pip qi

Practice Incentive Program
Quality Improvement and CAT Plus

Using CAT4 and Topbar for PIP QI activities

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It is designed for new and experienced users of CAT Plus and details the new improvement measures as well as additional examples for quality improvement (QI) activities in a general practice setting. PEN CS believes that our tools are ideally positioned to assist practices with their ongoing quality improvement.

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Contents

CAT Plus '10 Improvement Measures' Training Guide

Introduction

This training guide for new and experienced users, demonstrates how to use CAT Plus in the context of PIP QI. This step-by-step guide details the Improvement Measures and additional examples for quality improvement (QI) activities in general practice.

PIP QI is a Department of Health initiative that aims to support general practices, that participate in quality improvement activities, to improve patient outcomes and deliver best practice care. Pen CS has added new functionality for General Practice into CAT Plus, customised for PIP QI. This includes:

- '10 Improvement Measures' Report for General Practice, in CAT4
- Topbar 'PIP QI App' for General Practice, in Topbar
- Scheduled sharing of de-identified clinical data with your Primary Health Network (PHN)
- Email alerts to notify the General Practice of the status of your data submission (success/failure) to your PHN
- Patient 'Opt Out' (existing feature)

The new Topbar PIP QI App will drive better data quality for the '10 Improvement Measures'. This App notifies the Doctor when a presenting patient's record is missing information pertinent to the '10 Improvement Measures'. The Practice may opportunistically update clinical information, for the presenting patient, during the patient's attendance at the Practice.

Clinical audit tool (CAT4) supports data-driven quality improvement and is used to analyse the practice population and better manage patient cohorts. CAT4 will feature the '10 Improvement Measures' as an easy to use Report with the ability to drill down to patient level.

About Pen CS

Founded in 1993, Pen CS is Australia's leading Quality Improvement and Population Health Management software eco system. An Australian-owned company, Pen CS' vision is to build a healthy Australia by supporting data-driven, outcome-oriented, patient-centred care.

This platform is currently in use in 5,700 General Practices and Health Services across Australia with over 45,000 active medical practitioners Australia-wide.

eHealth innovation is embedded in our platform and partnerships as a key way of caring for patients and helping those who care for them. This is evidenced by Topbar clinical decision support and the variety of applications available for General Practices from team based care planning, to billing efficiency, accreditation, education and condition-specific QI apps e.g. Cancer Screening.

Pen CS has a long history of collaborating with research organisations and government to identify and address rising risks to help reduce costs, improve patient outcomes and increase provider satisfaction at local, state and national levels.

CATPlus

CAT4

topbar

PAT CAT

The Population

The Practice

The Patient

Clinical Audit Tool (CAT4)
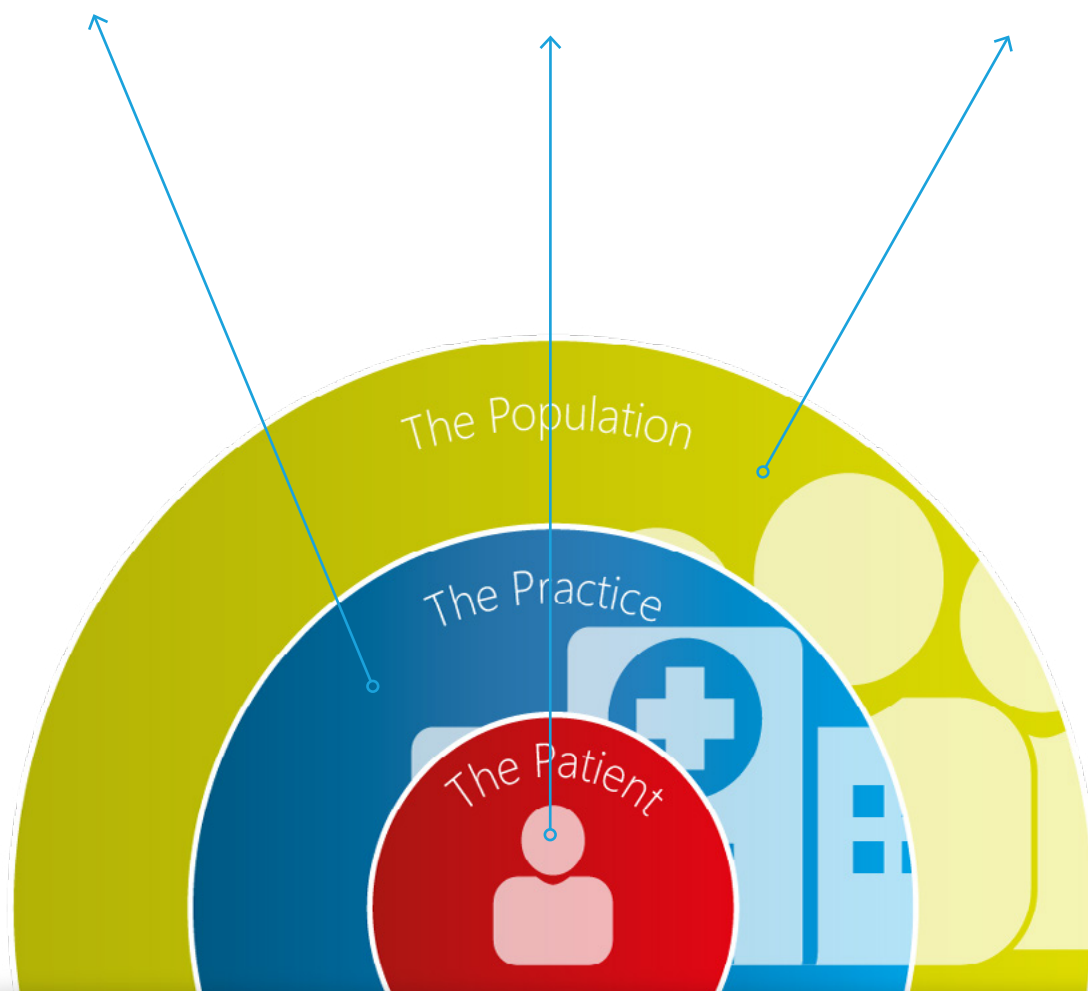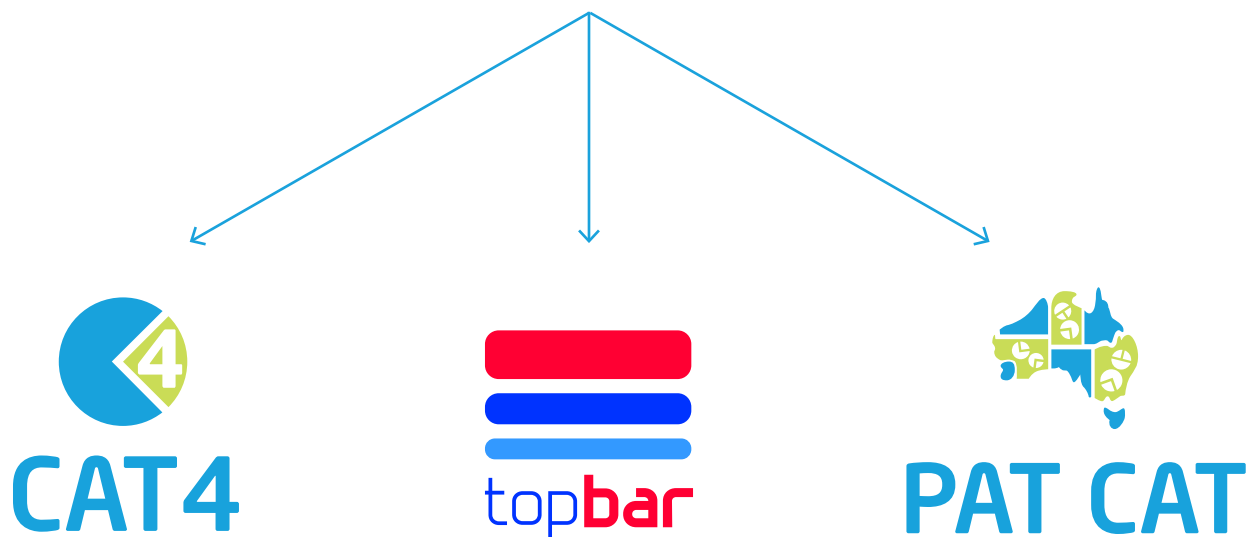
CAT4 is Australia's market leader in General Practice for population health and data-driven quality improvement. Initially released to market in 2008, CAT4 provides essential population health graphs, charts and reports to assist practice staff implement and drive change to improve patient health outcomes. CAT4 supports the formal quality improvement activities (PDSA) by allowing practices to PLAN using their data and to STUDY by providing outcomes and easily compared pre/post data. CAT4 adheres to the RACGP Guidelines.

CAT assists with targeting the following key areas:

• **Provide high quality patient care:** CAT4 makes it simple to identify patients with important information not recorded or patients with particular measures, medications or conditions in need of review.

• **Be in control of your patient information:** CAT4 allows the practice to investigate and identify local health priorities for the local population and create patient lists for bulk recalls and reminders.

• **Identify patients at risk:** CAT4 enables your practice to quickly identify patients with specific risk factors for chronic disease, risk medication profiles or co-morbidities.

• **Improve practice revenue:** CAT4 makes it simple to follow up Diabetes SIPs as well as identify patients who are eligible for MBS item claims. Use CAT4 to establish a sound business case for service delivery.

• **Review your MBS item claiming –** Practices using common clinical and billing software combinations can measure clinical data against MBS data to identify outstanding business opportunities.

• **Produce patient lists from any graph:** CAT4 is not simply a reporting tool. It allows users within the practice to create a list of target patients for follow up from any graph – even across multiple graphs and to send SMS or voicemail recall to your targeted patient group.

• **BMI graph across your population:** The BMI graph identifies all BMI ranges across age groups. It also identifies patients with incomplete BMI Data.

• **Chronic Disease Management:** CAT4 allows the user to manage patients chronic diseases including the Diabetic Cycle of Care, COPD, Asthma, Heart Disease, and Mental Health.

• **Data Quality & Accreditation** – Practices can prepare for an upcoming accreditation visit, use the data to review and plan changes at the practice, and to ensure compliance with the recording of allergies and other clinical items.

• **Cancer screening** – practices can review eligible patients for cervical screening, Mammogram, and FOBT. The tool allows practices to review the recording of these screening tests, and to recall those patients.

• **Immunisations** – Practices can monitor their Influenza, Child, Adolescent, and Adult immunisation rate and identify patients at risk who are overdue for specific immunisations for recall.

• **Sexual health:** CAT4 allows practices to review STI Screening rates

• **eHealth:** Practices can identify the number of patients with a MyHealth Record, Shared Health Summary, and compliance for the Quarterly Practice Incentives.

• **Identifying eligible patients for health programs/projects:** PHNs run different programs throughout the year and CAT4 can assist practices identify eligible cohorts.

• **Identifying patients at high risk of adverse health outcomes:** Practices can use advanced searches to find high-risk patients, calculate the Cardiovascular Risk, the CHADVASC Score and much more.

• **Registrar reporting** – CAT4 allows practices to report on the consultations completed by Registrar's at the practice. The reports look at Age, Gender, Disease Prevalence, Allergies, Smoking, Alcohol, BMI, and Blood Pressure and show the registrar's activity.

Practice Aggregation Tool (PAT CAT)

PAT CAT is the Practice Aggregation Tool for CAT – it is used by the PHNs and other organisations to use de-identified data uploaded from practices for population health reporting and provides reports to assist practices in improving their data as well as patient outcomes. The PAT CAT software and data is hosted and stored on the clients own designated servers. Importing data to PAT CAT is simple. Australia's leading data sharing software, CAT4, securely submits a consented, de-identified data set directly to PAT CAT.

The importing process can be fully automated or manually completed and is determined by an agreement between General Practice and the PHN.

PAT CAT Benefits:

- An efficient method to analyse the needs of a population within a defined catchment
- Quality Improvement: identify and assist General Practices to implement clinical interventions
- PIP QI monitoring and evaluation
- Compare chronic disease prevalence
- Identify data quality gaps within General Practices

Topbar

Topbar is a clinical decision support system (CDSS). It is designed to assist all staff at general practice, from reception staff to medical practitioners at the point of care. Topbar provides notifications based on the details in the patient record, thus saving valuable time in the consult room. The algorithms built into Topbar will present only relevant information, pulled from many different screens in the clinical system and alert to missing data, eligible MBS items as well as indicated diagnosis and many other details.

Topbar works together with CAT4 – a search for a specific group of patients, based on risk factors or missing care items, can be sent to Topbar to automatically alert the clinicians and enable opportunistic action at the point of care.

Topbar and CAT4 together are the ideal tools to implement PDSA activities as the combination allows a team approach and will provide outcome measures as well as clear action pathways.

Topbar Benefits:

- Knowledge and person-specific information
- Evidence-based clinical decision support
- Information that is intelligently filtered or presented at appropriate times
- Multiple items of data or "apps" to achieve more knowledgeable clinical advice for patient care
- Positioned discretely but consistently in front of the medical practitioner throughout their working day
- A unique method for promoting your programs and services to medical practitioners

Topbar Applications

Full details for all Topbar apps can be found here:
https://help.pencs.com.au/display/TUG/Topbar+Apps+in+Detail

Waiting Room App

Patients who have arrived in the Waiting Room are displayed showing any missing data items. This app is mainly designed for reception use as it highlights missing demographic items in the patient record. There is however a tab showing missing clinical/accreditation items so a clinical staff member can update missing details such as allergy status, smoking and other risk factors required for accreditation and PIP QI.

Data Cleansing App

This app shows the same information on demographic and clinical items as the Waiting Room app and in addition also displays indicated chronic conditions without a coded diagnosis recorded. This will assist in cleaning up free text diagnosis and improve the quality of the chronic disease registers. Unlike the Waiting Room app it is designed to be used in the consult room and only shows one patient.

MBS App

This prompts the user that the patient may be eligible for MBS items, this includes Health Assessments (45-49,75+, 715), Asthma Cycle of Care, Diabetes Cycle of Care, Medication Reviews, GP Management Plans and Reviews, Team Care Arrangements and Reviews, Practice Nurse/Allied Health Professional Services.

CAT Plus Prompts

Customised notifications can be created in CAT4 and then displayed on Topbar when the patient presents. This enables practices to work as a team in addressing outstanding care items, identifiying patients at risk and will support QI activities by involving the whole team at the practice.
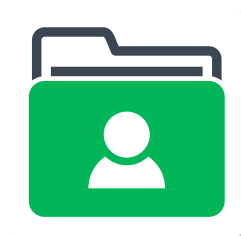
Patient Health Summary

The 5th Edition of the RACGP Standards for General Practice require that "Each active patient Health Record has the patient's current health summary that includes, where relevant: adverse drug reactions, current medicines list, current health problems, past health history, immunisations, family history, health risk factors (e.g. smoking, nutrition, alcohol, physical activity), social history, including cultural background. This app gives the clinician an overview at the click of a mouse!

Implementing the Change – PDSA Cycles

What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?

Act

Plan the next cycle.
Decide wheather the change can be implemented.

Plan

Define the objective, questions and predictions.
Plan to answer the questions (Who? What? Where? When?)
Plan data Collection to answer the questions.

Study

Complete the analysis of the data.
Compare data to predictions.
Summarise what was learned.

Do

Carry out the plan.
Collect the data.
Begin analysis of the data.

Quality improvement is foundational to contemporary high performing primary care. It includes team based approaches, peer review, reflective practice, best practice, and data analysis. It can improve uptake of evidence-based practices for better patient outcomes, better professional development, and better system performance.

The Royal Australian College of General Practitioners defines continuous quality improvement as an ongoing activity undertaken within a general practice with the primary purpose to monitor, evaluate or improve the quality of healthcare delivered to practice patients.

A general practice will need to meet two components to qualify for a PIP QI Incentive payment.

1. Participation in continuous quality improvement activities

The PIP QI Incentive rewards practices for participating in continuous quality improvement activities in partnership with their local PHN. Practices may focus their quality improvement activities on the specified Improvement Measures.

There are no prescribed targets associated with any of the Improvement Measures. Alternatively, practices may focus their quality improvement activities on any other areas informed by their clinical information system data that meet the needs of their practice population. PHNs already work with many general practices to support quality improvement. This includes the collection and review of clinical data to inform quality improvements in health care, and adoption of best practice methods. IAHP funded organisations will meet this requirement by continuing to undertake quality improvement activities in line with their existing arrangement with the Department of Health.

2. PIP Eligible Data Set

The PIP Eligible Data Set is the data collected against the specified Improvement Measures. This data set must be managed in accordance with the PIP Eligible Data Set Data Governance Framework. After PIP QI Incentive registration, the data set must be electronically submitted to a general practice's local PHN on a quarterly basis within the data submission period. PHNs will provide feedback to help general practices identify priority areas and continuous quality improvement activities. Participation in the PIP QI Incentive does not change existing data ownership arrangements of patient data. This means the Department of Health will not have access to an individual general practice's PIP Eligible Data Set. A set of ten Improvement Measures has been developed based on the nKPIs and adapted for broader use across all general practices.

The ten improvement measures are:

1. Proportion of patients with diabetes with a current HbA1c result
2. Proportion of patients with a smoking status
3. Proportion of patients with a weight classification
4. Proportion of patients aged 65 and over who were immunised against influenza
5. Proportion of patients with diabetes who were immunised against influenza
6. Proportion of patients with COPD who were immunised against influenza
7. Proportion of patients with an alcohol consumption status
8. Proportion of patients with the necessary risk factors assessed to enable CVD assessment
9. Proportion of female patients with an up-to-date cervical screening
10. Proportion of patients with diabetes with a blood pressure result.

These measures are all suitable for targeted quality improvement (QI) activities, but the practice can choose any QI activity to meet the PIP QI conditions. Using your practice data for QI requires reliable and clean data, that is why we have included some basic data cleaning activities in the examples below. The timeline and QI activities are purely examples but if implemented (not necessarily in the listed order), they will improve your data quality and make pro-active, planned patient care much more efficient.

PDSA Cycles – Implementation Timeline example

All listed searches/reports are suitable for QI activities and we have provided a template in the appendix PDSA template

Month	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
PDSA 1 – Duplicates & Inactives												
PDSA 2 – Clinical Coding												
PDSA 3 – Allergy Status												
PDSA 4 – Diabetes: HbA1c*												
PDSA 5 – Smoking*												
PDSA 6 – Weight/Height*												
PDSA 7 – Influenza: 65+*												
PDSA 8 – Influenza: diabetes*												
PDSA 9 – Influenza: COPD*												
PDSA 10 – Alcohol status*												
PDSA 11 – CVD risk factors*												
PDSA 12 – Cervical Screening*												
PDSA 13 – Diabetes: BP*												

* indicates PIP QI improvement measure

CAT4 User Interface - The Basics

For new users of CAT4 here are some very quick tips on how to navigate the user interface.

CAT4 extracts data from your clinical system and analyses that snapshot of your data. It is a read only tool and, after the data extraction which is often done monthly using a scheduled, after hours process, there is no connection to your clinical system.

To see your data you will have to have an extract in the extract panel on the left and you have to load that extract. Once the data is loaded, you will see the reports for all patients who have not been marked as deceased or inactive/archived in your clinical system.

To make the reports meaningful in most cases one or more filters are necessary. After selecting the required filters,

the 'Recalculate' label will turn red. You have to click on 'Recalculate' to apply the filters. The following activities show the steps including filters required in detail.

Duplicate Patient Records

Duplicate patients are problematic for many reasons and should be regularly checked and, if found, records should be merged following the instructions for your clinical system. CAT4 provides two different reports under the Data Quality report to find duplicate records:

Duplicate Patient Identification using Medicare, Healthcare Card, or DVA Number:

Duplicate Patient Identification using Surname, first name initial, gender and DOB:

Note: Due to the search criteria, the duplicate name report can show twins as possible duplicates. The provided list of names should always be seen as an indication of duplicates only and will need to be reviewed by someone familiar with the patients!

Inactive Patients

CAT4 produces a report that shows the last visit of a patient. The report can be accessed as shown below.
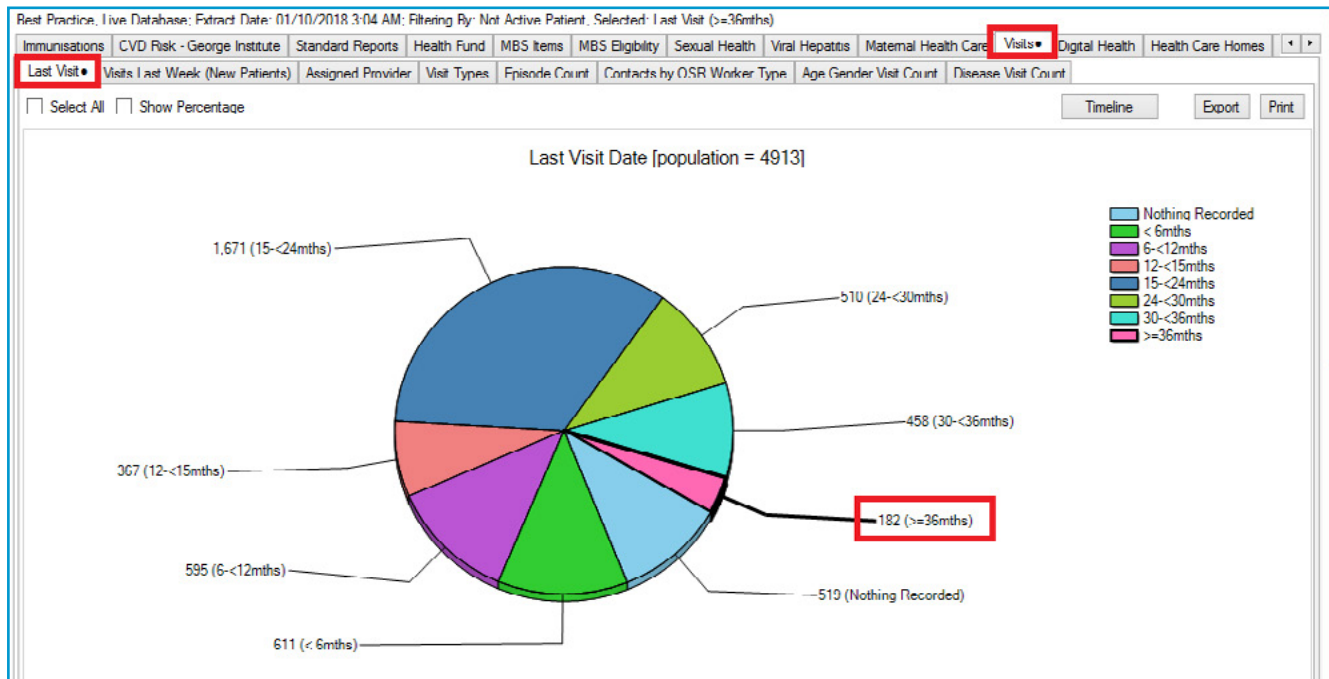
The report can be sorted by patients with the longest time since their last visit. The practice can then either inactivate/archive the patients one by one in their clinical system, or, much more preferable, use the built in bulk update functionality of the clinical system to find and inactivate patients.

Bulk Inactivating Patients

Most clinical systems have a feature to bulk inactivate patients who have not visited the practice in a significant period. It is recommended that the practice develops a policy to routinely inactivate/archive patients who have not visited the practice in a set period. Contact your clinical system vendor for the steps to do this.

PDSA - Duplicate and Inactive Patients – Example for PDSA activity
You can find a template for PDSA activities in the Appendix PDSA template

Q1. What are we trying to accomplish? (Goal)
Our goal is to: Ensure that the patient records in our clinical system are up to date and we are confident to use it to do recalls.

Q2. How will we know that a change is an improvement? (Measures)
We will measure: (Before and After Figures) 1.   The number of patients who have a duplicate Medicare, HCC or DVA Number. 2.   The number of patients who have a duplicate First Name Initial, Surname, DOB and Gender. 3.   The number of patient records (total) in CAT4. 4.   The number of patients who have not visited the practice in 3 years.

Q3. What Changes can we make that can lead to an improvement (Ideas)
Ideas for change:

Description: Clean-up the database and merge duplicate patients			
Plan	Do	Study	Act
What: Use CAT4 and identify patients with duplicate number, and duplicate names. Who: Practice Manager When: 21/8/2019 Expected outcome: list/number of duplicate patients	Merge patients where duplicates are found	Use the same report to find duplicate numbers after the clean-up and identify reasons for new duplicates	Implement business rules to avoid duplicate record creation, i.e. always search inactive/archived patients before creating a new record

Description : Clean-up the database and mark patients who have not visited in 3 years inactive/archived			
Plan	Do	Study	Act
What: Use the search feature in your clinical system to identify the patients who have not visited the practice in a given period. Who: Practice Manager When: 28/1/2019 Expected outcome: list/number of patients to be made inactive/archived	Make them inactive/ archived using your clinical system	Repeat search after 3 months to see how many patients are now listed	Implement a schedule to make patient inactive/ archived to keep the patient records up to date

Both CAT4 and Topbar are using algorithms to determine if a patient might have a chronic condition based on medications, pathology and other measures. The tools then display a colour-coded indication with yellow representing the least and red the highest likelihood. Full details can be found here: https://help.pencs.com.au/display/CG/Indicated+Conditions+Report+Details

Currently the five conditions are:

- Indicated CKD with no diagnosis
- Indicated Diabetes with no diagnosis
- Indicated Mental Health with no diagnosis
- Indicated COPD with no diagnosis
- Indicated Osteoporosis with no diagnosis

CAT4 - Cleansing Tool

The indicated conditions reports are in the Cleansing module and show a page for each of the five conditions. The data can be exported or printed and can also be further narrowed down by using the available filters.

	Surname	Firstname	DOB	Indication Date	Sex	Antidiabetic Medication	HbA1c	FBG	Eye Exam	BMI	BP	Foot Exam	Chol	Trig	HDL	Malb	Smoking	eGFR
▶	Surname	Firstname_1029	01/06/1950	19/09/2018	F		6.1	6.6			145/92		5.3	2.0	1.34		Ex smoker	92.455
	Surname	Firstname_1151	01/06/1948	08/04/2019	F	Y							4.4	2.8	1.43		Ex smoker	56
	Surname	Firstname_144	01/06/1952	16/02/2019	F		6.4	6.0			130/78		4.2	2.0	1.17	0	Never smoked	69
	Surname	Firstname_1483	01/06/1948	31/01/2018	F	Y	7.4			37.1	138/70		5.0	2.6	1.04		Never smoked	16
	Surname	Firstname_1632	01/06/1962	01/11/2018	F	Y	6.2			42.2	127/88		3.2	2.7	0.76	27	Never smoked	86
	Surname	Firstname_1844	01/06/1970	10/10/2017	M		6.6			50.9			7.1	3.7	0.92	45	Never smoked	103.537
	Surname	Firstname_2019	01/06/1956	15/11/2017	M	Y	7.8			31.0	120/75		4.3	2.6	1.05		Never smoked	89
	Surname	Firstname_227	01/06/1947	26/04/2019	F		6.1	6.4					4.7	1.3	1.58		Never smoked	88
	Surname	Firstname_2329	01/06/1950	20/02/2018	F		6.2	6.3					4.4	0.8	1.41		Never smoked	90.307

The Data Cleansing App in Topbar shows if there are any indicated chronic conditions on the 'Indications' tab. The same five conditions as reported in CAT4 are used. For full details on the algorithm please visit:
https://help.pencs.com.au/display/CG/Indicated+Conditions+Report+Details

Topbar uses the same colour scheme as CAT4, from yellow (least likely) to red (most likely).

To view why this condition was indicated, click on the condition.

The appendix contains resources for MD and BP users on how to use a bulk clean up and remapping tool for free text entries. This is highly recommended as it saves time and can be used as an ongoing process to ensure minimal free text entries.

Q1. What are we trying to accomplish? (Goal)
Our goal is to: Ensure our practice has consistent coding for the continuity of care of our patients. We also will have a policy in place to ensure that we comply with the eHealth PIP Requirements.

Q2. How will we know that a change is an improvement? (Measures)
We will measure: 1.   How many patients are indicated to have a chronic condition in Cleansing CAT, and the change after the review. 2.   How many coded diabetic patients are in the system. 3.   How many patients with Type 1, Type 2 or undefined diabetes are in the clinical system.

Q3. What Changes can we make that can lead to an improvement (Ideas)
Ideas for change:

Description : Have a practice meeting and discuss the coding policy for the practice and up-date for accreditation.			
Plan	Do	Study	Act
Who: All Staff What: Practice Meeting When: March 28 Expected Outcome: Practice Policy document created/ distributed	A draft copy of the policy was distributed to the GPs for review	GPs reviewed the use of coding	All GPs have agreed to use the drop down coding for Diabetes and update any patients coded with "NIDDM"

Description : Use the CAT4 Cleansing Tool and review the Diabetic, COPD, MH, Osteoporosis and CKD Patients			
Plan	Do	Study	Act
What: Review lists of patients indicated from CAT4 reports Who: Clinical Staff When: Expected Outcome: Better understanding of free texting issue at the clinic	CKD – 126 Patients Diabetes – 86 Mental Health 929 COPD – 84 Osteoporosis – 119 Records reviewed and updated in patient record with diagnosis or marked as false positive in CAT4/ Topbar	Check by provider and diagnosis for common terms free texted and provider most likely to free text	Implement business rules on diagnosis entry and use free text mapping tools for BP or MD to avoid this issue in the future

Allergy Status

According to the RACGP 5th Edition Standards:

A patient's health summary must give a practitioner sufficient information to enable them to safely and effectively provide care for the patient. The RACGP encourages you to work towards all of your active records containing a current health summary, including a record of known allergies. However, to satisfy this Criterion, your practice must have a:

  • *record of known allergies for at least 90% of your active patient health records*

If a patient has no known allergies, a practitioner must verify this with the patient and then record 'no known allergies' in the patient's health record.

CAT4 provides a number of reports on the allergy status of the patient population and Topbar has a notification in the Data Cleansing App about missing allergy status among other accreditation related items in the patient record. The allergy report in CAT4 can be filtered for the patients of interest, for example for active patients only (those with 3 or more visits in the last two years).
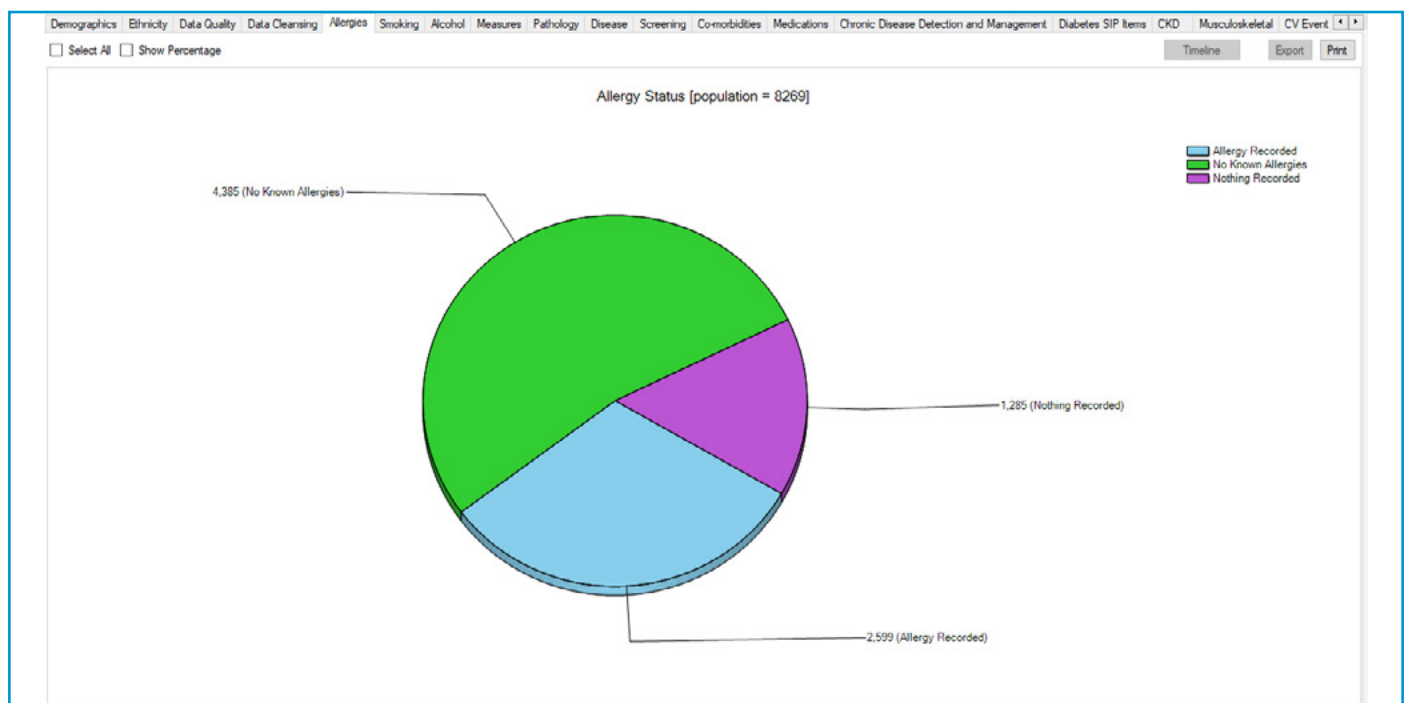
Data Quality Dashboard

The CDSA Tool has been developed to report on the completeness of patient demographic and health summary data within the general practice clinical system. It provides the following reports:

- '**Data Quality Dashboard Report**' to indicate the overall status of data quality based on the data indicators.

- '**Data Completeness Report**' to report the % of completeness for each data indicator.

- '**Data Completeness Patient Graph**' to provide a graphical view of the data indicators and allow re-identification of patients where data is missing.

The Data Quality Dashboard provides a report indicating the overall status of data quality based on the data indicators. It displays each data content section with a 'Traffic Light' status icon calculated from the % completeness of each data indicator within the section. Each indicator contributes equal weight to the overall status. Indicators that are not available for a clinical system do not contribute to the overall status.

The 'Traffic Light' status icons will display:

- RED : 0 – 60% for all

- ORANGE : > 60 – 90% for allergies, >60 - 75% for other indicators

- GREEN : > 90% for allergies, >75% for other indicators

The second tab (data completeness report) shows more detailed information and can be used to identify quality improvement targets (planning) as well as measure the outcome of the QI activities (study).

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Data Completeness Report **Report Date: 01/06/2019 3:14 AM**

Practice Name: Deidentified Practice

* Eligible Population = Active patients except where the denominator is specified with the measure
An Active patient has had 3 visits in the last 2 years

Measure	Count	Eligible Population*	%
Allergies and adverse reactions			
Allergy status recorded	4775	5180	92.18%
Allergy recorded - coded format (denominator = number of allergies for eligible population)	3463	4601	75.27%
Allergy recorded - reaction completed (denominator = number of allergies for eligible population)	3390	4601	73.68%
Medicines			
Medications - coded reason for prescribing recorded (denominator = number of scripts for eligible population)	4130	23754	17.39%
Medical History			
Diagnosis recorded - coded format in past history (denominator = number of diagnoses for eligible population)	47068	62473	75.34%
Health Risk Factors			
Smoking status recorded (denominator = patients >= 10 yrs in eligible population)	4536	4643	97.70%
Smoker - cigarettes per day recorded (denominator = smoker is recorded for patients >= 10 yrs in eligible population)	199	244	81.56%
Ex-smoker - Date ceased (denominator = ex-smoker is recorded for patients >= 10 yrs in eligible population)	320	702	45.58%
Waist circumference recorded in last 2 years (denominator = patients who are overweight (BMI>=25) or underweight (BMI < 18.5))	628	2547	24.66%
Alcohol status - quantity recorded (denominator = patients >= 14 yrs in eligible population)	3533	4511	78.32%
Alcohol status - frequency recorded (denominator = patients >= 14 yrs in eligible population)	3458	4511	76.66%
Immunisations			
Immunisations recorded	3527	5180	68.09%
Relevant Family History			
Family history recorded	3229	5180	62.34%
Relevant Social History			
Living arrangement recorded	750	5180	14.48%
Ethnicity recorded	5150	5180	99.42%
Is a carer recorded	166	5180	3.20%
Has a carer recorded	842	5180	16.25%
Occupation and employment status recorded (denominator = patients >= 15 yrs in eligible population)	2921	4484	65.14%
Relationship status recorded (denominator = patients >= 15 yrs in eligible population)	2393	4484	53.37%

This report can also be filtered using the date range visit filter to see how the numbers/percentages change after new business rules, targeting the measures listed in this report, have been implemented.

Using the Date Range Visit filter, any time period can be configured and the report will change accordingly.

Remember that this report only shows active patients, with at least 3 visits in the last two years.

QIM 1 – HBA1C status for patients with diabetes

Diabetes was the underlying cause of around 10% of all deaths in Australia in 2016 and recent reports show death rates for people with Type 2 diabetes are rising. As part of their care, people with Type 1 and 2 diabetes should have their glycosylated haemoglobin (HbA1c) measured at least every 12 months, or more frequently depending on the level of blood glucose control. Effective management of chronic disease can delay the progression of disease, improve quality of life, increase life expectancy, and decrease the need for high-cost interventions.

CAT4 has been used for many years to assist with the management of diabetes. There are numerous reports available for the regular check-ups required.

By default CAT4 extracts only the most recent result for pathology, measures, MBS items and other indicators. This means the HbA1c report under the pathology tab needs to be filtered first to make it meaningful.

Quality Improvement Measure 1 definition:

Proportion of regular clients who have Type 1 or Type 2 diabetes and who have had an HbA1c measurement result recorded within the previous 12 months.

To meet this definition, we need to apply the following filters:
Regular clients:

Who have Type 1 diabetes:

Or Type 2 diabetes:

And who have had an HbA1c measurement result recorded within the previous 12 months:

You will have to apply two separate filters, one for Type I and one for Type II diabetes and then check the respective HbA1c status for each. The Pathology/HbA1c report will then show the proportion of those without a result in the last 12 months (or longer) under the 'No HbA1c Recorded' category:
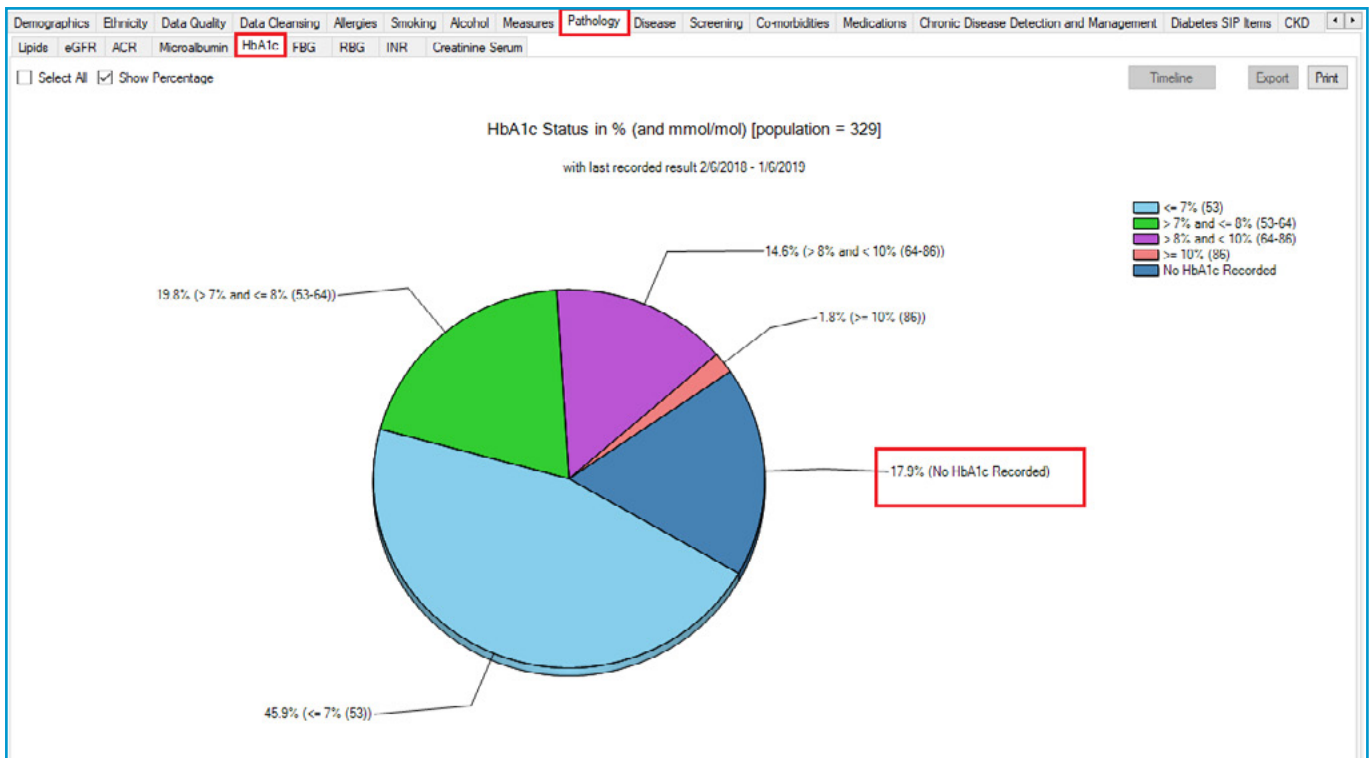
The HbA1c report will show you the numbers/percentage of your patients Hba1c status and will allow you to measure improvement over time by comparing reports. It will also allow you to see more details of those patients with a result by double clicking on a selected slice of the graph to see the patient details and measurements:

Reidentify Report [patient count = 8]

Filtering By: Active Patient, Conditions (Diabetes Type II - Yes), Selected: HbA1c % (mmol/mol) (>= 10% (86))

ID	Surname	First Name	Known As	Sex	D.O.B (Age)	Address	City	Postcode	Phone (H/W)	Phone (M)	Medicare	HbA1c % (mmol/mol)	HbA1c Date
1487	Surname	Firstname_328	Firstname_320	F	01/06/1945 (74)	12 John St	Suburb Town	5109	H:07 50505050 W:07 50509999	1234999999	1234123412 04	11.2 (99)	11/03/2019
7644	Surname	Firstname_425	Firstname_425	F	01/06/1951 (68)	12 John St	Suburb Town	2965	H:07 50505050 W:07 50509999	1234999999	1234123412 34	10.8 (95)	30/04/2018
1103	Surname	Firstname_552	Firstname_552	F	01/06/1947 (72)	12 John St	Suburb Town	2266	H:07 50505050 W:07 50509999	1234999999	1234123412 34	12.5 (113)	26/11/2018
3779	Surname	Firstname_1683	Firstname_1683	M	01/06/1961 (58)	12 Jogger St	Suburb Town	2853	H:07 50505050 W:07 50509999	1234999999	1234123412 34	10.8 (95)	22/03/2019

Please note that if your patients with diabetes are not coded clearly for type I or II, they will show as 'undefined' in the CAT4 reports. It is an easy register clean-up to filter for 'Undefined diabetes' and then correct the diagnosis in the patient record to reflect the type of diabetes.
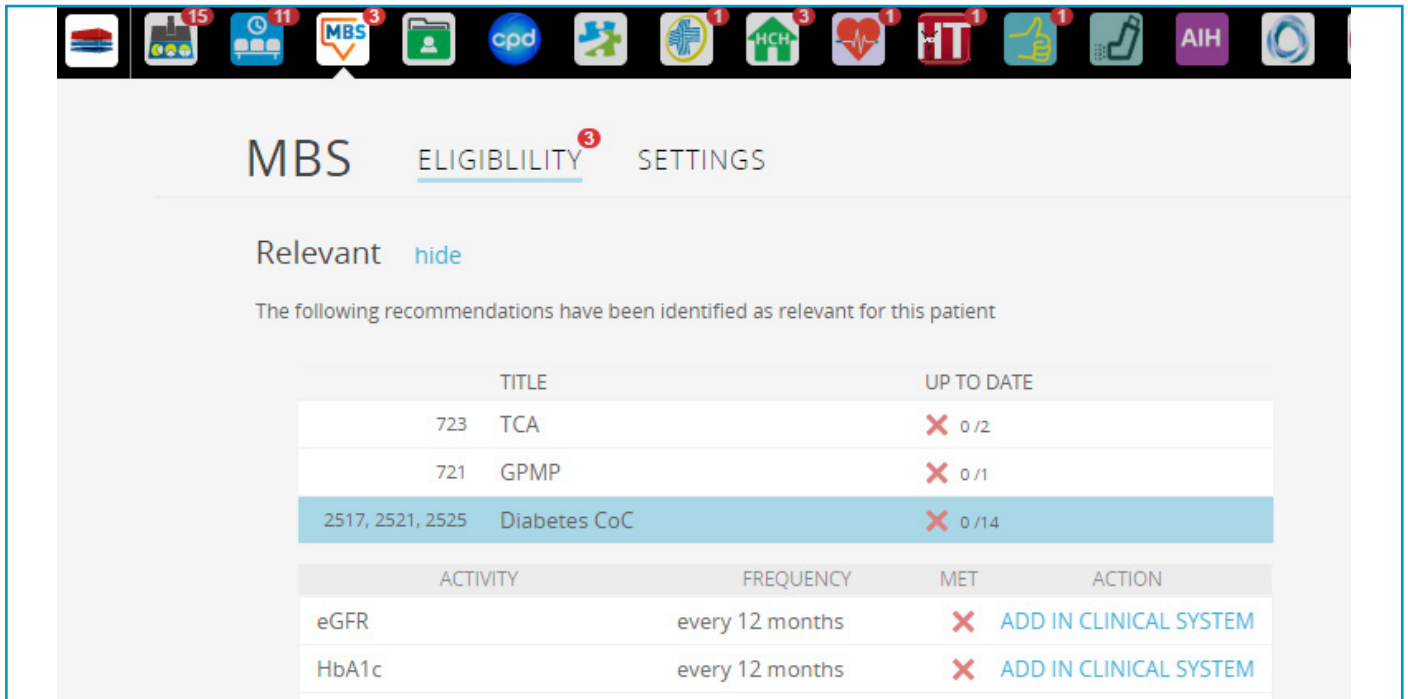
Here is a guide on how to clean up your diabetes register: https://help.pencs.com.au/display/CG/Patients+with+incorrect+Diabetes+coding

And here is a recipe describing the steps with details:
Recipe: Ensure all diabetic patients are coded with the correct diagnosis in the clinical software

Topbar – Diabetes Patients

In Topbar the MBS app will show, for patients with a coded condition of either type I or type II diabetes, the relevant checks under the Diabetes Cycle of Care item. This relies on correct coding, as does the report in CAT4, so the review of coding and of patients indicated, covered earlier will be beneficial for the accuracy of both CAT4 and Topbar reports.

Clinicians will receive a notification for any patient, with diabetes, on the details of the diabetes cycle of care and can check if the HbA1c is up to date in Topbar's MBS app.

QIM 2 – Smoking Status

In Australia, smoking continues to be the behavioural risk factor responsible for the highest levels of preventable disease and premature death. Recording systems that document tobacco use almost double the rate at which clinicians intervene with smokers, leading to higher rates of smoking cessation.

CAT4 allows the practice to identify how many patients have had their smoking status recorded in the clinical system. The smoking report shows the smoking status in the following categories:

- Daily Smoker
- Irregular Smoker
- Ex-Smoker
- Never Smoked
- Nothing Recorded
- Age<10 and Nothing Recorded

Quality Improvement Measure 2 definition:

Proportion of regular clients aged 15 years and over whose smoking status has been recorded as one of the following: current smoker; ex-smoker; or never smoked in the last 12 months.

To meet these criteria, we need to apply a number of filters:
Regular patients aged 15 and over:

Who have had a smoking status recorded within the previous 12 months:

Smoking status of regular patients aged 15 and over:
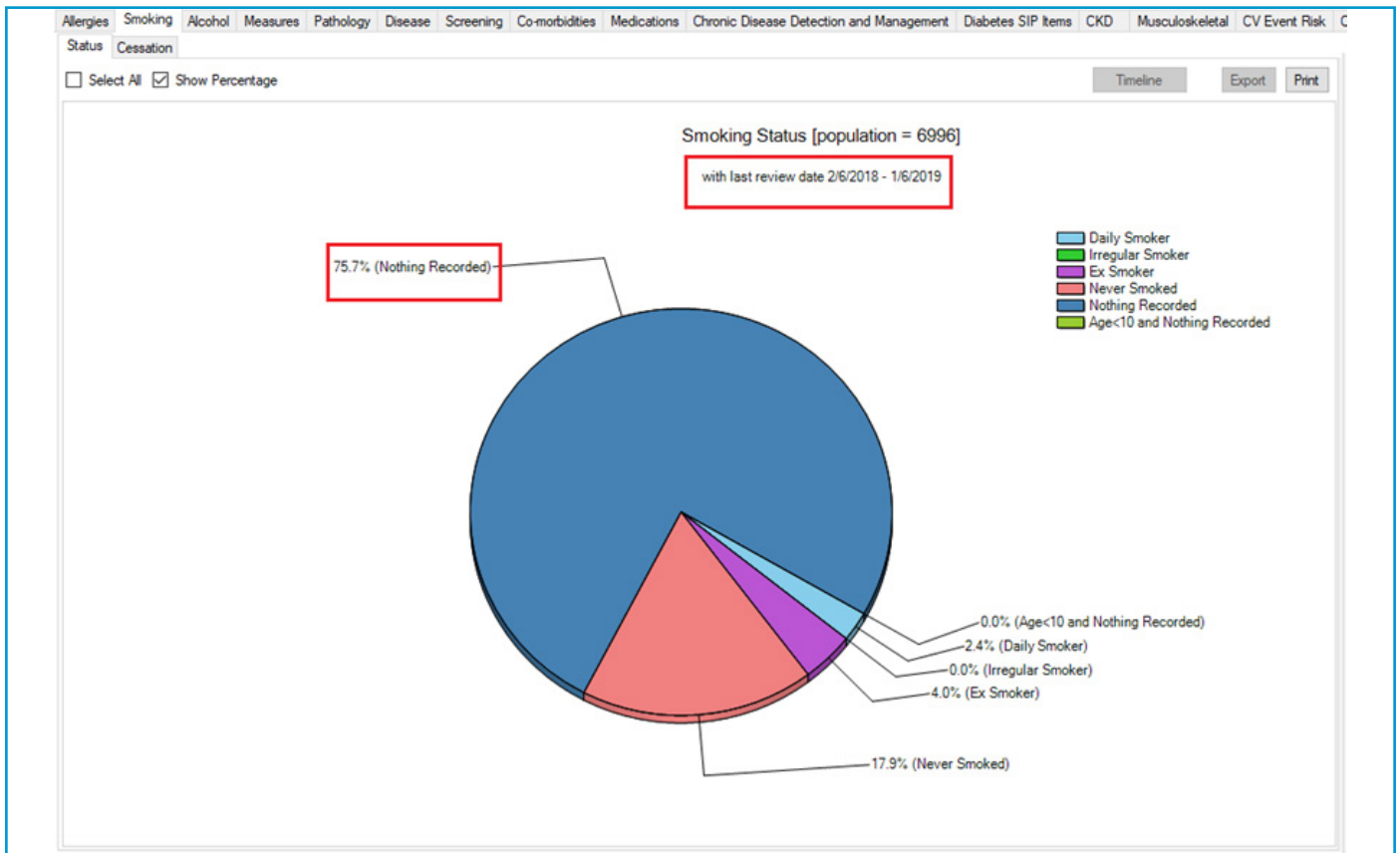
The Smoking Status report will show the numbers or percentages of your selected patients and will allow you to measure improvement over time by comparing your reports.

Smoking Status in Topbar

Topbar's Data Cleansing and Waiting Room apps assist clinic staff who are using Best Practice, Medical Director or Zedmed to identify patients that do not have smoking status recorded. A small red notification shows the patient is missing information, and Topbar also makes it simple for the clinician to record it in the clinical system by clicking the button "Add In Clinical System" this will then take the clinician to the correct field in their clinical system to add the information.

QIM 3 – BMI

Being overweight, obese or underweight is associated with higher rates of morbidity and is now a major public health issue in Australia. Being overweight and obese is a risk factor for Type 2 diabetes, cardiovascular disease, hypertension, osteoarthritis, some cancers and gallbladder disease. Being overweight or obese is also associated with certain psychosocial problems, functional limitations and disabilities. Being underweight means you may be malnourished and develop compromised immune function, respiratory disease, digestive diseases, cancer and osteoporosis. Australia's obesity rate now ranks fifth among Organisation for Economic Co-Operation and Development (OECD) countries (OECD 2017). BMI continues to be a common measure to identify adults who may be at an increased risk or morbidity and mortality due to their weight.

Quality Improvement Measure 3 definition:

Proportion of regular clients aged 15 years and over and who have had their Body Mass Index (BMI) classified as obese, overweight, healthy or underweight within the previous 12 months.

CAT4 and BMI

The Clinical Audit Tool provides graphs that allow the clinician to quickly see at a glance how the practices population compares with the national figures by categorising them into Morbid, Obese, Overweight, Health, and Underweight.

Importantly for QI activities CAT4 will show a report on missing/incomplete patient records. This will enable the practice to easily see the extent of the issue and to measure change after implementing an activity targeting BMI data in patient records. Both reports in CAT4 may be filtered, for example, by visit date range to show only those patient who have visited in the last six months or since commencing a QI Activity targeting weights/heights to measure the success of the activity.

To meet the improvement measure criteria, we need to apply this filter:
Regular patients aged 15 and over:

Who have had a weight/height result recorded within the previous 12 months:

And then check the BMI report:
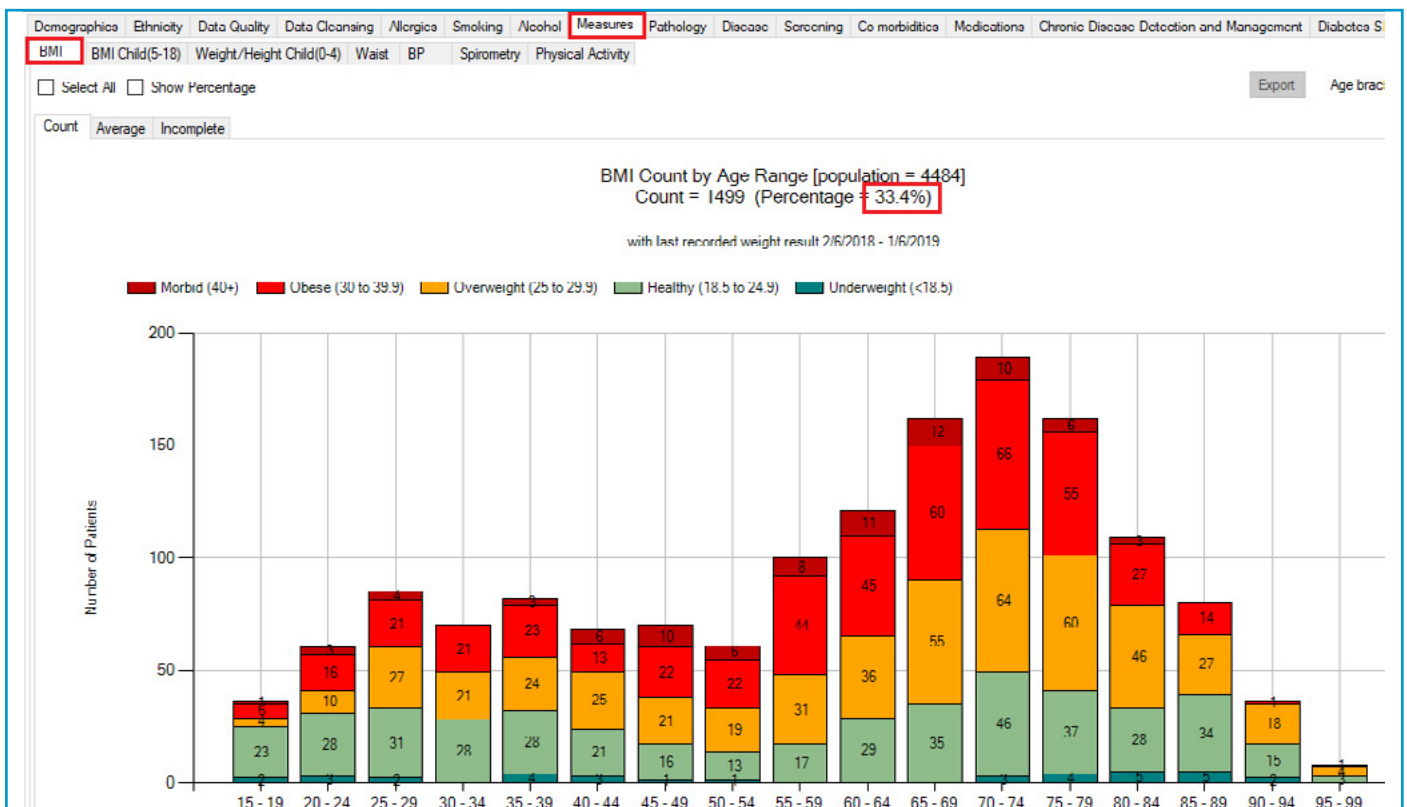
The title of the report will provide a percentage of patients (in this case 15 and older, regular patients) who had a BMI recorded/calculated in the last 12 months.

The 'Incomplete' report will show what is missing in the patient records to calculate the BMI:
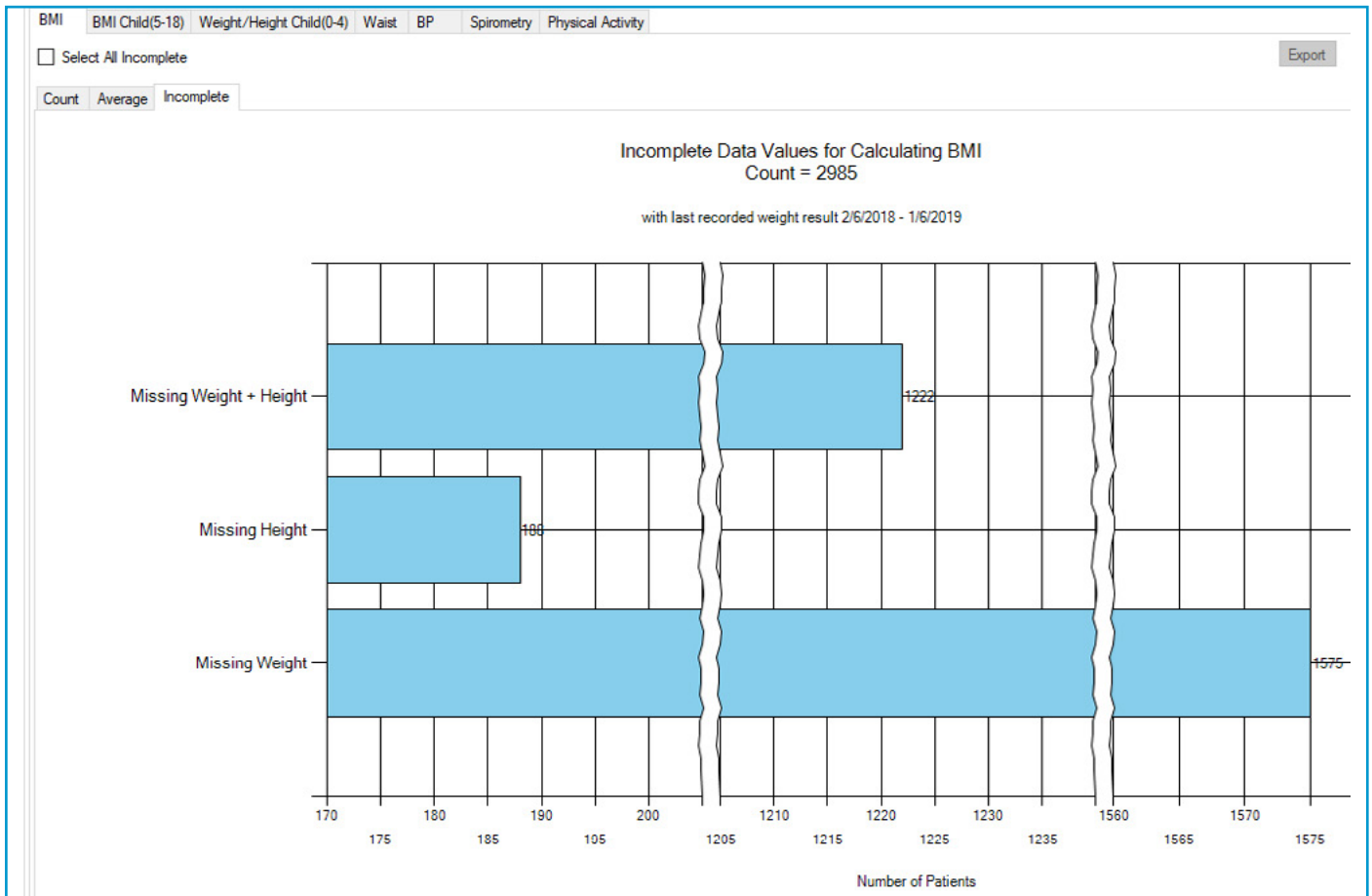
CAT4 uses algorithms for weight and height inclusion detailed on the graph, but applying the 12 months results filter will only show those patients with a weight entered in the last 12 months.
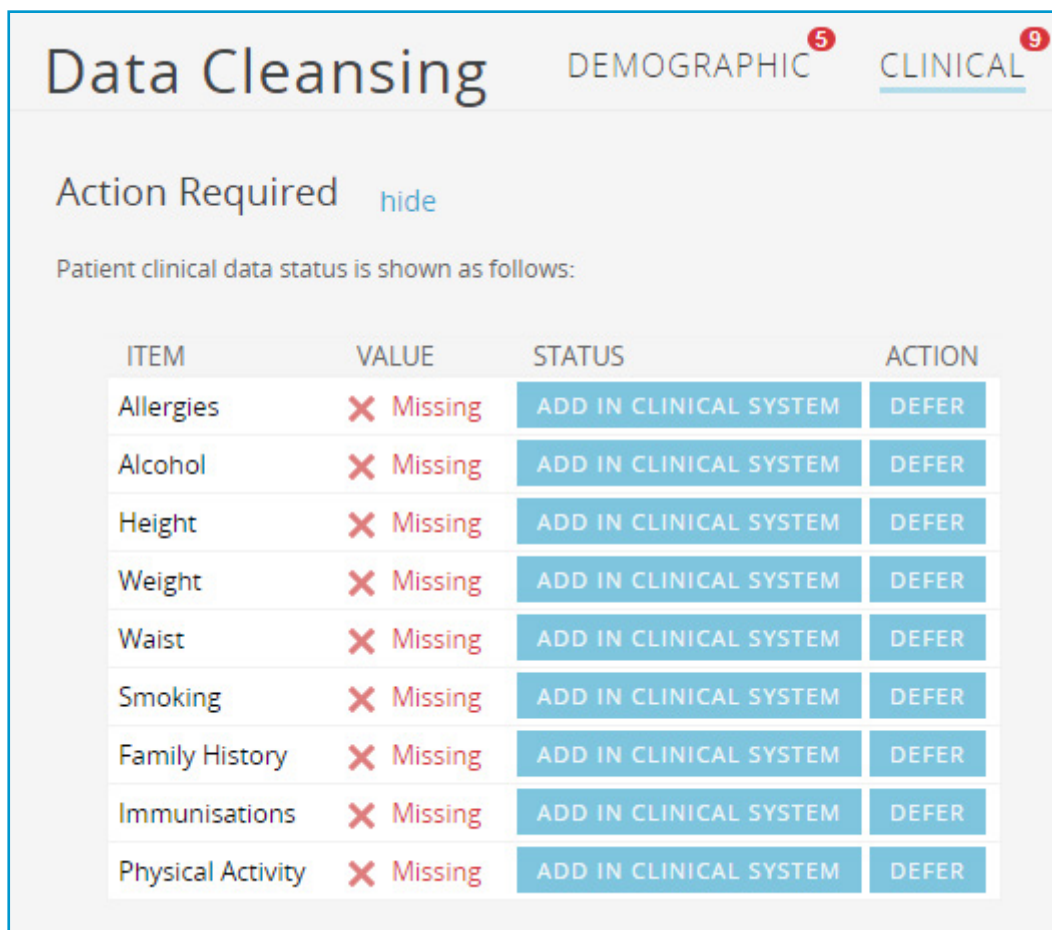
Topbar and BMI/Waist

The Data Cleansing and Waiting Room apps in Topbar will assist clinicians who are using Best Practice, Medical Director or Zedmed at the point of consultation to identify patients that do not have a number of accreditation and data quality related items recorded. Topbar will list the missing items on the 'Clinical' tab of the Data Cleansing app for any patient who is open in the clinical system.

The Waiting Room app will show the same information for all patients currently in the Waiting Room.

This information can be used to introduce a business rule around patients being seen first by a practice nurse, to update their essential clinical items, before the patient goes on to see the doctor.

This requires available staff and a consult room, but can be very effective if implemented.

QIM 4, 5 and 6 – Influenza Immunisation

The administration of influenza vaccine to persons at risk of complications of infection is the single most important measure in preventing or attenuating influenza infection and preventing mortality.

There is evidence that influenza vaccine reduces hospitalisations from influenza and pneumonia and all-cause mortality in adults aged ≥65 years of age. While best practice guidelines recommend annual immunisation, a 15 month interval allows for cases when a client decides to receive a vaccine earlier than recommended (e.g. from a pharmacy) or delay and wait for the release of an 'enhanced' vaccine.

There are three parts to this improvement measure, defined as followed:

1. QIM 4 – *Proportion of regular clients aged 65 years and over who were immunised against influenza in the previous 15 months.*

2. QIM 5 – *Proportion of regular clients with diabetes who were immunised against influenza in the previous 15 months.*

3. QIM 6 – *Proportion of regular clients who are aged 15 years and over, are recorded as having chronic obstructive pulmonary disease (COPD) and were immunised against influenza in the previous 15 months.*

To meet the criteria above, a number of filters will need to be applied before the Influenza graph will show the correct population:

QIM 4 - regular patients aged over 65:

Immunised in the last 15 months:

QIM 5 - regular clients:

With diabetes:

Selecting the Yes on top of the diabetes category will include Type I or Type II in the search.

Immunised in the last 15 months:

QIM 6 - regular clients who are aged 15 years and over:

Are recorded as having chronic obstructive pulmonary disease (COPD):

Immunised in the last 15 months:

After applying the respective filters for the patients of interest, the Immunisation/Influenza report will show the proportion of patients immunised in the last 15 months.
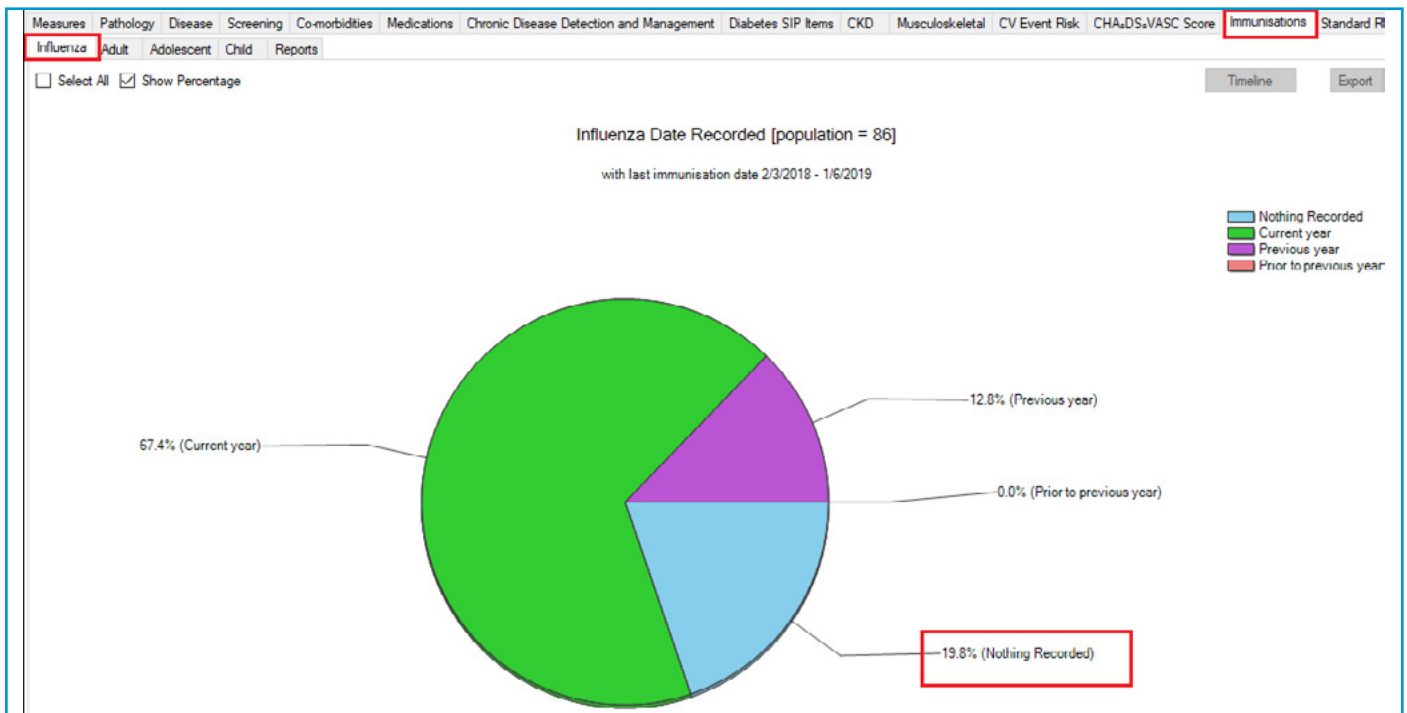
The immunisation report is designed to show patients who have received the current vaccine for the calendar year, so the 15 month criteria for this measure will show patients who have received last year's vaccine if it was within 15 months of the extract date. Patients appearing in the 'previous year' category might still benefit from a vaccine this year!

The filters/searches used for these measures can be used to create a Topbar prompt, please see the relevant page in the appendix of this document.

QIM 7 – Alcohol Status Recording

Excessive consumption is associated with health and social problems in all populations. Many chronic conditions share common risk factors that are largely preventable, including excessive alcohol consumption. While fewer Australians are drinking at levels that contribute to alcohol-related harm, about 26% of people drink more than is recommended on a single occasion, and they do this at least once each month.

Note a record and date stamped Change Track Audit C is the gold standard where clinical information systems have this functionality.

Alcohol status is listed as an important risk factor in the RACGP accreditation guidelines and CAT4 and Topbar both have reports and notifications for the alcohol status of patients.

**Quality Improvement Measure 7 definition:**

Proportion of regular clients who are aged 15 years and over who have had their alcohol consumption status recorded.

To meet the criteria above, a filter will need to be applied before the alcohol graph will show the correct population:
Regular clients who are aged 15 years and over:

After applying the filter, the Alcohol Status report will show the proportion of patients with their status recorded/not recorded.
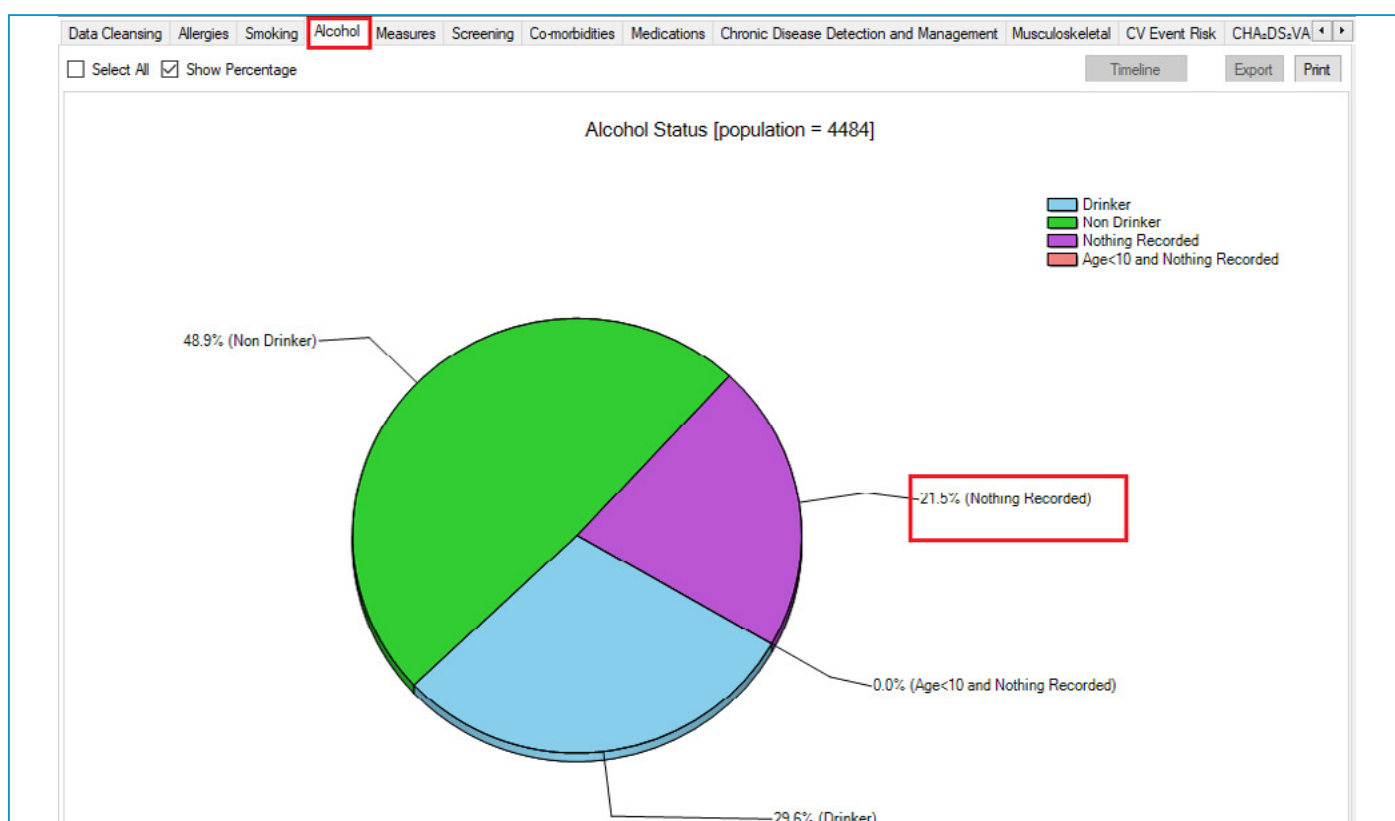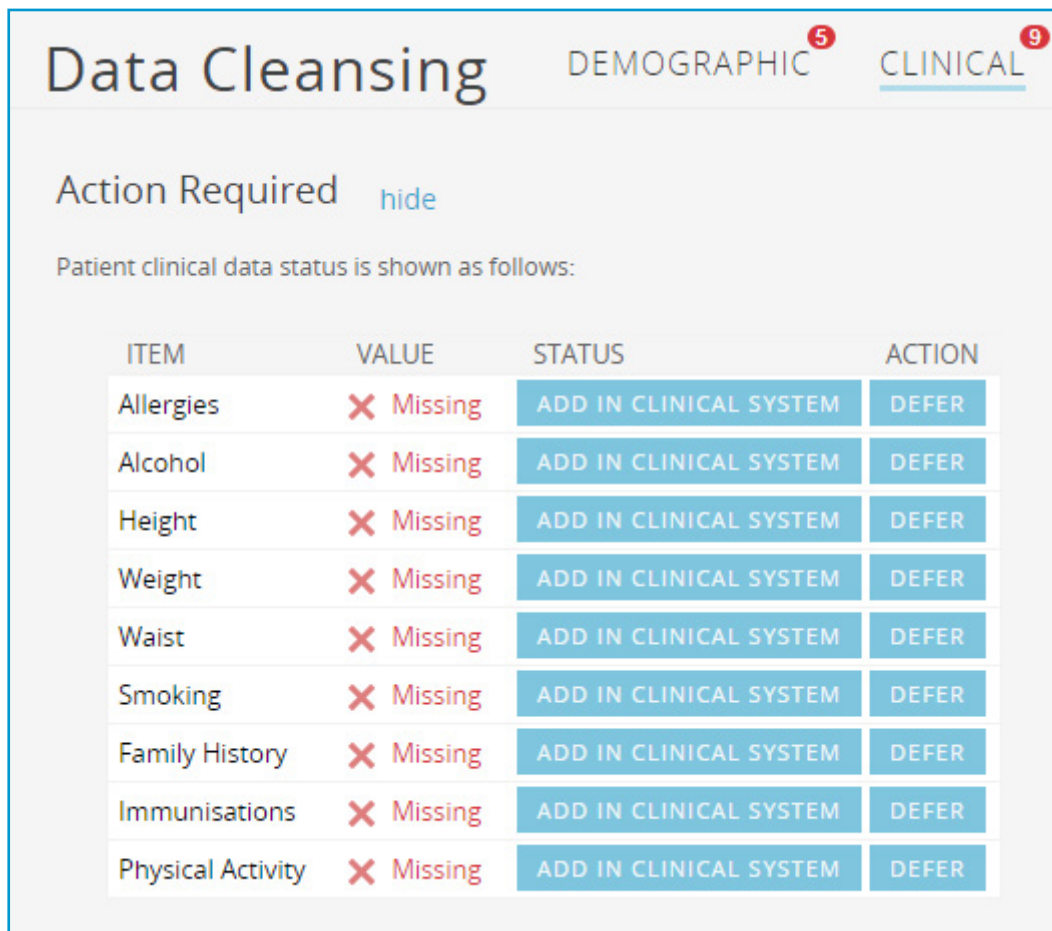
Topbar and Alcohol Status

The Data Cleansing and Waiting Room apps in Topbar will assist clinicians who are using Best Practice, Medical Director or Zedmed at the point of consultation to identify patients that do not have a number of accreditation and data quality related items recorded. Topbar will list the missing items on the 'Clinical' tab of the Data Cleansing app for any patient who is open in the clinical system.

The Waiting Room app will show the same information for all patients currently in the Waiting Room.

This information can be used to introduce a business rule around patients being seen first by a practice nurse, to update their essential clinical items, before the patient goes on to see the doctor.

This requires available staff and a consult room, but can be very effective if implemented.

QIM 8 – Cardiovascular Risk

Assessment of absolute CVD risk, based on multiple risk factors, is more accurate than that based on individual risk factors due to the cumulative nature of risk effects. Basing patient management decisions on this approach should improve CVD outcomes.

The report will look at regular clients aged 45 to 74 years, who have had all of the following information recorded:

- Tobacco smoking
- Diabetes
  - Diabetes status: Type 1 or Type 2 Diabetes
  - Diabetes risk: Fasting Glucose Test result, or a screening for glycosylated haemoglobin (HbA1c test result)
- Systolic blood pressure
- Total cholesterol and HDL cholesterol levels
- Age
- Sex

The CV event risk report in CAT4 shows the risk level of patients based on the National Vascular Disease Prevention Alliance (NVDPA) guidelines: https://www.cvdcheck.org.au/australian-absolute-cardiovascular-disease-risk-calculator

The report will show patients with all recorded values and their calculated risk and a second report will show those patients with incomplete data and which data items are missing. The second report in particular can be used to plan a quality improvement activity addressing cardiovascular risk and related measures.

The criteria used by the NVDPA don't align 100% with the improvement measure as defined above. The main difference is the inclusion of patients with a diagnosed cardiovascular condition (excluded by the NVDPA) and the inclusion of diabetes screening (Fasting blood glucose or screening HbA1c). We will work on providing an easy way to match up the QIM with our reports but recommend for now to use the report and filters described in this chapter as any improvement to the data shown in this report will affect the QIM as well.

**Quality Improvement Measure 8 definition:**

Proportion of regular clients aged 45 to 74 years with information available to calculate their absolute CVD risk.

To meet the criteria above, a filter will need to be applied before the CV event risk graphs will show the correct population:
Regular patients aged between 45 and 74:

After applying the filter the CV Event Risk report will show the details for the selected patient group:
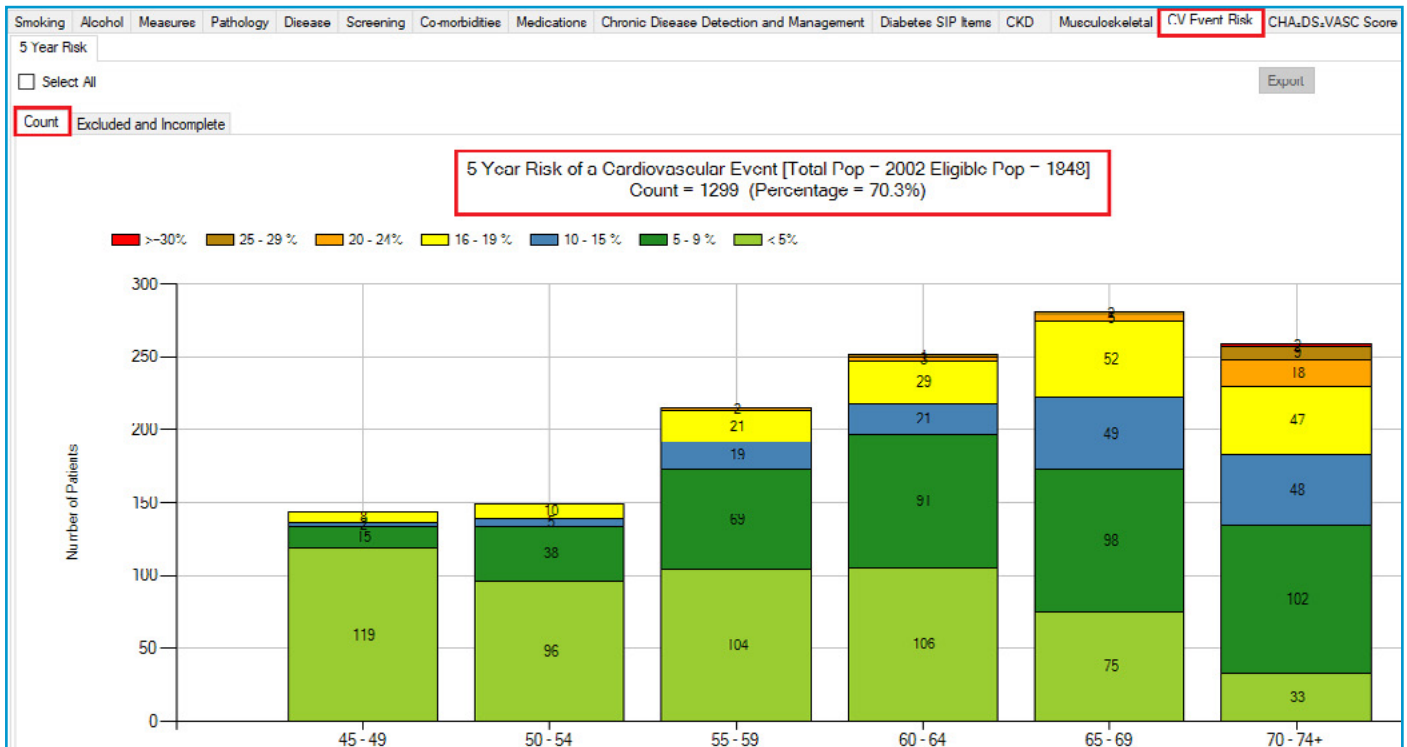
The title of the report shows the number of patients matching the search criteria, in this case 2002 regular patients aged between 45 and 74 years. Out of those 1848 are eligible for the risk calculation as they don't have a diagnosis of a cardiovascular condition. Out of the 1848 eligible patients 1299 or 70.3% have all measures in place to calculate their CV event risk.

The next tab shows excluded and incomplete patient records:

In this example there are 154 patients with a diagnosed condition who were excluded (2002-154= 1848) and 549 were excluded due to missing data items as listed in the graph. This graph makes it easy to measure change as part of a QI activity. Patients can be easily identified by clicking on the graph and their records can be updated or a Topbar prompt can be created for the missing data items.

QIM 9 – Cervical Screening

Australia has the lowest mortality rate and the second lowest incidence of cervical cancer in the world. The success of the cervical screening program is dependent upon the recruitment of women. Higher participation in cervical screening means that more women with precancerous abnormalities can have these detected and treated, which is necessary for achieving the overall aim of reducing incidence and mortality from cervical cancer.

Quality Improvement Measure 9 definition:

Proportion of female regular clients aged 25 to 74, who have not had a hysterectomy and who have had a cervical screening [human papillomavirus (HPV) test] after 1 December 2017 and within the previous 5 years.

To meet the criteria above, a filter will need to be applied before the graph will show the correct population:
Regular clients aged 25-74:

You can select the Gender/Female but the report will automatically show female patients as well as patients with no gender entered. This is the preferred approach, as it will include all potential patients.

Results after 1/12/2017:

This filter is currently not available for the Cervical Screening graph. We will update CAT4 in the near future to enable this filter to be applied to the report.

However the current options are covering the five year criteria:

• HPV <= 5yrs - HPV tested within the last 5 years
• Pap <= 2 yrs (no HPV) - Pap tested within the last 2 years but no HPV test done
• HPV>5yrs / Pap>2yrs (no HPV) - No HPV test in more than 5 years/ no Pap test in more than 2 years
• Not Recorded
• Ineligible

The Screening/Cervical Screening report will show the selected patients and the proportion of patients without a test recorded:
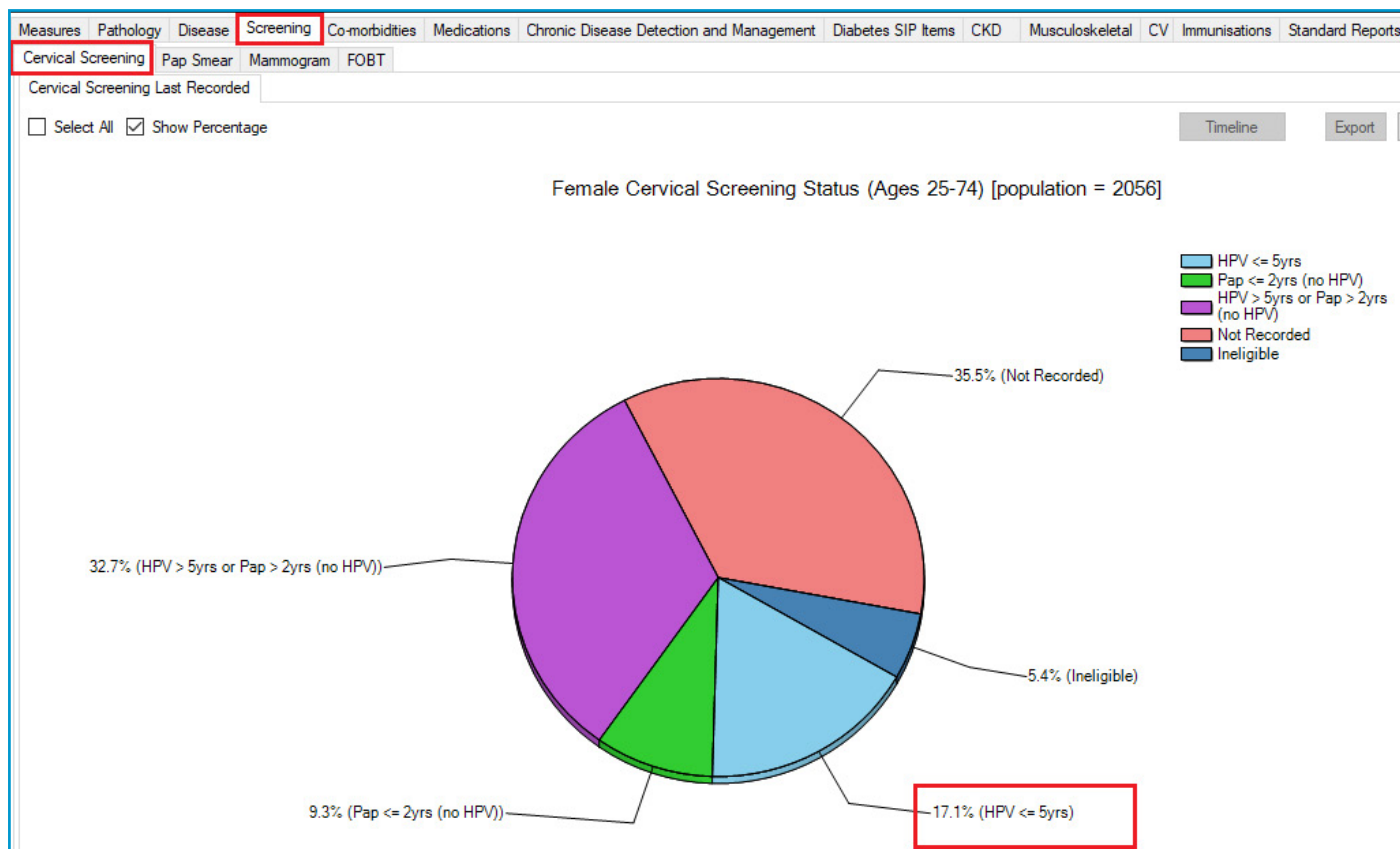
This report excludes patients with a number of conditions, including hysterectomy. Full details can be found here:
https://help.pencs.com.au/display/CG/Diagnosis+Codes+Screening+Tests

Based on the report recall messages can be sent to patients or a Topbar prompt can be created to notify clinicians about eligible/overdue patients. The report can also be exported to be sent to the national cancer register for bulk enquiries on patients. For details on Topbar prompts please check here: Topbar Prompts

QIM 10 – Blood Pressure for Patients with Diabetes

Diabetes was the underlying cause of around 10% of all deaths in Australia in 2016 and recent reports show death rates for people with type 2 diabetes are rising. For people with type 1 or type 2 diabetes, monitoring blood pressure can help assure appropriate medical care to lower the risk of macro vascular (stroke, heart attack and heart failure) and microvascular (kidney disease, eye disease and peripheral neuropathy) complications.

Quality Improvement Measure 10 definition:

Proportion of regular clients who have diabetes and who have had a blood pressure measurement result recorded at the primary health care service within the previous 6 months

To meet the criteria above, a number of filters will need to be applied before the blood pressure (BP) graph will show the correct population:
Regular clients:

With diabetes:

This will select any type of diabetes, but not include Gestational Diabetes.

With results in the last six months
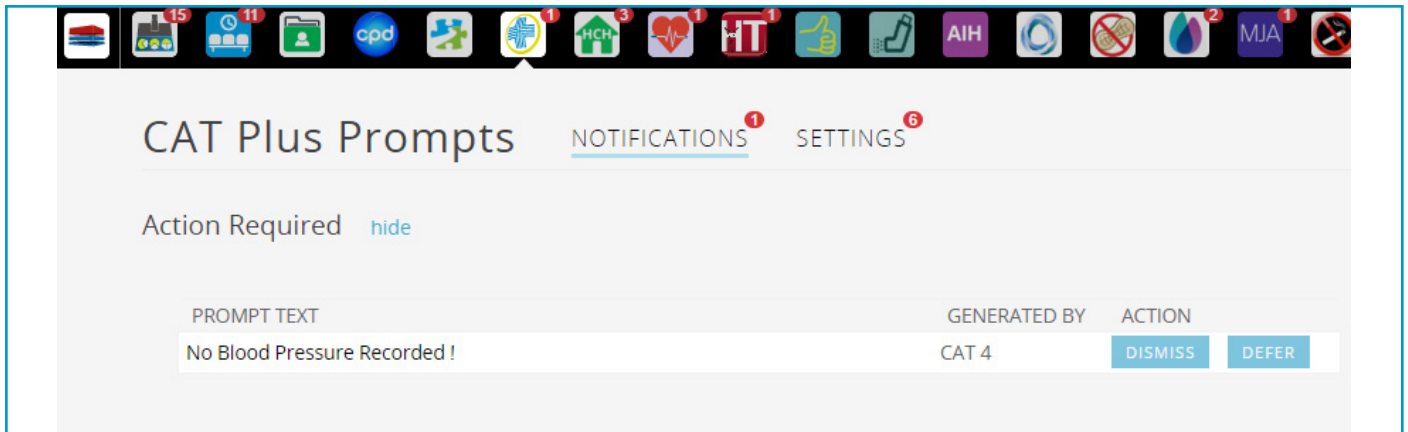
The Measures/BP report will now show the blood pressure results for the last six months for the selected patients:
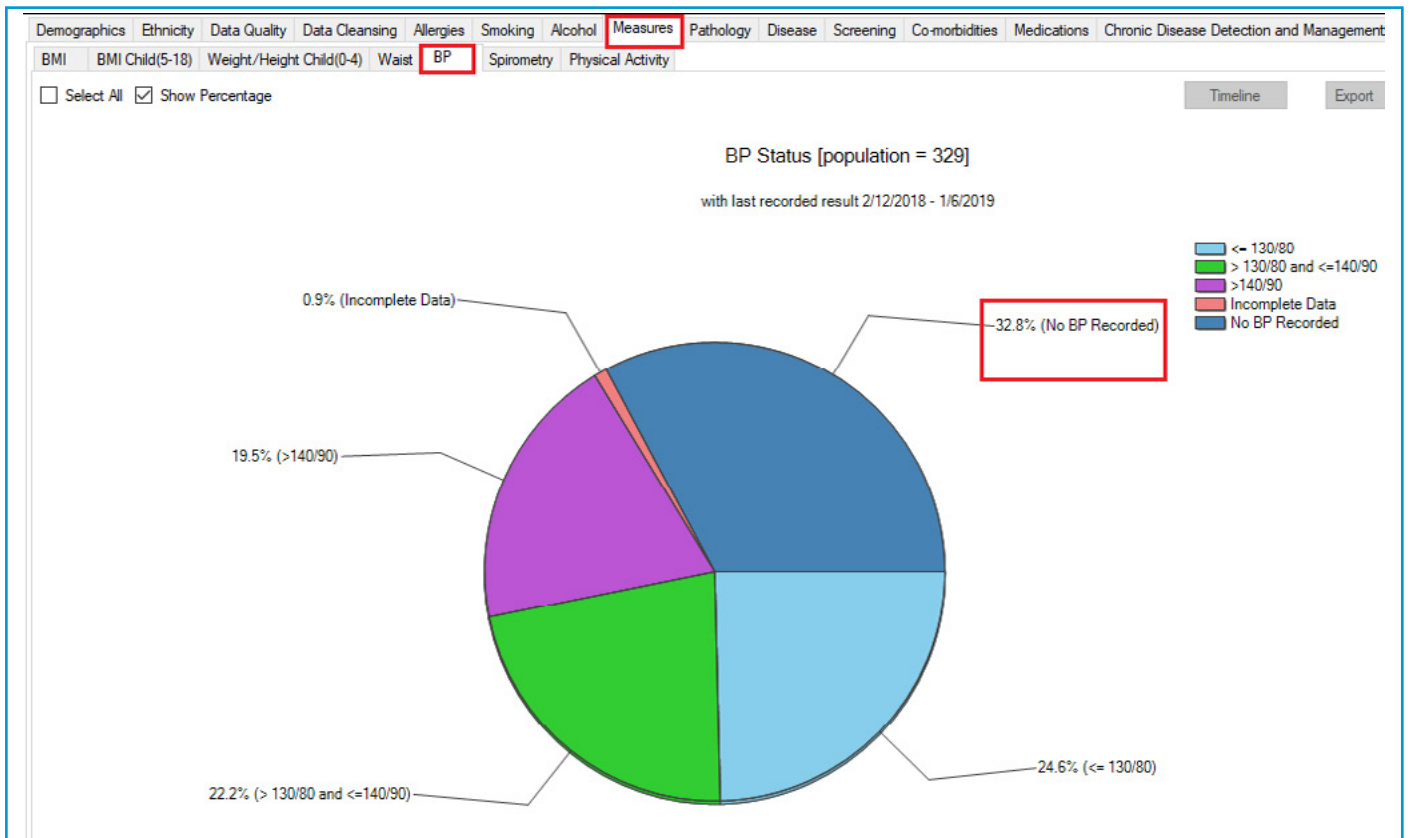
Please note that all patients who had blood pressure results outside the six months date range are counted under the 'No BP recorded' category along with those patients who never had a BP done.

Topbar – Blood Pressure

This is a good example for a Topbar prompt based on the above search in CAT4. Missing blood pressures are not reason enough to recall a patient, but if a CAT Plus Prompt is created based on the criteria shown above, the clinicians will receive a notification for any patient with diabetes who didn't have a BP done in the last six months. Once the BP is updated, the prompt will disappear until six months have passed. This ensures opportunistic care and will also apply to patients newly diagnosed or new patients as the prompts are dynamic.

Appendix - Resources

Resources to help you with ongoing quality improvement using CAT Plus

Our online user guides - everything you ever wanted to know about CAT Plus and probably a lot more!
https://help.pencs.com.au

Videos - watch webinars, training or short, tip of the month videos when it suits you:
https://vimeo.com/pencs/albums

Webinars - Pen CS is running regular webinars for new users and for specific topics, check out the page for the latest schedule:
https://www.pencs.com.au/support/webinars/

General Practice Resources - Please check with your Primary Health Network for aditional resources available from Pen CS e.g. Privacy Poster, Pen CS Data Governance Booklet.

GP Newsletter - Sign up to receive news, release updates, case studies and further information from Pen CS.
https://lp.constantcontact.com/su/HMgIOwO/gpnewsletter

Pen CS website and online shop - www.pencs.com.au

CAT4 – Recall CAT

Delivered through CAT4, practices can send either an SMS or Voicemail message in bulk to their patients. By utilising CAT4's extensive search capabilities, practices can engage with their patients for a multitude of reasons such as preventive health initiatives, chronic disease management, due or overdue health checks, immunisations and General Practice financial opportunities. The filters and searches detailed in this booklet can all be used as a base for SMS or Voice messages. Full details on

Recall CAT can be found here:
https://help.pencs.com.au/display/CG/Recall+CAT+-+SMS+and+Voice+Messaging+for+CAT4

From the RACGP https://www.racgp.org.au/download/Documents/e-health/Requirement-3-Data-Records-and-Clinical-Coding-policy-template-for-general-practices.docx

[insert practice name] Practice policy on data records and clinical coding

Current as of: [insert date of last revision]
Version No:

Our practice ensures that important elements of our patients' health information is recorded in their health record consistently, regardless of the provider they see. The clinical terminologies used are based on agreement by our practice and/or the practice team.

Background and rationale
Using consistent clinical coding terminologies will support better utilisation of searchable chronic disease registers and avoid confusion that can result from 'free text' descriptions in the health record. Best practice is the use of medical vocabulary that can be mapped against a nationally recognised disease classification or terminology system.

Practice procedure
Our practice:
• discourages the use of free-text coding for the recording of all important diagnoses and current and past clinical history in patients' health records
• is working towards consistent recording by encouraging the use of agreed clinical coding terminologies by using, for example, a 'pick list' or 'drop down box' function in the clinical desktop system
• uses clinical coding terminologies, at a minimum, for all 'active patients' of the practice[1]
• provides practice-based education and skills-based training to all healthcare providers and staff to ensure compliance with the policy and competency in the use of the technology.

Software requirements
The clinical desktop system used in our practice is:
(List clinical software)

The medical vocabulary used in the clinical desktop system is:
(List medical vocabulary)

Staff responsibility
It is the responsibility of all healthcare providers in our practice, where clinically relevant, to use the 'pick list' or 'drop-down box' capability and reduce the unnecessary and/or inappropriate use of 'free text'.

It is the responsibility of all administrative staff to support the use of clinical coding terminologies by undertaking any administration tasks involved in the maintenance or use of the clinical desktop system. When any problems arise with the clinical desktop system software within our practice, the appropriate software vendor and/or the company providing IT support for the practice will be contacted to assist in resolving the problem in a timely manner.

1-The definition of an 'active' patient is a patient who has attended the practice three (3) or more times in the past two (2) years.

Data records and clinical coding policy template for general practices – April 2016
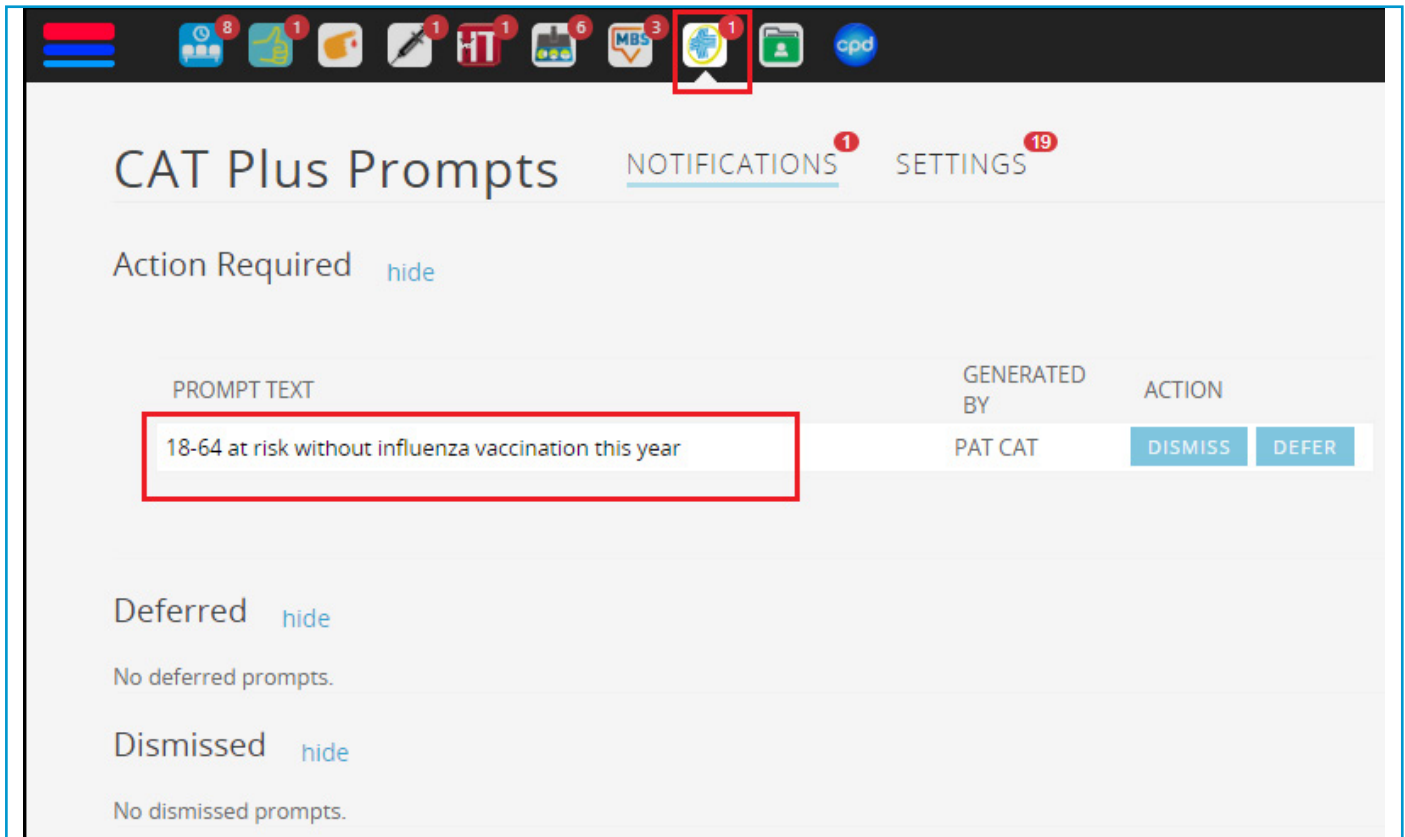Policy version number [insert version number]
Policy review date [insert review date]

Topbar Prompts

CAT4 and Topbar can work together using CAT Plus Prompts. Full details are explained on our help site:

https://help.pencs.com.au/display/CP/CAT+PLUS+PROMPTS

In brief, any search/filter created in the daily view in CAT4 can be sent to Topbar and will be triggered by any patient meeting the search criteria. This will show a notification in the CAT Plus Prompts app alerting the clinician. These prompts are dynamic and will keep reminding Topbar users until the issue has been addressed. CAT4 provides some reports to see if the prompts are acted on.

Free Text Clean Up for MD/BP users

Both Best Practice and Medical Director have a free text clean up tool in the admin section of their software. Practices are encouraged to use this tool to improve the correctly coded diagnosis, and a good tip is use CAT4 to create a baseline of your data and then create another extract after you have completed the clean up to see the difference it made to your data.

Best Practice users can access a guide here:
http://help.pencs.com.au/display/CR/Bulk+clean+up+of+free+text+diagnosis+-+BP+users

Medical Director users can access a guide here:
http://help.pencs.com.au/display/CR/Bulk+clean+up+of+free+text+diagnosis+-+MD3+users

PDSA Template

Q1. What are we trying to accomplish ? (Goal)

Our goal is to:

Q2. How will we know that a change is an improvement? (Measures)

We will measure:
1.
2.
3.

Q3. What Changes can we make that can lead to an improvement (Ideas)

Ideas for change:

Description :			
Plan	Do	Study	Act
What: Who: When: Expected Outcome:			

Description :			
Plan	Do	Study	Act
What: Who: When: Expected Outcome:			

Description :			
Plan	Do	Study	Act
What: Who: When: Expected Outcome:			

pip qi

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