number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have had a completed check of the **appearance of both ear canals and ear drums** within the previous 12 months.

#### Denominator

Total number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]**.

### Calculation 2: Patients with Movement of both eardrums

#### Numerator:

Number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]** who have had a completed check of the **movement of both eardrums** within the previous 12 months.

#### Denominator

Total number of **[Disaggregation: Sex at Birth]** Indigenous regular clients aged **[Disaggregation: Age]**.

### Calculation 3: Patients with Appearance of both ear canals and ear drums AND movement of both ear drums

#### Numerator:

Number of *[Disaggregation: Sex at Birth]* Indigenous regular clients aged *[Disaggregation: Age]* who have had a completed check of the **appearance of both ear canals and eardrums and the movement of both eardrums** within the previous 12 months.

#### Denominator

Total number of *[Disaggregation: Sex at Birth]* Indigenous regular clients aged *[Disaggregation: Age]*.

#### Reporting by Age Group

	Age					
	0-11 Months	12-23 Months	24-35 Months	36-59 Months	5-9 Years	10-14 Years
Male	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓

#### Check

- For each age and sex at birth group of regular patients with an ear health check recorded should not be more than the total number of regular clients in that group.

## APPENDIX A- DOCLE CODES

### Diabetes Type 2

diabm@niddm	Diabetes Mellitus - NIDDM
diabm@niddm	Diabetes Mellitus - Type II
diabm@niddm	NIDDM
diabm@niddm	NIDDM (Non-Insulin dependent diabetes mellitus)
diabm@niddm	Non-insulin dependent diabetes mellitus
diabm@niddm&rx%insu	Diabetes Type II requiring insulin
diabm@niddm&rx%insu	NIDDM - requiring insulin

### Unspecified Diabetes

diabm	Diabetes Mellitus
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### COPD

bronchit@chro	Bronchitis - Chronic
coad	CAL (Chronic Airways Limitation)
coad	Chronic Airways Limitation
coad	Chronic Bronchitis
coad	Chronic Obstructive Airways Disease
coad	Chronic Obstructive Pulmonary Disease
coad	COAD
coad	COAD (Chronic Obstructive Airways Disease)
coad	COPD (Chronic Obstructive Pulmonary Disease)
emph	Emphysema

### CVD

#### Coronary Heart Disease (CHD)

atherosc	Arteriosclerosis
atherosc	Atherosclerosis
embo.arte	Arterial embolism
embo.arte.aort	Aortic embolism
ihd	Atherosclerotic heart disease
ihd	Coronary artery disease
ihd	Coronary heart disease
ihd	Coronary insufficiency
ihd	IHD
ihd	IHD (Ischaemic Heart Disease)

### Coronary Heart Disease (CHD)

ihd	Ischaemic heart disease
ihd	Myocardial insufficiency
occl@coroa	Blockage Coronary Artery
occl@coroa	Coronary Occlusion
occl@coroa	Occlusion-Coronary Artery
ppoc@reha@ihd	Coronary artery disease-Rehabilitation

### Acute Coronary Syndrome (ACS)

angip	Angina
angip	Angina pectoris
angip@unst	Acute coronary insufficiency
angip@unst	Angina pectoris - unstable
angip@unst	Preinfarction syndrome
angip@unst	Unstable Angina
angip@unst:high@risk	Unstable Angina - High risk
angip@unst:low@risk	Unstable Angina - Low risk
angip@unst:moderate@risk	Unstable Angina - Moderate risk
occl@coroa:acut	ACS (acute coronary syndrome)
occl@coroa:acut	Acute coronary syndrome
occl@coroa:acut	Acute Coronary Syndrome (ACS)

### Carotid Artery Stenosis

sten.caroa	Carotid Stenosis
------------	------------------

### Surgery – Cardiovascular – Carotid

surg.caroa@bypa@graf	Carotid artery bypass surgery
surg.caroa@enda	Carotid Endarterectomy
surg.caroa@enda	Endarterectomy - Carotid
surg.caroa@stent	Arterial stent - Carotid artery
surg.caroa@stent	Carotid artery stent
surg.caroa@stent	Stent - Carotid artery

### Surgery – Cardiovascular – Coronary

surg.coroa	Coronary artery surgery
surg.coroa	Surgery - Coronary artery
surg.coroa@balloon	Angioplasty - coronary
surg.coroa@balloon	Balloon coronary angioplasty
surg.coroa@balloon	Coronary artery balloon angioplasty
surg.coroa@balloon	PCTA
surg.coroa@balloon	Percutaneous transluminal angioplasty
surg.coroa@balloon	Surgery - Coronary artery balloon angioplasty
surg.coroa@enda	Coronary artery endarterectomy

surg.coroa@enda	Surgery - Coronary artery endarterectomy
surg.coroa@graf	Bypass - coronary
surg.coroa@graf	CABG (Coronary Artery Bypass graft)
surg.coroa@graf	Coronary artery bypass graft
surg.coroa@graf	Surgery - Coronary artery bypass graft
surg.coroa@stent	Coronary Angiography and Stent
surg.coroa@stent	Coronary artery stent
surg.coroa@stent	Stent-Coronary artery
surg.coroa@stent	Surgery - Coronary artery stent
surg.coroa@stent	Angioplasty - coronary (with stent)
surg.coroa@stent@eluting	Arterial stent - Coronary artery, drug-eluting
surg.coroa@stent@eluting	Coronary artery, drug-eluting stent
surg.coroa@stent@eluting	Stent-Coronary Artery, drug-eluting
surg.coroa@stent@eluting@non	Arterial stent - Coronary artery, not drug-eluting
surg.coroa@stent@eluting@non	Coronary artery ,not drug-eluting stent
surg.coroa@stent@eluting@non	Stent-Coronary artery, not drug-eluting

### Cerebrovascular Disease

cva	Cerebral Infarction
cva	Cerebrovascular Accident
cva	CVA (Cerebrovascular Accident)
cva	Stroke
cva@isch	Ischaemic Stroke
cva@isch	Stroke - Ischaemic
cva@lacu	Lacunar Stroke
cva@lacu	Stroke - Lacunar
cva@migr	Migranous Stroke
cva@migr	Stroke - Migranous
cva@thrombos	Stroke - Thrombotic
cva@thrombos	Thrombotic - Stroke
cvi	Cerebrovascular insufficiency
embo.cere	Cerebral Embolism
embo.cere	Embolism - Cerebral
ich	Cerebral Haemorrhage
ich	Haemorrhage - intracerebral
ich	Haemorrhagic CVA
ich	Haemorrhagic Stroke
ich	Intracerebral bleed
ich	Intracerebral haemorrhage
ich	Stroke-Haemorrhagic
sah	Haemorrhage - subarachnoid
sah	Subarachnoid bleed
sah	Subarachnoid haemorrhage

### Cerebrovascular Disease - TIA

tia	Arterial Embolism - minor
tia	Cerebral TIA
tia	Cerebral Transient Ischaemia
tia	Cerebral Transient Ischaemic Attacks
tia	TIA (Transient Ischaemic Attack)
tia	Transient Ischaemic Attack

### Myocardial Infarction (MI)

myoci	Acute myocardial infarction
myoci	AMI (Acute Myocardial Infarction)
myoci	Myocardial Damage
myoci	Myocardial Damage
myoci	Myocardial infarction
myoci	Myocardial Infarction(MI)
myoci:sans,st@elev	Myocardial infarction-without ST elevation
myoci:sans,st@elev	Non-ST-elevation myocardial infarction (NSTEMI)
myoci:sans,st@elev	NSTEMI (non-ST-elevation myocardial infarction)
myoci:st@elev	Myocardial Infarction-with ST elevation
myoci:st@elev	STEMI (ST-Elevation Myocardial Infarction)
myoci@ante	Anterior myocardial infarct
myoci@ante	Myocardial infarction-anterior
myoci@antel	Anterolateral myocardial infarct
myoci@antel	Myocardial infarction-anterolateral
myoci@antel	Myocardial infarction-anterolateral
myoci@inf	Inferior myocardial infarction
myoci@inf	Inferior myocardial infarction
myoci@inf	Myocardial infarction-inferior
myoci@inf	Myocardial infarction-inferior
myoci@posterio	Myocardial infarction-posterior
myoci@posterio	Myocardial infarction-posterior
myoci@posterio	Posterior myocardial infarct
myoci@posterio	Posterior myocardial infarct
myoci@sile	Myocardial infarction-silent
myoci@sile	Myocardial infarction-silent
myoci@sile	Silent myocardial infarction
myoci@sile	Silent myocardial infarction
myoci@subendoc	Myocardial infarction-subendocardial
myoci@subendoc	Myocardial infarction-subendocardial
myoci@subendoc	Subendocardial myocardial infarct
myoci@supe	Myocardial infarction-superior
myoci@supe	Myocardial infarction-superior
myoci@supe	Superior myocardial infarct

### Peripheral Vascular Disease (PVD)

pvd	Arteriosclerosis obliterans
pvd	Peripheral Vascular Disease
pvd	PVD

### Renal Artery Stenosis (RENALSTENOSIS)

sten.renaa	Renal Artery Stenosis
sten.renaa	Stenosis - Renal artery

### Surgery – Cardiovascular – Renal Artery

surg.renaa	Angioplasty - renal
surg.renaa@stent	Arterial stent - Renal artery
surg.renaa@stent	Renal artery stent
surg.renaa@stent	Stent - Renal artery

### Chronic Kidney Disease

crf:eval,ctx:stag3	Chronic Kidney Disease - Stage 3
crf:eval,ctx:stag3	CKD (Chronic Kidney Disease) Stage 3
crf:eval,ctx:stag3	Kidney Disease - Chronic - Stage 3
crf:eval,ctx:stag3	Renal Disease - Chronic - Stage 3
crf:eval,ctx:stag4	Chronic Kidney Disease - Stage 4
crf:eval,ctx:stag4	CKD (Chronic Kidney Disease) Stage 4
crf:eval,ctx:stag4	Kidney Disease - Chronic - Stage 4
crf:eval,ctx:stag4	Renal Disease - Chronic - Stage 4
crf:eval,ctx:stag5	Chronic Kidney Disease - Stage 5
crf:eval,ctx:stag5	CKD (Chronic Kidney Disease) Stage 5
crf:eval,ctx:stag5	Kidney Disease - Chronic - Stage 5
crf:eval,ctx:stag5	Renal Disease - Chronic - Stage 5
ppoc@capd	CAPD (Continuous Ambulatory Peritoneal Dialysis)
ppoc@capd	Continuous Ambulatory Peritoneal Dialysis
ppoc@capd	Dialysis peritoneal
ppoc@capd	Peritoneal Dialysis
ppoc@dial@kidn	Dialysis haemodialysis
ppoc@dial@kidn	Haemodialysis
ppoc@dial@kidn	Hemodialysis
ppoc@dial@kidn	Renal dialysis
surg.kidn@transpla	Kidney transplant
surg.kidn@transpla	Renal transplant
surg.kidn@transpla	Surgery - Kidney transplant
surg.kidn@transpla	Transplant - kidney

### Hysterectomy

cxyz	Hysterectomy
cxyz	Surgery - Uterus - Hysterectomy
cxyz	Uterus - removal of
cxyz	Hysterectomy - Abdominal
cxyz	Hysterectomy - Vaginal
cxyz	Vaginal Hysterectomy
cxyz	Hysterectomy - Vaginal with vaginal repair
cxyz	Hysterectomy - Laparoscopic
cxyz	Laparoscopic hysterectomy
cxyz	Hysterectomy - ovary(ies) spared
cxyz	Hysterectomy - Subtotal
cxyz	Hysterectomy - Total
cxyz	Subtotal hysterectomy
cxyz	Hysterectomy & BSO - Abdominal

### Ear Health – Conditions

otite	Otitis Externa	Both
otite@recu	Otitis Externa - Recurrent	Both
otite	Outer ear infection	Both
otitm&ctx@ill,recu	Chronic Suppurative Otitis Media	Both
otitm	Middle ear infection	Both
otitm	Otitis Media	Both
otitm&ctx@ill,recu	Otitis Media - Recurrent	Both
tube.ear	Ear tuberculosis	Both
myringit<viru	Myringitis	App
perf.eard	Tympanic perforation	App
perf.eard	Ear drum perforation	App
perf.eard	Perforation - eardrum	App
perf.eard	Perforation of eardrum	App
cholstea	Cholesteatoma	App
effu.ear	Ear effusion	App
ear@disc	Ear - Discharge	App
ear@disc	Otorrhoea	App
ear@blee	Ear - Bleeding	App
ear@blee	Bleeding from ear	App

### Ear Health – Procedures

surg.ear@tympm@perf	Myringoplasty	Both
surg.ear@tympm@inci	Myringotomy	Both
surg.ear@tympm	Tympanic membrane surgery	Both
surg.ear@tympm@perf	Tympanoplasty	Both
surg.ear@grom	Tympanostomy tube insertion	Both
surg.ear@grom@remo	Tympanostomy tube removal	Both
surg.ear@grom	Insertion of grommets	Both



surg.ear@grom	Ear - grommet insertion	Both
surg.ear@grom	Grommet insertion	Both
surg.ear@grom	Surgery - Ear - Grommet insertion	Both
surg.ear@grom	Ear Grommets	Both
surg.ear@grom	Tubes - middle ear - insertion	Both
surg.ear@grom@remo	Removal of grommets	Both
surg.ear@grom@remo	Ear - grommet removal	Both
surg.ear@grom@remo	Grommet removal	Both
surg.ear@grom@remo	Surgery - Ear - Grommet removal	Both
surg.ear@grom@remo	Tubes - middle ear - removal	Both
surg.ear@tympm@inci@suct	Suction Myringotomy	Both
surg.ear@tympm	Surgery - Ear - tympanic membrane	Both
surg.ear@tympm@perf	Surgery - Ear - Tympanic membrane - Perforation repair	Both

## APPENDIX B- LOINC CODES

### Chlamydia and gonorrhoea - Included

100356-5	100710-3	101172-5	36902-5	36903-3	43405-0	43406-8
44806-8	44807-6	45067-6	45068-4	45069-2	45070-0	45072-6
45074-2	45075-9	45076-7	47362-9	64017-7	70161-5	70162-3
70163-1	70164-9	72828-7	77577-5	80360-1	80361-9	80362-7
80365-0	85687-2	85689-8	90357-5	90358-3	92683-2	92684-0
96612-7						

### Chlamydia and gonorrhoea - Included local unpublished codes

39994369	M112	M1005	M1015	M2845	1230005015	D110
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### Chlamydia and gonorrhoea - Excluded

45071-8	45073-4	62864-4	62865-1	69865-4	86661-6
---------	---------	---------	---------	---------	---------

### Chlamydia only - Included

14463-4	14464-2	14465-9	14467-5	14470-9	14471-7	14472-5
14474-1	14509-4	14510-2	14511-0	14513-6	16593-6	16600-9
16601-7	21189-6	21190-4	21191-2	21192-0	21613-5	23838-6
31765-1	31767-7	31771-9	31772-7	31775-0	31776-8	31777-6
32001-0	32004-4	32671-0	32774-2	34708-8	34709-6	34710-4
35412-6	35711-1	35713-7	35714-5	35715-2	35716-0	35717-8
35718-6	35721-0	35724-4	35725-1	35726-9	35727-7	35728-5
35729-3	35730-1	35736-8	42931-6	43304-5	43404-3	45078-3
45080-9	45084-1	45085-8	45086-6	45089-0	45090-8	45091-6
45092-4	45093-2	45095-7	45096-5	45097-3	45098-1	45100-5
45101-3	45103-9	45104-7	45105-4	45106-2	45107-0	45108-8
45112-0	45113-8	45114-6	45115-3	45131-0	45132-8	45133-6
47211-8	47212-6	49096-1	4993-2	50311-0	50387-0	50411-8
51578-3	53925-4	53926-2	557-9	558-7	559-5	560-3
561-1	57287-5	57288-3	6345-3	6346-1	6347-9	6349-5
6354-5	6355-2	6356-0	6357-8	80363-5	80364-3	80367-6
82306-2	88221-7	89648-0	91860-7	91873-0		

### Chlamydia only - Included local unpublished codes

30677925	30677929	30677933	M1010	M1020	M2850	ChlamMethTest
CHLAMYDIA PCR URINE	CHTPCR	CLR01	CLR02	D0111	D0116	D0124
D0351	D0353	D0355	D0843	D0847	D0853	D0854
D0859	D353	D841	D843	D851	D852	D853
cP						

## Gonorrhoea only - Included local unpublished codes

30678089	30678097	30678101	30678101	M1011	M1022	M2852
GonoMethTest	GONO URINE PCR	GONPCR	GOLCX	D0114	D0119	D0129
D0401	D0403	D0405	D0845	D0849	D0857	D0858
D0861	D403	D845	D846	D855	D855	D856
D857	gN					

## Chlamydia only - Excluded

100120-5	100121-3	13217-5	13218-3	13219-1	13220-9	13221-7
13222-5	13223-3	13224-1	14199-4	14200-0	14201-8	14202-6
14203-4	14204-2	14461-8	14462-6	14466-7	14468-3	14469-1
14473-3	14507-8	14508-6	14512-8	16594-4	16595-1	16596-9
16597-7	16598-5	16599-3	16602-5	18490-3	18491-1	18492-9
20993-2	21187-0	21188-8	22187-9	22188-7	22189-5	22190-3
22191-1	22192-9	22193-7	22194-5	22195-2	22196-0	22197-8
22198-6	22199-4	22200-0	22201-8	22202-6	26626-2	26663-5
26664-3	26665-0	26666-8	26667-6	26668-4	26715-3	27167-6
27185-8	27368-0	27370-6	27371-4	28556-9	28557-7	28558-5
30204-2	31293-4	31294-2	31295-9	31296-7	31297-5	31298-3
31768-5	31769-3	31770-1	31773-5	31774-3	32005-1	32006-9
32007-7	33574-5	33575-2	33604-0	33605-7	38469-3	40710-6
40854-2	40855-9	40856-7	41157-9	43058-7	43059-5	43060-3
43061-1	43062-9	43173-4	43174-2	43175-9	43355-7	43356-5
43357-3	43848-1	44005-7	44079-2	44983-5	44984-3	44985-0
44986-8	44987-6	44988-4	44989-2	44990-0	44991-8	44992-6
44993-4	44994-2	44995-9	44996-7	44997-5	44998-3	44999-1
45000-7	45001-5	45002-3	45003-1	45004-9	45005-6	45006-4
45007-2	45008-0	45009-8	45077-5	45079-1	45081-7	45082-5
45083-3	45087-4	45088-2	45094-0	45130-2	45135-1	46176-4
46177-2	46178-0	47234-0	5087-2	5088-0	5089-8	5090-6
51734-2	6350-3	6351-1	6352-9	6353-7	6358-6	6918-7
6919-5	6920-3	7824-6	87949-4	87950-2	90361-7	90362-5
90363-3	90365-8	91861-5	99105-9	99778-3	10848-0	10849-8
16589-4	16590-2	16591-0	16592-8	20755-5	20756-3	20757-1
21185-4	21186-2	22182-0	22183-8	22184-6	22185-3	22186-1

23967-3	23990-5	24005-1	24238-8	24239-6	25369-0	27273-2
29664-0	29677-2	31292-6	31763-6	31764-4	31766-9	32002-8
32003-6	33410-2	34264-2	35710-3	35712-9	35719-4	35720-2
35722-8	35723-6	38467-7	38468-5	41482-1	43063-7	43846-5
43847-3	45010-6	45011-4	45012-2	45099-9	45102-1	45109-6
45110-4	45111-2	46179-8	5082-3	5083-1	5084-9	5085-6
5086-4	556-1	56909-5	56910-3	56911-1	57679-3	57680-1
6342-0	6343-8	6344-6	6348-7	75757-5	77166-7	7823-8
86659-0	100122-1	100123-9	100124-7	10651-8	10652-6	11254-0
16581-1	16582-9	16583-7	16584-5	16585-2	21184-7	22169-7
22170-5	22171-3	22172-1	22173-9	22174-7	24004-4	29722-6
30205-9	31299-1	31300-7	31301-5	31302-3	31303-1	31304-9
31778-4	34645-2	34707-0	43844-0	43845-7	44080-0	44979-3
44980-1	44981-9	44982-7	47052-6	50612-1	5078-1	51806-8
51807-6	58758-4	6912-0	6913-8	6914-6	7821-2	82178-5
88546-7	88547-5	88718-2	89640-7	89641-5	92133-8	92577-6
92859-8	92860-6	92986-9	100125-4	14198-6	16586-0	16587-8
16588-6	20752-2	20753-0	20754-8	22175-4	22176-2	22177-0
22178-8	22179-6	22180-4	22181-2	22992-2	22993-0	22994-8
22995-5	22996-3	22997-1	22998-9	22999-7	23000-3	23001-1
27404-3	31305-6	31306-4	31307-2	31779-2	31780-0	43057-9
43868-9	44081-8	44977-7	44978-5	5079-9	5080-7	5081-5
51808-4	51809-2	59065-3	6338-8	6339-6	6340-4	6341-2
6915-3	6916-1	6917-9	7822-0	24402-0	33943-2	35639-4
43216-1	39224-1	54044-3	57817-9	74241-1	82957-2	90763-4
96075-7						

## Gonorrhoea only - Included

14127-5	21414-8	21415-5	21416-3	24111-7	29311-8	31905-3
31906-1	32198-4	32199-2	32705-6	43305-2	43403-5	47387-6
5028-6	50326-8	50388-8	50412-6	53879-3	53927-0	57180-2
57289-1	57458-2	60255-7	60256-5	6487-3	6488-1	6489-9
6490-7	688-2	690-8	691-6	692-4	693-2	694-0
696-5	697-3	698-1	80366-8	80368-4	88224-1	88225-8
96599-6						

## Gonorrhoea only - Excluded

22430-3	23908-7	27021-5	30099-6	31525-9	32704-9	33904-4
35735-0	39557-4	42987-8	43387-0	5261-3	53762-1	53878-5
6491-5	689-0	695-7	86660-8	91781-5	9568-7	97626-6
99779-1						

## APPENDIX C- FREE TEXT SEARCH TERMS FOR PI25

### Chlamydia - Included

Chlamydial infection	Chlamydial STI	Chlamydia trachomati
Chlamydia trachomatis	Chlamydial trachomatis	c trachom
Chlamydial	Chlamydia	Chlam
ct main	CTNG	CT/NG
CHL/GON	U-CHL/GON	NG and CT

### Chlamydia - Excluded

Pneumoniae	Pneum	Psittaci
Ornithosis	Orni	Ab
IgA	IgG	IgM

### Gonorrhoea - Included

Gono	Gonno	Neisseria gonorrhoea
Gonococcus	Gonorrhea	N gonorrhoea
Gonorrhoea	Gonorrhoeae	Gnrrh
ng main	CTNG	CT/NG
CHL/GON	U-CHL/GON	NG and CT

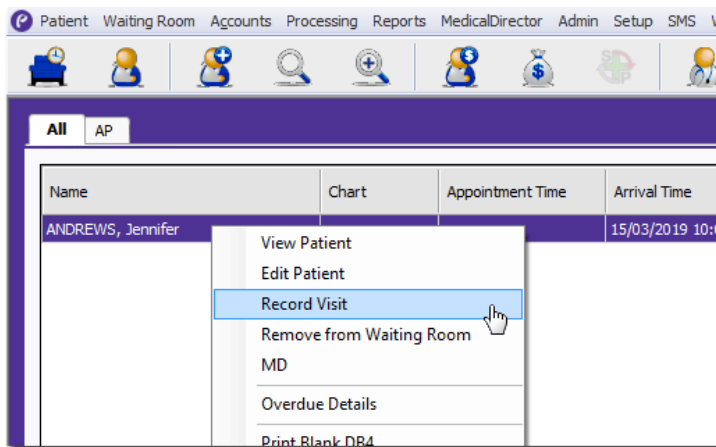
### Gonorrhoea - Excluded

Ab	IgA	IgG
IgM		

## APPENDIX D- CREATING AND PROCESSING A CLAIM

### Example – Creating a 715 Claim

1. Open MedicalDirector Pracsoft.
2. Add Patient to the Pracsoft **Waiting Room**.
  - See 'Adding Patients to the Waiting Room' for instructions.
3. Right-click the patient's name, and click **Record Visit**



4. Select the following:
  - Select **Bulk Bill** via the **Invoice To** drop-down list.
  - Select the associated Doctor via the **Seen By** drop-down list.
  - Service Details: Item No: 715.

Record Visit

File View

Patient name: ANDREWS, Jennifer    Seen by: AP    Location: Surgery

Consult time: 10:18:42 AM

Consult date: 15/03/2019

Invoice to: Bulk Bill

Visit Date	Item No	Description	Fee	Gap	Fee Rate	GST Rate	GST Amount	Text
15/03/2019	715	attendance by a medical practitioner...	\$176.90	\$0.00	Rebate 85	0.00	\$0.00	

\$0.00    \$0.00    \$0.00

In hospital     Apply incentive    Add    Delete    Up    Down

Payment options (F12):    Visit options:    Print options:

Pay now    Full Payment     Remove from Waiting Room     Non visit     Print voucher     Print preview  
 Pay later    Gap Payment     Non patient account     Aftercare     Print PC1    Copies: 1

Hold    Voucher    Account    Cancel

5. Click **Voucher**

## Example - Processing a Patient Claim

1. Select **Processing > Batch Bulk Claims > Medicare**.

Patient    Waiting Room    Accounts    Processing    Reports    MedicalDirector    Admin    Setup    SMS    Window    Help

Banking    Batch Bulk Claims    Receipt Bulk Payments    Medicare    Veterans Affairs

Name	Chart	Appointment Time	Arrival Time	Waiting Time	Concession
ANDREWS, Jennifer			15/03/2019 10:00 am	27 mins	None

2. Enter a Claim Number (5 digits).

Batch Bulk Claims - Medicare

Claim details    Claim 1 of 1

Practitioner: AP    Number of vouchers: 1

Location: Surgery    Total amount claimed: \$176.90

Claim number: A2345

Show    Process

Summary

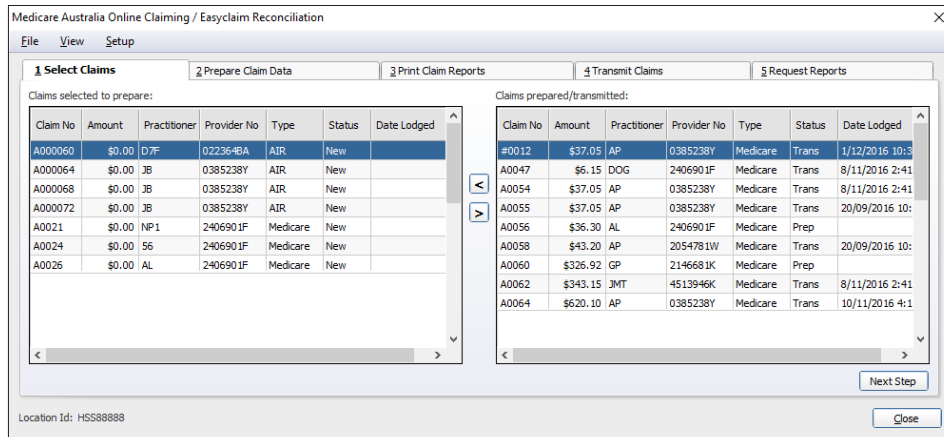
Undaimed visits: 1

Undaimed amount: \$176.90

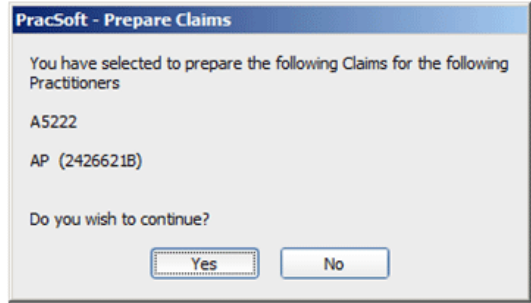
Minimum number of claims required: 1

Send    Close

3. Click **Process**.
4. Click **Yes**.
5. Click **Send**.
6. Click **Yes** to proceed. The **Select Claims Tab** is presented.



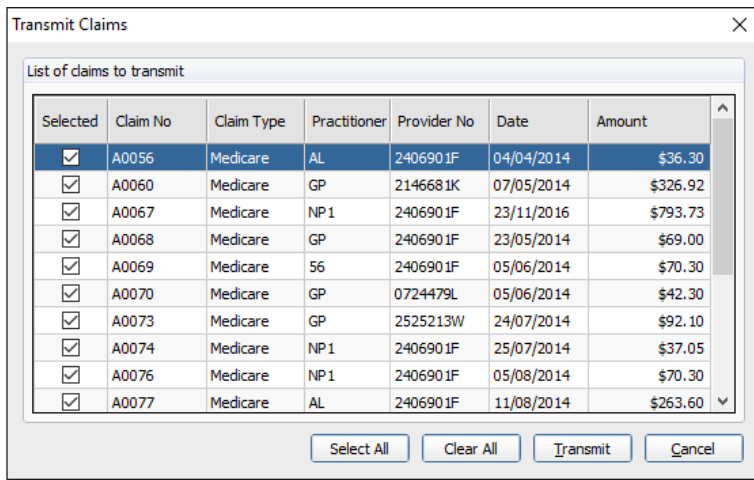
7. Click **Next Step**. The **Prepare Claim** Tab is presented. Click **Prepare**.
8. When prompted, click **Yes** for claim item.



9. Click **Next Step**. The **Transmit Claims** tab is presented.

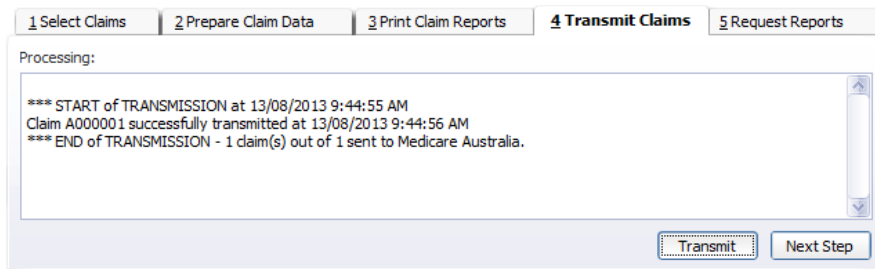


10. Click Transmit. The **Transmit Claims** window appears.



11. Locate and tick the item(s) for transmitting.

12. Click **Transmit**.



13. Click **OK**.

## APPENDIX E- RETIRED AND SUSPENDED INDICATORS

### PI04 – Fully Immunised Children (SUSPENDED)

#### Description

Proportion of Indigenous children who are regular patients, aged:

- 12 months to less than 24 months.
- 24 months to less than 36 months.
- 60 months to less than 72 months.

and who are 'fully immunised'.

#### Business Rules:

For a 12-month-old child to be considered 'fully Immunised' their record must show the following:

	Minimum Count	Antigens
		Each of the antigens have been immunised for times equal or larger than the minimum count. Not to sum up all in the same group
DTPa count	3	DIPHTHERIA, TETANUS, PERTUSSIS
Polio count	3	POLIO
HiB count	2	HIB
Hep B count	2	HEPB
MMR count	0	MEASLES, MUMPS, RUBELLA

For a 24-month-old child to be considered 'fully Immunised' their record must show the following:

	Minimum Count	Antigens
		Each of the antigens have been immunised for times equal or larger than the minimum count. Not to sum up all in the same group.
DTPa count	3	DIPHTHERIA, TETANUS, PERTUSSIS
Polio count	3	POLIO

HiB count	3	HIB
Hep B count	3	HEPB
MMR count	1	MEASLES, MUMPS, RUBELLA

For a 60-month-old child to be considered 'fully Immunised' their record must show the following:

	Minimum Count	Antigens
		Each of the antigens have been immunised for times equal or larger than the minimum count. Not to sum up all in the same group.
DTPa count	4	DIPHTHERIA, TETANUS, PERTUSSIS
Polio count	4	POLIO
MMR count	2	MEASLES, MUMPS, RUBELLA
HiB count	0	HIB
Hep B count	0	HEPB

### **Calculation 1: 12 Months to Less Than 24 Months**

#### **Numerator**

How many regular Indigenous patients were fully immunised and aged from 12 months to less than 24 months.

#### **Denominator**

How many of your regular Indigenous patients were aged 12 months to less than 24 months.

### **Calculation 2: 24 Months to Less Than 36 Months**

#### **Numerator**

How many regular Indigenous patients were fully immunised and aged from 24 months to less than 36 months.

#### **Denominator**

How many of your regular Indigenous patients were aged 24 months to less than 36 months.

### **Calculation 3: 60 Months to Less Than 72 Months**

#### **Numerator**

How many patients were fully immunised and aged 60 months to less than 72 months.

## Denominator

How many of your regular Indigenous patients were aged 60 months to less than 72 months.

## Notes

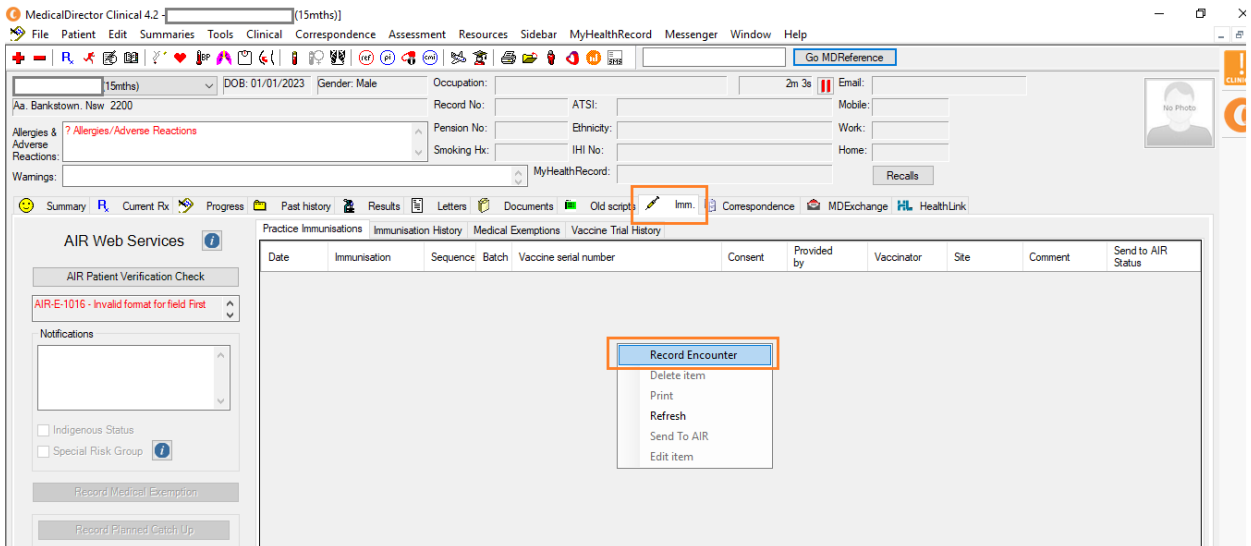
A child is considered 'fully immunised' if they have received the relevant vaccinations as per the National Immunisation Program Schedule by the specified age milestones. Currently these vaccinations include:

- DTPa (diphtheria, tetanus, pertussis).
- Polio.
- HiB (haemophilus influenzae type B).
- Hep B (hepatitis B).
- MMR (measles, mumps, rubella).

## Example – To View or Edit Child Immunisation Records

For correct data entry you will need to follow the below workflow.

1. Open the record of a child patient.
2. Select the 'Imm.' Tab.
3. Right click within the white space to add new Immunisations



The screenshot shows the MedicalDirector Clinical 4.2 interface for a patient named 'Aa. Bankstown, New 2200' with a DOB of 01/01/2023 and Gender: Male. The 'Imm.' tab is selected in the navigation bar. A table titled 'Practice Immunisations' is visible, with columns for Date, Immunisation, Sequence, Batch, Vaccine serial number, Consent, Provided by, Vaccinator, Site, Comment, and Send to AIR Status. A context menu is open over the table, showing options: Record Encounter, Delete item, Print, Refresh, Send To AIR, and Edit item.

4. Add immunisation details and click **Save**

Vaccination Window
✕

Vaccine given elsewhere   
  Vaccine administered overseas   
  Send to AIR

Vaccinator:

Submit on behalf of:

Consent provided by:   Vaccination declined

Date:

Type:

Site:

Sequence:

Batch No:   Store batch No

Vaccine serial no:

Comment:

**Check**

For each age group, you cannot have more immunised children than the total number of Indigenous children who were your regular clients.

**Note:** This indicator is currently suspended - it will not be visible to health services in the health data portal from June 2021 onwards

## PI08 – Team Care Arrangement (MBS Item 723) (RETIRED)

### Description

Proportion of regular patients who are Indigenous, have a chronic disease (type 2 diabetes) and for whom a Team Care Arrangement (MBS Item 723) was claimed within the previous 24 months.

Currently, Type 2 diabetes is the only chronic disease included for this indicator.

### Business Rules

- Patient has a history of Type 2 Diabetes as defined in PI05.
- Patient has had an MBS Item 723 claimed as defined in PI03.

### Numerator

The number of regular Indigenous patients that had a Team Care Arrangement (claimed under MBS Item 723) in the **24 months up to the census date**.

In the Numerator, only those patients whose Team Care Arrangement was claimed by your organisation under MBS Item 723.

### Denominator

The number of regular Indigenous patients have type 2 diabetes.

### Reporting by Age Group

	Age (years)							
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓	✓	✓

### Records Excluded

Patients with type 1 diabetes, secondary diabetes, gestational diabetes mellitus (GDM), previous GDM, impaired fasting glucose or impaired glucose tolerance.

### Notes

- The extract only looks for the MBS claim and whether the patient is in the specified disease category (as per the denominator).

- If your organisation does not claim this MBS item but provides an equivalent level of care, such as an equivalent team care approach that cannot be claimed through the MBS.
- A note in the submission comments if your patients cannot access Team Care Arrangements. This is often the case in remote regions.
- Services taking part in the Health Care Homes Trial: For the duration of the Health Care Homes trial (currently 1 October 2017 to 30 November 2019), patients who are part of the trial will be deemed to have had an MBS Item 723 claimed if there is evidence of a Team Care Arrangement recorded.
- While Type 2 Diabetes Is the only chronic disease needed for this nKPI, MedicalDirector Insights also reports on: Cardiovascular disease, Chronic Obstructive Pulmonary Disease and Chronic Kidney Disease.

### Example – Creating and Processing a 723 Claim

The method for creating and processing a 723 claim can be seen in PI03.

### Example – Recording History of Type 2 Diabetes

A history of Type 2 Diabetes may be added to the patient file by following the method outlined in PI05

### Check

For each age and sex at birth group:

- You cannot have more patients for whom an MBS Item 723 (for managing type 2 diabetes under a Team Care Arrangement) was claimed than there are patients with type 2 diabetes.
- The total number of regular patients with type 2 diabetes should be the same as the total number of regular patients with type 2 diabetes in each relevant age and sex at birth group in these nKPIs: PI05, PI07, PI15, PI18 and PI23.
- You cannot have more people with type 2 diabetes than there are in the same age and sex at birth groups in these nKPIs: PI03 (adults), PI09 and PI16.

**Note: This indicator is retired - it is not visible to health services in the health data portal from December 2020 onwards**

# PI15 – Influenza Immunisation (Type 2 Diabetes or COPD Patients) (RETIRED)

## Description

Proportion of regular patients who are Indigenous, aged 15–49, are recorded as having type 2 diabetes and are immunised against influenza, **AND SIMILARLY** for chronic obstructive pulmonary disease (COPD).

## Business Rules

- Patients with a history of Type II diabetes defined as per PI05.
- Patient's influenza immunisation history defined as per PI14.
- Patients with a history of COPD are defined as having a condition listed under one of the below DOCLE codes:

bronchit@chro	Bronchitis Chronic
coad	CAL (Chronic Airways Limitation)
coad	Chronic Airways Limitation
coad	Chronic Bronchitis
coad	Chronic Obstructive Airways Disease
coad	Chronic Obstructive Pulmonary Disease
coad	COAD
coad	COAD (Chronic Obstructive Airways Disease)
coad	COPD (Chronic Obstructive Pulmonary Disease)
emph	Emphysema

## Calculation 1: Type 2 Diabetes

### Numerator

The number of regular Indigenous patients that have type 2 diabetes and had an influenza vaccination in the 12 months up to the census date.

Note: These need to be recorded in the immunisations tab like PI04.

### Denominator

The number of regular Indigenous patients who have type 2 diabetes.

## Calculation 2: COPD

### Numerator

The number of regular Indigenous patients that have COPD and had an influenza vaccination in the 12 months up to the census date.



Note: These need to be recorded in the immunisations tab like PI04.

### Denominator

The number of regular Indigenous patients that have COPD.

### Reported by Age Group

	Age (years)			
	15-24	25-34	35-44	45-49
Male	✓	✓	✓	✓
Female	✓	✓	✓	✓

### Records Excluded

Patients in the Numerator if they have not been vaccinated, regardless of the reason (you will still include them in the Denominator if they are aged 15–49).

### Example - Record Influenza Immunisation

Influenza Immunisation may be recorded through the method explained in PI14.

### Example - Record history of Type 2 Diabetes or COPD

A history of Type 2 Diabetes may be added following the method explained in PI05.

### Check

For each age and sex at birth group:

- You cannot have more people being immunised than the total number of regular patients with either type 2 diabetes or COPD.
- You cannot have more regular patients with type 2 diabetes or COPD than the total number of regular patients in these nKPIs: PI03 (adults), PI09 and PI16.
- The total number of regular patients with type 2 diabetes should be the same as the total number of regular patients with type 2 diabetes in each relevant age and sex at birth group for these nKPIs: PI05, PI07, PI08, PI18 and PI23 (other than for the 45–49 age group, see below).

For age 45–49:

- The total number of regular patients with type 2 diabetes should be less than or the same as the total number of regular patients with type 2 diabetes in the 45–54 age group for these nKPIs: PI05, PI07, PI08, PI18 and PI23.

**Note: This indicator is retired - it is not visible to health services in the health data portal from December 2021 onwards - no change required to CIS reports.**

## PI17 – AUDIT-C Result Recorded (RETIRED)

### Description

Proportion of regular patients who are Indigenous, aged 15 and over and who have had an AUDIT-C result recorded within the previous 24 months with result (score) as one of the following:

- Greater than or equal to 4 in males and 3 in females: OR
- Less than 4 in males and 3 in females.

### Business Rules

- AUDIT-C result recorded as defined in [PI16](#).
- The score is defined as the result recorded for the AUDIT-C assessment.

### Calculation 1: Males with A Score Equal to Or Greater Than 4

#### Numerator

The number of regular Indigenous male patients had an AUDIT-C score of greater than or equal to 4 in the 24 months up to the census date.

For correct data entry please see PI16.

#### Denominator

The number of regular Indigenous male patients that had an AUDIT-C result recorded in the same 24 months.

An AUDIT-C with a result within the specified levels recorded in the last 24 months via the Audit-C Assessment only.

### Calculation 2: Males with A Score Less Than 4

#### Numerator

The number of regular Indigenous male patients that had an AUDIT-C score of less than 4 in the 24 months up to the census date.

For correct data entry please see PI16.

#### Denominator

The number of males who had an AUDIT-C result recorded in the same 24 months.

An AUDIT-C with a result within the specified levels recorded in last 24 months via the Audit-C Assessment only.

### Calculation 3: Females with A Score Equal to Or Greater Than 3

#### Numerator

The number of regular Indigenous female patients that had an AUDIT-C score of greater than or equal to 3 in the 24 months up to the census date.

For correct data entry please see PI16.

### Denominator

The number of regular Indigenous female patients that had an AUDIT-C result recorded in the same 24 months.  
 An AUDIT-C with a result within the specified levels recorded in the last 24 months via the Audit-C Assessment only.

### Calculation 4: Females with A Score Less Than 3

#### Numerator

The number of regular Indigenous female patients that had an AUDIT-C score of less than 3 in the 24 months up to the census date.

For correct data entry please see P116.

#### Denominator

The number of females who had an AUDIT-C result recorded in the same 24 months.

An AUDIT-C with a result within the specified levels recorded in the last 24 months via the Audit-C Assessment only.

### Reporting by Age Group

	Age (years)					
	15-24	25-34	35-44	45-54	55-64	65+
Male	✓	✓	✓	✓	✓	✓
Female	✓	✓	✓	✓	✓	✓

### Records Excluded

- Results from any other alcohol use screening tool.

## Notes

Where an Indigenous regular patient's AUDIT-C score does not have an assessment date assigned within the Patient Information Record System (PIRS), the AUDIT-C score as recorded in the PIRS should be treated as current (that is, as having been updated within the previous 24 months).

## Example - Recording Alcohol Consumption Status

A Patient's alcohol consumption status should be entered following the method outlined in PI16.

If this patient has had an Audit-C assessment recorded in their file before, click 'New Assessment' to add a new record.

Patient Details
X

Pt. Details | Allergies/Adverse Reactions/Warnings | Family/Social Hx | Notes | Smoking | Alcohol | Personal Details

Date of assessment:

**Audit-C Assessment**

1. How often do you have a drink containing alcohol?

Never       Monthly or less       2-4 times a month  
 2-3 times a week       4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day?

1 or 2       3 or 4       5 or 6  
 7 to 9       10 or more

3. How often do you have six or more drinks on one occasion?

Never       Less than monthly       Monthly  
 Weekly       Daily or almost daily

**Audit-C Total Score: 9**

In men a score of 4 or more and in women a score of 3 or more is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders. The guidelines to reduce health risks from drinking alcohol provide further assessment and treatment options.

Patient concerned about drinking?

Yes       No       Don't know

Currently displaying data from assessment performed on 10/11/2016. Click 'New Assessment' to conduct a new assessment.

Update address for all family members  
 Auto-capitalise names

Date	Time	Score	Concerns	Comments
10/11/2016	10:55:22	9	Don't know	No
10/11/2016	09:53:28	2	Don't know	No

Comments

## Check

For each age and sex at birth group:

- You cannot have more regular patients with AUDIT-C results in each range than the total number of regular patients who had an AUDIT-C result recorded.
- The total number of regular patients who had an AUDIT-C result recorded should be less than or equal to the number of regular patients who had alcohol consumption status recorded in PI16.

**Note: This indicator is retired - it is not visible to health services in the health data portal from December 2022 onwards - no change required to CIS reports.**