

# PATCAT USER GUIDE

USER GUIDE PAT CAT

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The Practice Aggregation Tool for the Clinical Audit Tool (PAT CAT) is a data repository, data aggregation and reporting tool for CAT4 de-identified data extract files. It is designed to assist with population health analysis and reporting by aggregating data from many practices over time.

PAT CAT provides aggregated statistics and figures that clearly show population health on a regional scale, yet also provides granular practice specific data. This is achieved through a comprehensive collection of graphs, reports, statistics, indicators, timelines, geospatial mapping and customisable data filtering.

Practices upload their own data to the PAT CAT server in accordance with their agreement with the organization hosting the PAT CAT – normally this is the local PHN or other organisation. The practice is provided with a login to the PATCAT web site by the organisation which allows them to view their own data and compare it to the aggregated data results.

The purpose of this document is to provide instructions on how to use PAT CAT. It is assumed that the users are familiar with CAT4, as all data originates from that application and the user interface of PAT CAT is based on that of CAT4.

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# 1 DEFINITIONS AND ACRONYMS

CAT Plus products use a number of terms that are explained in the table below

Term	Description
ABS	Australian Bureau of Statistics
ACR	Microalbumin Creatinine Ratio
Active patient	A patient with at least three visits in the last two years
Adjusted Population	In all numerical reports in PAT CAT we display the total number and another column called 'Adjusted'. Please refer to <a href="#">Adjusted Column Details</a> <sup>1</sup> for more detail
ANU	Australian National University
APCC	Australian Primary Care Collaboratives
ATSI	Aboriginal Torres Strait Islander
BMI	Body Mass Index
BP	Best Practice Clinical Desktop System
BP	Blood Pressure
BP	Best Practice
BSLF	Blood Sugar Level (Fasting) – more commonly called FBG
CAT	PCS Clinical Audit Tool®
CAT	Clinical Audit Tool
CAT4	Clinical Audit Tool
CHD	Coronary Heart Disease

<sup>1</sup> <https://help.pencs.com.au/display/ds/Adjusted+Column+Details>



CKD	Chronic Kidney Disease
COPD	Chronic Obstructive Pulmonary Disease
CV	Cardiovascular
CVD	Cardiovascular Disease
DoH	Department of Health
DoHA	Department of Health and Ageing
DVA	Department Veteran Affairs
eGFR	Estimated Glomerular Filtration Rate
ES	Event Summary
FBG	Fasting Blood Glucose
Geocode	The process of converting a location/address into a coordinate that then translates to an area type (e.g. SA1)
GP	General Practitioner
GRAPHC	National Centre for Geographic & Resource Analysis in Primary Health Care
GTag	GRAPHC – Tag (a dedicated globally unique identifier)
HbA1c	Haemoglobin A1c
HCN	Health Communication Network Ltd
HDL	High-density Lipoproteins
Help Desk	Pen CS Help Desk
HMR	Home Medicine Review
IF	Improvement Foundation

LDL	Low-density Lipoprotein
MBS	Medicare Benefits Schedule
MD	Medical Director Clinical Desktop System, developed by HCN
MD	Medical Director
NEHTA	National E-Health Transition Authority
NPCC	National Primary Care Collaboratives
NPCC	National Primary Care Collaborative
NPI	National Performance Indicators
NVDPA	National Vascular Disease Prevention Alliance
Org	PHN or other organisation
Organisation	PHN or other organisation
PCEHR	Personally Controlled eHealth Record
PEN CS	Pen CS Pty Ltd
Pensioners	Used in Practice Data Quality Benchmark Report. The pensioner status of a patient is extracted from the patient details in the clinical system. This is not age related
QAIHC	Queensland Aboriginal and Islander Health Council
QRG	Quick Reference Guide
RACGP	Royal Australian College of General Practitioners
SA	Statistical Area
SHS	Shared Health Summary as part of My Health Record
SIP	Service Incentive Payment

Topbar	A software tool for general practitioners by PCS
Transient	A patient that has visited at least 2 clinics in the organisation's catchment where both clinics have uploaded patient data.
Unique	A patient that has only been uploaded from one clinic in the organisation's catchment

## 2 SYSTEM REQUIREMENTS, INSTALLATION AND CONFIGURATION

PAT CAT is installed on a server and detailed specifications/requirements for the server are available from Pen CS. It is accessed by users entirely within a web browser. The following browsers are recommended:

- Internet Explorer v10 or later,
- Firefox v13 or later,
- Chrome v32 or later,
- Safari v7 or later.

### PAT CAT Responsibilities and Requirements

#### Requirements

Web Server	Minimum Requirements	Recommended Requirements
Operating System	Microsoft Windows Server 2008 (Standard/R2) X64	Microsoft Windows Server 2012 (Standard/R2) X64 or higher
Processor	8 Logical Cores	24+ Logical Cores
RAM	16 GB	32+ GB
Hard Disk	250 GB	500+ GB
Microsoft .NET Framework	<ul style="list-style-type: none"> <li>• .NET 3.5, 4.5 and 4.6.1</li> <li>• IIS 7+</li> <li>• IIS Web components(ASP.NET 4.5, Static &amp; Dynamic Content Compression, IIS Manager)</li> </ul>	

Web Server	Minimum Requirements	Recommended Requirements
Other Requirements	<ul style="list-style-type: none"> <li>Broadband internet connection (minimum 5 Mbs up + 5 Mbs down)</li> <li>SSL Certificate (Single root or Wildcard dependent on IT infrastructure, Wildcard recommended)</li> <li>Dedicated PAT CAT Subdomain (e.g. <a href="https://patcat.yourphnurl.org.au">https://patcat.yourphnurl.org.au</a>)</li> <li>Port forwarding from port 80 to port 443 for all PAT CAT traffic</li> <li>Remote access facilities for installation and maintenance by Pen CS (e.g. Remote Desktop, Teamviewer...etc.) with local Admin privileges</li> <li>Firewall exception for connectivity to database server (standard SQL Server ports are TCP 1433 and UDP 1434)</li> <li>Internet Explorer 11+ or Google Chrome v42+</li> </ul>	

Note: "+" refers to "more is better"

Database Server	Minimum Requirements	Recommended Requirements
Operating System	Microsoft Windows Server 2008 (Standard/R2) X64	Microsoft Windows Server 2012 (Standard/R2) X64 or higher
Processor	16 Logical Cores	32+ Logical Cores
RAM	32 GB	64+ GB
Hard Disk	1TB	1+TB
Microsoft .NET Framework	<ul style="list-style-type: none"> <li>.NET 3.5, 4.5 and 4.6.1</li> </ul>	
Database	<ul style="list-style-type: none"> <li>Microsoft SQL Server 2008r2 Standard Edition (2014 Standard Edition or higher recommended)</li> </ul> <p>SQL Server Options installed:</p> <ul style="list-style-type: none"> <li>SQL Server Management Studio</li> <li>Mixed Mode Authentication</li> <li>SQL Server Agent</li> </ul>	

Database Server	Minimum Requirements	Recommended Requirements
Other Requirements	<ul style="list-style-type: none"> <li>• Firewall exception for connectivity to web server (standard SQL Server ports are TCP 1433 and UDP 1434)</li> <li>• Remote access facilities for installation and maintenance by Pen CS (e.g. Remote Desktop, Teamviewer...etc.) with local Admin privileges, and database owner privileges</li> </ul>	


Note: "+" refers to "more is better"

## 2.1 PAT CAT Responsibilities and Requirements



### 2.1.1 Responsibilities

#### Server Maintenance and Availability

- The server hosting PAT CAT is under your control and as such needs to be monitored and maintained
- Should the server be unavailable during a scheduled upload time PENCS can assist in the resending of data from practices as V3 of scheduler allows for remote triggering of a data upload. This functionality will be made available to PHNs shortly as well.
- Server disk space – PAT CAT will need sufficient disk space at all times to ensure that scheduled uploads can be imported. The server host needs to monitor and allocate the required disk space before scheduled collects.
  - Web Server – at least 50GB free disk space.
  - If extract files are stored in another disk, the 50GB free disk space also applies there.
  - SQL Server – at least 150GB free disk space.
- PAT CAT updates are managed and pushed out by PENCS but need to be applied by the PHN. This will allow the PHN to choose the best time for an update (over the weekend or in the evening is recommended).
-  Updating PAT CAT to the latest version is responsibility of the PHN and failing to update can result in reports/data missing as well as wrong figures being displayed if an update contained an algorithm change. Please make sure that you update when new updates are available!
- Server operating system and security updates are responsibility of the host.
- Access to the Server by PEN CS for PAT CAT trouble shooting and maintenance needs to be provided either ongoing or in a timely manner so that any issues can be addressed without delay. A clear escalation pathway should be provided by the ACCHO/PHN.
- Server certificates such as SSL and other server specific maintenance are the responsibility of the host.

#### IT Contact Details to be provided

The PHN should provide the best contact details for their IT support to allow PEN CS staff to access the PAT CAT

server(s) if needed. Access might be required for error checking, updates or other software maintenance issues. If access details or IT providers change PEN CS should be notified by contacting the relevant account manager.

#### Practices and licence maintenance

With the alignment of PAT CAT and the licensing portal, the ACHOs/PHNs are responsible for maintaining an up to date list of practices in the licensing portal. This will ensure that only licensed practices are active in PAT CAT. Practices that are using CAT Plus but are not submitting data to PAT CAT **have** to be configured in PAT CAT accordingly as this is an agreement between the practice and the ACCHO/PHN.

As an additional safe guard we are implementing a configuration setting in the licensing portal to indicate which practices are uploading automatically, manually or not at all. This status needs to be confirmed with PEN CS so we can update the licensing portal accordingly to avoid any accidental uploads/collections via remote trigger.

## 2.1.2 Requirements

Web Server	Minimum Requirements	Recommended Requirements
Operating System	Microsoft Windows Server 2008 (Standard/R2) X64	Microsoft Windows Server 2012 (Standard/R2) X64 or higher
Processor	8 Logical Cores	16 Logical Cores
RAM	16 GB	16+ GB
Hard Disk	250 GB	250+ GB
Microsoft .NET Framework	<ul style="list-style-type: none"> <li>ASP.NET 3.5 and 4.5</li> <li>IIS 7+</li> <li>IIS Web components(ASP.NET 4.5, Static &amp; Dynamic Content Compression, IIS Manager)</li> </ul>	
Other Requirements	<ul style="list-style-type: none"> <li>Broadband internet connection (minimum 5 Mbs up + 5 Mbs down)</li> <li>SSL Certificate (Single root or Wildcard dependent on IT infrastructure, Wildcard recommended)</li> <li>Dedicated PAT CAT Subdomain (e.g. <a href="https://patcat.yourphnurl.org.au">https://patcat.yourphnurl.org.au</a>)</li> <li>Port forwarding from port 80 to port 443 for all PAT CAT traffic</li> <li>Remote access facilities for installation and maintenance by Pen CS (e.g. Remote Desktop, Teamviewer...etc.) with local Admin privileges</li> <li>Firewall exception for connectivity to database server (standard SQL Server ports are TCP 1433 and UDP 1434)</li> <li>Internet Explorer 11+ or Google Chrome v42+</li> </ul>	

Note: "+" refers to "more is better"

Database Server	Minimum Requirements	Recommended Requirements
Operating System	Microsoft Windows Server 2008 (Standard/R2) X64	Microsoft Windows Server 2012 (Standard/R2) X64 or higher
Processor	8 Logical Cores	16+ Logical Cores
RAM	32 GB	32+ GB
Hard Disk	1TB	1+TB
Microsoft .NET Framework	<ul style="list-style-type: none"> <li>Microsoft .NET 3.5 and 4.5</li> </ul>	
Database	<ul style="list-style-type: none"> <li>Microsoft SQL Server 2008r2 Standard Edition (2014 Standard Edition or higher recommended)</li> </ul> <p>SQL Server Options installed:</p> <ul style="list-style-type: none"> <li>SQL Server Management Studio</li> <li>Mixed Mode Authentication</li> <li>SQL Server Agent</li> </ul>	
Other Requirements	<ul style="list-style-type: none"> <li>Firewall exception for connectivity to web server (standard SQL Server ports are TCP 1433 and UDP 1434)</li> <li>Remote access facilities for installation and maintenance by Pen CS (e.g. Remote Desktop, Teamviewer...etc.) with local Admin privileges, and database owner privileges</li> </ul>	

Note: "+" refers to "more is better"



### 3 WHERE TO GET HELP

For further assistance with **CAT Plus products** please contact the PEN CS Help Desk on **1800 762 993** or email [support@pencs.com.au](mailto:support@pencs.com.au)<sup>2</sup>

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<sup>2</sup> <mailto:support@pencs.com.au>

## 4 GETTING STARTED

PAT CAT is accessed via an internet browser:

- Open your preferred browser and enter the address specific to your organisations PAT CAT instance, as provided to you by Pen CS
- Enter your Username and Password key and click **LOGIN**.

**NOTE:** The logon screen also provides the PAT CAT version number on the bottom right.


- [Setting up Practices](#)(see page 23)
- [Practice Groupings](#)(see page 29)
- [Practice to Practice Visibility](#)(see page 31)
- [Additional Configurations PAT CAT](#)(see page 35)
  - [Email Reminders](#)(see page 36)
  - [User Interface Customisation](#)(see page 37)
  - [Schedule Updates](#)(see page 38)
  - [Data Management](#)(see page 39)
    - [Disk Management](#)(see page 40)
    - [Report Recalculate](#)(see page 41)
    - [Report Work Space](#)(see page 42)
    - [Duplicate Extracts](#)(see page 43)

## 4.1 Setting up Practices



With the latest release of PAT CAT (V3.2) the practice list in PAT CAT will be automatically aligned with the list of practices in the MyPen Licensing Portal. There will be some manual merging and cleaning to do after the update, but after that initial work all new practices will have to be set up only in the licensing portal. No separate user names and passwords will have to be created in PAT CAT any more. A practice licensed through the MyPen Portal will be able to upload their de-identified data to PAT CAT without the configuration of an additional user name or password.














While the update is being rolled out, we have ensured that CAT4 and Scheduler remain compatible to both the old and the new PAT CAT practice list.

 There is no more option to add a practice in PAT CAT - this can only be done through the MyPen portal once PAT CAT has been updated.

**NOTE:** The Practice Management function is only available when you are logged in as organisation user, when logged on as a practice user you will not see the Practices button.



Clicking on the 'Practices' link will open the practice list window. All columns can be sorted by clicking on the column header and the green ticks and red crosses indicate the practice status for the respective heading.

Practice List								
 Hide Unlicensed Practices		 Merge Licensed and Unlicensed Practice		 Sync Practices				
Link	Practice Name	Practice ID	Email	Submitting Data	Allow Practice Login	Email Notification	Sharing Data	Merged
	AF.Topbar	AF.Topbar		✓	✓	✗	✓	✗
	AFMDTopbar	AFMDTopbar		✓	✓	✗	✓	✗
	ash.sky	ash.sky		✓	✓	✗	✗	✗
	Ash.zedmedv24	Ash.zedmedv24		✓	✓	✗	✓	✗
	ash_reg.bp	ash_reg.bp		✓	✓	✗	✓	✗
	audit	audit		✓	✓	✗	✗	✗
	BP LinkedEHR Test Clinic	BP LinkedEHR Test Clinic		✗	✓	✗	✓	✗
	bp.zedmed	bp.zedmed		✓	✓	✗	✓	✗
	BPnew	BPnew		✓	✓	✗	✗	✗
	Cheran Gul Clinic	Cheran Gul Clinic		✓	✓	✗	✗	✗

### 4.1.1 Editing Practice Details

As in the previous version a click on a practice name will open a window allowing changes in the set-up for that practice:

Edit Practice

Practice Name

AF. Topbar

Practice ID \*

AF. Topbar

Email

Email Notification

☐

Submitting Data

☒

Allow Practice Login

☒

Sharing Data

Yes

Merged

No

✓ Save

● Cancel

Field Name	Definition
Practice Name	The full name of the practice without abbreviations. Mandatory field.
Practice ID	An abbreviation of the practice name or identifier. It is recommended that it is less than 10 characters. This field appears on all the reports generated in PAT CAT rather than the Practice Name.  Mandatory Field.
Email	Email address of the practice
Email Notification	The practice can receive an automated email each month if they have not sent their data to PAT CAT. See Email Reminders section below for more details.
Sharing Data	Value showing whether the practice has given consent to share their individual practice aggregated data with other practices in PAT CAT. Default value is NO. See Practice to Practice Visibility section below for more details.
Submitting Data	This box is ticked by default, allowing the practice to submit data to PAT CAT. If unticked, the practice will not be able to submit data and will not show on the practice filter. This is useful for removing practices that are set up in the licensing portal but are currently not submitting data.

Allow Practice Login	This box is ticked by default, allowing the practice to use their CAT Plus details to log in to PAT CAT. If unticked, no users under this practice will be able to login to the PAT CAT website.
Sharing Data	Value showing whether the practice has given consent to share their individual practice aggregated data with other practices in PAT CAT. Default value is NO. See Practice to Practice Visibility section below for more details.
Merged	This indicates if a practice has been merged after the initial alignment of PAT CAT and the MyPen portal. Please see the 'Merging' paragraph for more details.

### 4.1.2 Merge Licensed and Unlicensed Practices

When the PAT CAT aligns with the licensing portal for the first time, there will be some manual work required to merge existing practices set up in PAT CAT with the ones listed in the licensing portal. This could be due to spelling mistakes or other mismatches. Merging the accounts is needed to ensure consistency of reporting and will only have to be done once. It can also be reversed at any time if found to be in error. To merge two practices start by clicking on the 'Merge Licensed and Unlicensed Practice' button:

**Practice List**

Link	Practice Name	Practice ID	Email
	AF.Topbar	AF.Topbar	
	AFMDtopbar		
	ash.sky		
	Ash.zedmedv24		
	ash_reg.bp		
	audit		
	BP LinkedEHR Test Clinic		
	bp.zedmed		
	BPnew		
	Cheran Gul Clinic		
	deepti.test2		
	Defect Test Clinic		
	Eph Organisation		
	Eph Organisation A		
	Eph Organisation B		
	Eph Organisation C		
	Eph Organisation D		
	Is MD Sky		

**Merge Practice**

Note: The direction of the merge is from right to left (Licensed -> Unlicensed). Only the practice name of the licensed practice will be carried over to the unlicensed practice

Unlicensed Practices

- ☐ BP LinkedEHR Test Clinic
- ☐ Defect Test Clinic
- ☐ Legacy Practice 11
- ☐ Legacy Practice 12
- ☐ Legacy Practice 13
- ☐ Legacy Practice 14
- ☐ Legacy Practice 16
- ☐ Legacy Practice 17
- ☐ Legacy Practice 18
- ☐ Legacy Practice 19
- ☐ Legacy Practice 2

Licensed Practices

- ☐ Legacy Practice 19 (8726-Legacy Practice 19)
- ☐ Legacy Practice 20 (8723-Legacy Practice 20)
- ☐ Legacy Practice 9 (legacy Practice9)
- ☐ MD
- ☐ new (8730-new)
- ☐ Rashmi Sawant's Clinic
- ☐ Sample
- ☐ Sched\_POC
- ☐ sky.user2

Then select the unlicensed practice (this would be a practice set up in PAT CAT which is unmatched to one in the licensing portal) and the licensed practice (which was pulled from the licensing portal) to merge it with. The merged practice will have all the data and other details from the unlicensed practice but will have the name of the licensed practice. This is to ensure that all data previously uploaded to PAT CAT under the unlicensed practice remains intact and is aligned with the correct name from the licensed practice. Select the two practices and click on 'Merge Practices':

**Merge Practice**

Note: The direction of the merge is from right to left (Licensed -> Unlicensed). Only the practice name of the licensed practice will be carried over to the unlicensed practice

**Unlicensed Practices**

- ☐ BP LinkedEHR Test Clinic
- ☐ Defect Test Clinic
- ☒ Legacy Practice 11
- ☐ Legacy Practice 12
- ☐ Legacy Practice 13
- ☐ Legacy Practice 14
- ☐ Legacy Practice 16
- ☐ Legacy Practice 17
- ☐ Legacy Practice 18
- ☐ Legacy Practice 19
- ☐ Legacy Practice 2

**Licensed Practices**

- ☐ Legacy Practice 19 (8726-Legacy Practice 19)
- ☒ Legacy Practice 20 (8723-Legacy Practice 20)
- ☐ Legacy Practice 9 (legacy Practice9)
- ☐ MD
- ☐ new (8730-new)
- ☐ Rashmi Sawant's Clinic
- ☐ Sample
- ☐ Sched\_POC
- ☐ sky.user2

**Merge Practices** **Cancel**

This will result in a window being displayed:

**Merge Complete**

The practice has been successfully merged

**Close**

After a successful merge the practice details will reflect the merged information. To display the practice details, click on the practice name in the list.

Edit Practice

Practice Name	Legacy Practice 20
Practice ID *	Legacy Practice 11
Email	
Email Notification	<input type="checkbox"/>
Submitting Data	<input checked="" type="checkbox"/>
Allow Practice Login	<input checked="" type="checkbox"/>
Sharing Data	Yes
Merged	Yes <span>🔄 Separate Practices</span>

Important

- This section is obsolete and has been locked
- The username and password below is for outdated CAT4's that uses a username and password to send extracts to PATCAT.
- This section will automatically be removed once CAT4 has been updated to the correct version

Username	LegacyPractice11
Password	LegacyPractice11

✓ Save
● Cancel

The legacy user name and password is displayed for reference, and it is possible to separate the practices by using the 'Separate Practices' button. Separating the practices will assign the data back to their original owners:

Separate Practice

Separating the practice will result in extracts being assigned back to their original owner. Do you wish to continue?

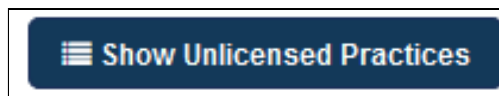
🔄 Separate Practices
● Cancel

### 4.1.3 Hide Unlicensed Practices

Licensed practice are those that appear in the MyPen portal as active. Their status is indicated by the green dot in the 'Link' column:

<div> <div>☰ Hide Unlicensed Practices</div> <div>🔗 Merge Licensed and Unlicensed Practice</div> </div>			
Link	Practice Name	Practice ID	Email
●	AF.Topbar	AF.Topbar	
●	AFMDtopbar	AFMDtopbar	
●	ash.sky	ash.sky	
●	Ash.zedmedv24	Ash.zedmedv24	
●	ash_reg.bp	ash_reg.bp	
●	audit	audit	
●	BP LinkedEHR Test Clinic	BP LinkedEHR Test Clinic	
●	bp.zedmed	bp.zedmed	
●	BPnew	BPnew	
●	Cheran Gul Clinic	Cheran Gul Clinic	
●	deepti.test2	deepti.test2	
●	Defect Test Clinic	Defect Test Clinic	

To show only licensed practices, click on the 'Hide Unlicensed Practices' button. This will hide all practices with a red dot (not licensed) and will change the label of the button to 'Show Unlicensed Practices'. To show all practices, click the button again.



Unlicensed practices will display the legacy user name and password for data upload from CAT4. CAT4 will, once updated, use the new interface for PAT CAT data upload. This old functionality is only maintained for compatibility reasons and will be phased out. We strongly encourage all CAT Plus users to update their software as soon as possible.



Edit Practice

Practice Name	Legacy Practice 18
Practice ID *	Legacy Practice 18
Email	
Email Notification	<input type="checkbox"/>
Submitting Data	<input checked="" type="checkbox"/>
Allow Practice Login	<input checked="" type="checkbox"/>
Sharing Data	Yes
Merged	No

Important

- This section is obsolete and has been locked
- The username and password below is for outdated CAT4's that uses a username and password to send extracts to PATCAT.
- This section will automatically be removed once CAT4 has been updated to the correct version

Username	LegacyPractice18
Password	LegacyPractice18

✓ Save

✂ Delete

● Cancel

#### 4.1.4 Sync Practices

The 'Sync Practices' button allows a manual synchronisation with the licensing portal. Any time a change in your licensing portal has been applied, you need to synchronize the practice list with PAT CAT to see the changes.

## 4.2 Practice Groupings

Practices can be grouped to enable comparisons between similar practices or to provide geographical or otherwise relevant groupings. For example participation in particular projects can be used as grouping criteria. All practices that are part of an ongoing quality improvement program could be added to a group and can thus be easily compared to the overall data or to other grouped practices not participating in the program. After configuring at least two practices you can add groups by clicking on the Practice Groupings tab in the Practices screen.

The screenshot shows the 'Add Group' dialog box. It contains the following fields and values:

- Group Name: Test Group
- Group ID: TGR
- Notes: This is an example for a group
- Colour: 33FF00 (with a green color swatch)

Buttons: 'Ok' and 'Cancel'.

Figure 8: Practice Groupings Setup

After giving the group a name and ID you will have to select a colour - this helps to identify different groups in the reports. Click on OK to save your group. The next step is to add practices to the new group; all practices will be displayed in the list and you can choose practices by clicking the box next to their name/ID.

The screenshot shows the 'Practice Groupings' page with the 'Add Practice To Group' dialog box open. The dialog lists the following practices:

- ☒ GTCMC
- ☐ PCSMC
- ☒ VGP

Buttons: 'Add' (highlighted with a red box) and 'Cancel'.

Figure 9: Adding Practices to a Group

This will create your new group with the colour selected:

The screenshot shows the 'Practice Groupings' page after the group has been created. The 'Test Group (TGR)' is listed with a green background. It contains the following practices:

- ☒ GTCMC
- ☒ VGP

Buttons: 'Add Practice'.

Figure 10: Practice Group



To leave this screen and return to the standard PAT CAT interface click on

Looking at any numerical report (accessed via the 'View Report' button) in PAT CAT now shows a different view as the grouped practices are displayed in the colour chosen and with their own aggregated results. Each individual clinic is still shown to allow individual reporting within the group and in the overall reporting. In the example below the 'Smoking' report is displayed.

Smoking

View Map View Report View Timeline Download

Smoking Status

Show / Hide Columns

No filters applied for June 2015 audit month. Generated on 8/07/2015 2:18 PM

Measure	PENCS	PENCS %	Adjusted	Adjusted %	TGR	TGR %	GTCMC	GTCMC %	VGP	VGP %	GTCMC	GTCMC %	VGP	VGP %
Total Population	25,431		25,431		20,928		5,734		15,194		5,734		15,194	
Daily Smoker	1,551	6.10 %	1,551	6.10 %	1,282	6.13 %	363	6.33 %	919	6.05 %	363	6.33 %	919	6.05 %
Irregular Smoker	357	1.40 %	357	1.40 %	284	1.36 %	81	1.41 %	203	1.34 %	81	1.41 %	203	1.34 %
Ex Smoker	2,296	9.03 %	2,296	9.03 %	1,907	9.11 %	528	9.21 %	1,379	9.08 %	528	9.21 %	1,379	9.08 %
Never Smoked	7,414	29.15 %	7,414	29.15 %	6,088	29.09 %	1,678	29.26 %	4,410	29.02 %	1,678	29.26 %	4,410	29.02 %
Nothing Recorded	11,984	47.12 %	11,984	47.12 %	9,835	46.99 %	2,634	45.94 %	7,201	47.39 %	2,634	45.94 %	7,201	47.39 %
Age<10 and Nothing Recorded	1,829	7.19 %	1,829	7.19 %	1,532	7.32 %	450	7.85 %	1,082	7.12 %	450	7.85 %	1,082	7.12 %

Figure 11: Practice Group Smoking Report Example

Practice groupings are visible to the organisation users as well as to practice users – so the groupings can be used to benchmark similar practices.

## 4.3 Practice to Practice Visibility

PAT CAT offers the ability to allow practices to share their data with other practices who are using the same PAT CAT instance. This functionality is OPT IN, and by default, practices cannot see other practices data (asides from the aggregate totals). If a practice would like to share their data, the practice will need to log into PAT CAT then clicking on Support, then Settings:

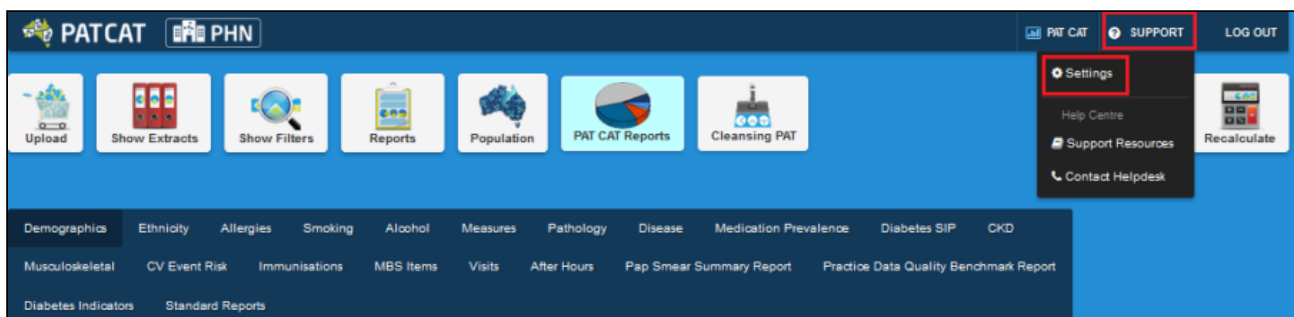
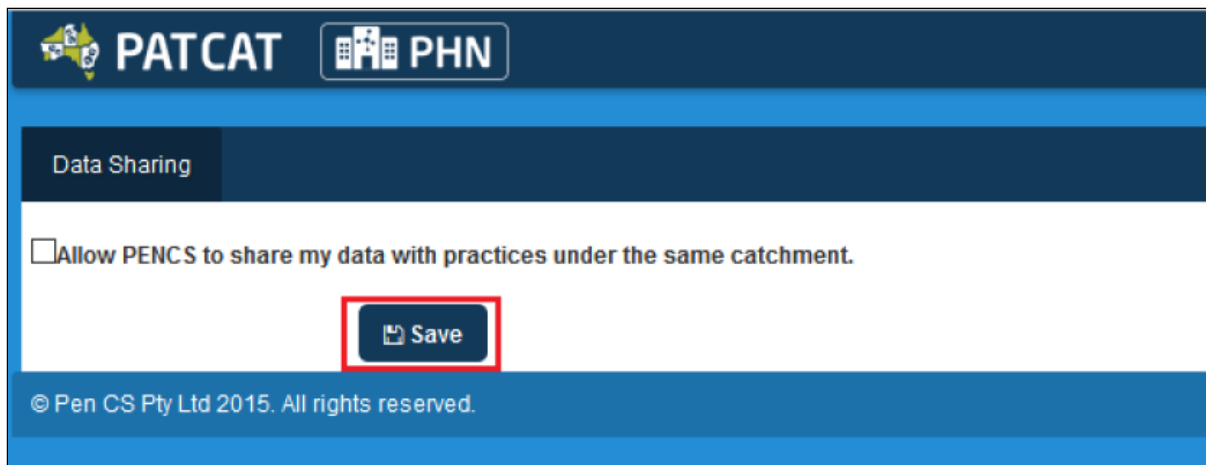


Figure 12: Practice Data Sharing Settings

The tick box on the screen below will allow the Organisation to share the data from this practice with other

practices who have uploaded their data to the same instance of PAT CAT. This permission can be revoked at any time by going back the screen below and un-ticking the box and saving again.



*Figure 13: Allow Data Sharing*

Now that the SMC clinic has allow data sharing the Organisation users can set up who of the other clinics can see the SMC data. This is done under the Practices screen on the Practice to Practice Visibility tab:



*Figure 14: Adding Practice Data Visibility*

As SMC clinic has allowed data sharing, we can now allow the other two clinics to see the SMC data – clicking on the 'Add Practice' button will show all available practices that have agreed to share their data. Then tick the box of the practice you want to allow to be seen by the other practice and click on 'Add' when done.

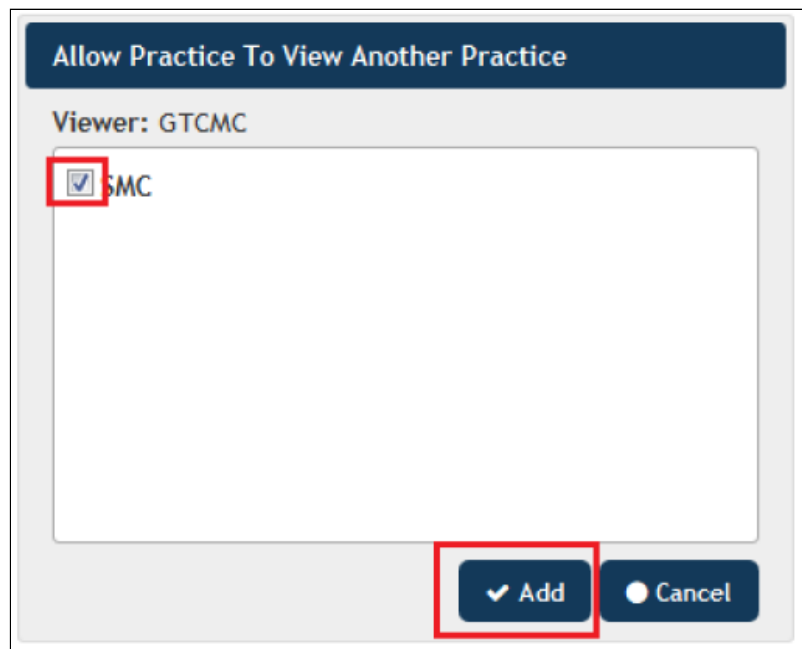


Figure 15: Select Practices for Data Sharing

After adding a practice to another one you can see from the 'Practice to Practice Visibility' tab which practice data is visible to the other practices and you can remove them by clicking on the **x**.

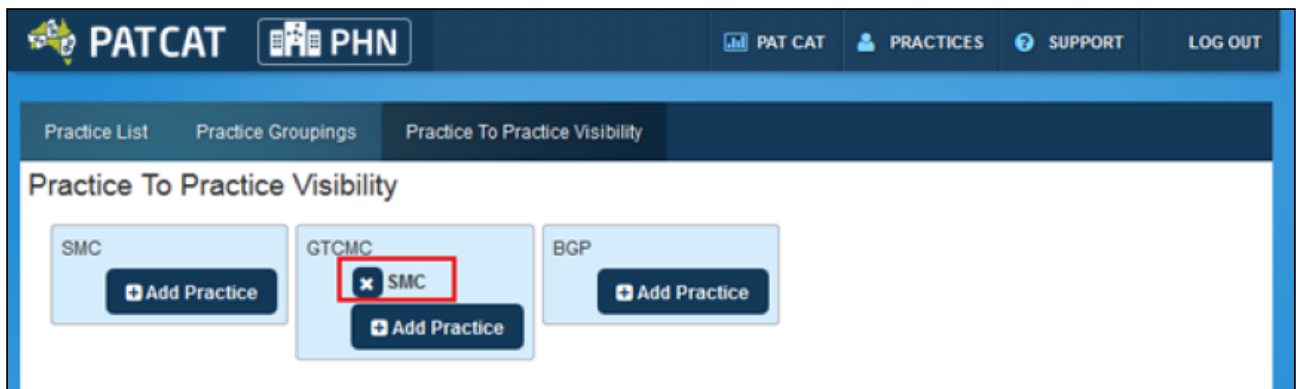


Figure 16: Practice Visibility

The status of data sharing can also be seen from the 'Practice List' tab – a click on the practice name will show you if they have agreed to share their data.

**Edit Existing Practice**

Practice Name \*

Practice ID \*

Email

Login

Password

Email Notification ☐

**Sharing Data** ☒ Yes

Figure 17: Data Sharing Setting

Once the practice has agreed to data sharing and the organisation using PAT CAT has set up which practices can see each other, the practice users will see each other's data in all numerical reports (accessed through the 'View Report' button) when logged on. In the screenshot below GTCMC has logged on and can see the data from SMC in their report.

Please note that the groups set up previously are also visible to practices if they are a member of the group. This can be useful to compare against a group of similar clinics even when they haven't shared their data as only the aggregated data for the group will be visible.

**Smoking Status**

▲ Show / Hide Columns

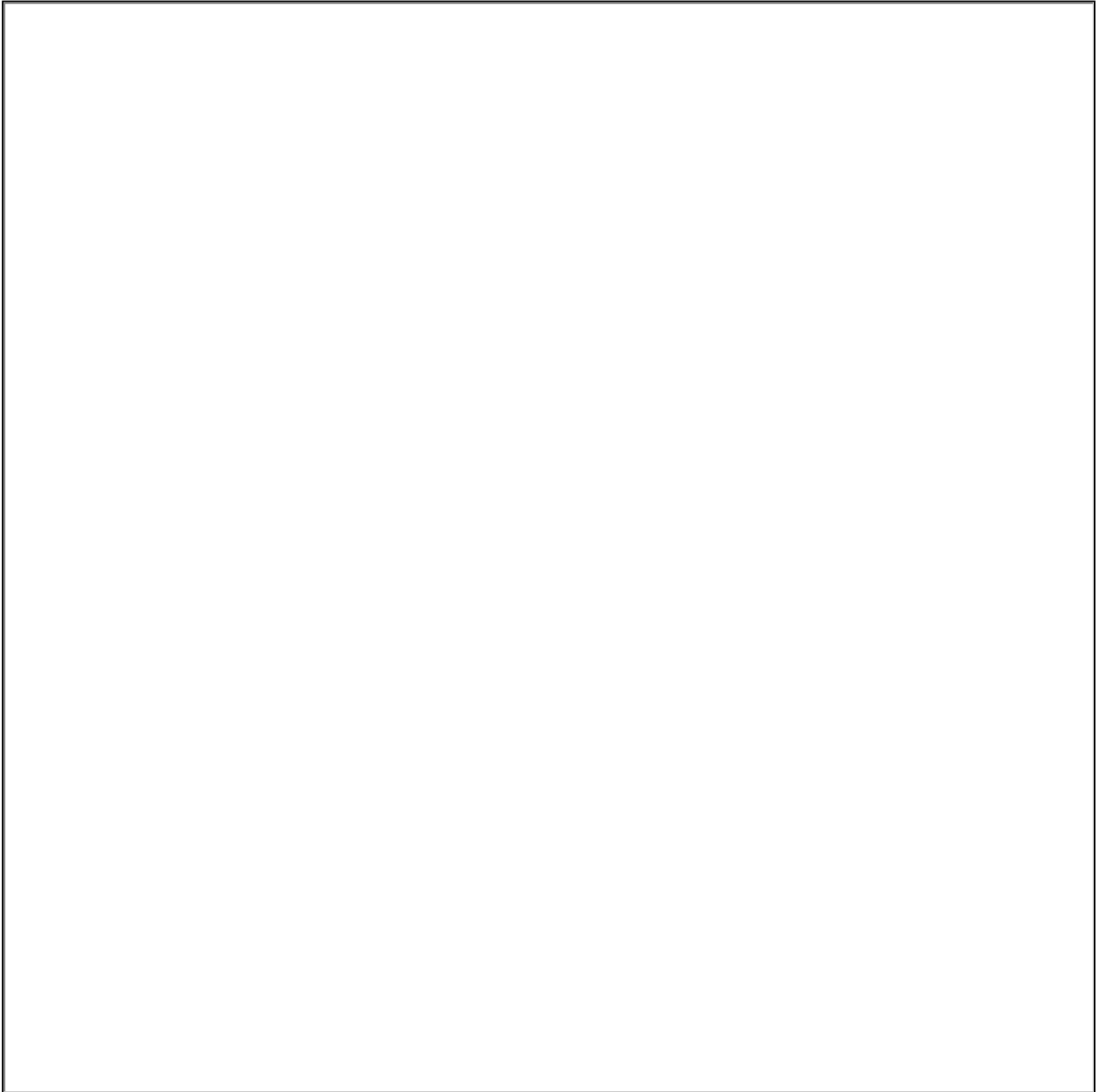
No filters applied for June 2015 audit month. Generated on 8/07/2015 2:37 PM

Measure	PENCS	PENCS %	Adjusted	Adjusted %	TGR	TGR %	GTCMC	GTCMC %	GTCMC	GTCMC %	SMC	SMC %
Total Population	25,431		25,431		20,928		5,734		5,734		4,503	
Daily Smoker	1,551	6.10 %	1,551	6.10 %	1,282	6.13 %	363	6.33 %	363	6.33 %	269	5.97 %
Irregular Smoker	357	1.40 %	357	1.40 %	284	1.36 %	81	1.41 %	81	1.41 %	73	1.62 %
Ex Smoker	2,296	9.03 %	2,296	9.03 %	1,907	9.11 %	528	9.21 %	528	9.21 %	389	8.64 %
Never Smoked	7,414	29.15 %	7,414	29.15 %	6,088	29.09 %	1,678	29.26 %	1,678	29.26 %	1,326	29.45 %
Nothing Recorded	11,984	47.12 %	11,984	47.12 %	9,835	46.99 %	2,634	45.94 %	2,634	45.94 %	2,149	47.72 %
Age<10 and Nothing Recorded	1,829	7.19 %	1,829	7.19 %	1,532	7.32 %	450	7.85 %	450	7.85 %	297	6.60 %

Figure 18: Shared Practice Data Smoking Report

## 4.4 Additional Configurations PAT CAT

There are a number of additional configuration options available in PAT CAT v3.3 and higher that have been moved to the 'Settings' page in PAT CAT.



- [Email Reminders](#)(see page 36)
- [User Interface Customisation](#)(see page 37)
- [Schedule Updates](#)(see page 38)

- [Data Management](#)(see page 39)

### 4.4.1 Email Reminders

You can configure PAT CAT to send automatic reminder messages to registered practices – this should ensure data is uploaded at the agreed intervals. To configure this you will need to enter your email server details – click on 'Support' to access the settings.

**NOTE:** The reminder emails are only sent if the practice has not already submitted the data for the period specified in the setup.

The Automated Email Reminder screen is displayed. Some of the information required might need IT support to assist as PAT CAT will need the mail server details to enable the sending of emails.

Automated Email Reminder
User Interface Customisation
Schedule Upgrades
Schedule Report Recalculate

SMTP Configuration

Email \*
Host \*
Port \*
25
Enable SSL
Username \*
Password \*
Repeat Password \*

Message Template

Subject \*
Body \*

Message Send Frequency

☐ Enable Automated Practice Email Reminders

Send email reminders on day 10 of the current month, every Month

**! Important:** If the given day is not found for the current month (e.g. send email reminders on day 31 and the current month is February), the given day will be treated as the last day of the current month.

Save



Once all details including the text of the email has been set up you will have to decide on the schedule for the email to be sent, enable the reminders by ticking the **Enable Automated Practice Email Reminders** box and save the settings. This is a one off process and all practices who agree to receive reminder emails (and have it configured in the settings as shown above) will receive these emails monthly.

#### 4.4.2 User Interface Customisation

In the User Interface Customisation tab you can configure details on how PAT CAT displays some data items and set preferred times for data import, gtagging (if relevant) and virtual patient calculation.

- The adjusted column is enabled by default, for more details on what this column shows please check here: [Adjusted Column Details](#)(see page 101)
- The option to hide a practice filter when used can be used if reports are shared by practice names should not be shown on the shared reports.
- Schedules for import and gtagging are set to default times outside normal working times to improve PAT CAT performance. If you want uploaded data to be immediately imported, these settings need to be adjusted to allow data import/gtagging during working hours. We recommend to set both schedules for the same time, as this won't have a performance impact on your server. With the latest update to 3.3.26 PAT CAT will import and geotag data without immediately recalculating the virtual patients - this will make the import a lot faster. We also recommend to schedule the Virtual Patient Calculation later in the day, so for example in the screenshot below we have the import running in the early morning and the virtual patient calculation in the early evening.
- Daily Schedule for Virtual Patient Calculation - this is a very demanding calculation and in the previous versions was performed after each individual extract which caused long import times and large server load. With this new scheduling option PAT CAT can import extracts quickly and will then bulk process all imported extracts as per schedule. This should speed up the processing time for data imports a lot.



PEN CS recommends to leave the default times as scheduled on installation. If you are unclear about the best times for the schedules below please contact our support team!

Automated Email Reminder	<b>User Interface Customisation</b>	Schedule Upgrades	Schedule Report Recalculate
--------------------------	-------------------------------------	-------------------	-----------------------------

Adjusted Column

☒ Display Enabled  
☐ Hide when practice filter is used

Save

Daily Scheduled for Import Service

Start Time  End Time

Save

Daily Scheduled for Gtagging Event Service

Start Time  End Time

Save

Daily Scheduled for Virtual Patient Calculation

**Important:**

- Virtual Patient Calculations are done on affected audit/extract month
  - Affected audit/extract month is determined during import and/or include/exclude of extracts
- The system will only process a given audit/extract month once between the scheduled timeframes




Start Time  End Time

Save      Show Progress / Log

### 4.4.3 Schedule Updates

This tab will show you if there are any updates to PAT CAT available and allow you to schedule the updates to a time/date suitable to your organisation.

Once an update is available, you can schedule it here for a time to your liking. The scheduled time/date for the update will be displayed in the heading.


 **PATCAT**  **PHN**  Update scheduled for May 12, 2017 at 02:43 PM



Automated Email Reminder   User Interface Customisation   **Schedule Upgrades**   Schedule Report Recalculate

**Current Version 3.3.0.8**

Version 1.0.13.490 is now available. Please schedule a date and time for the update.

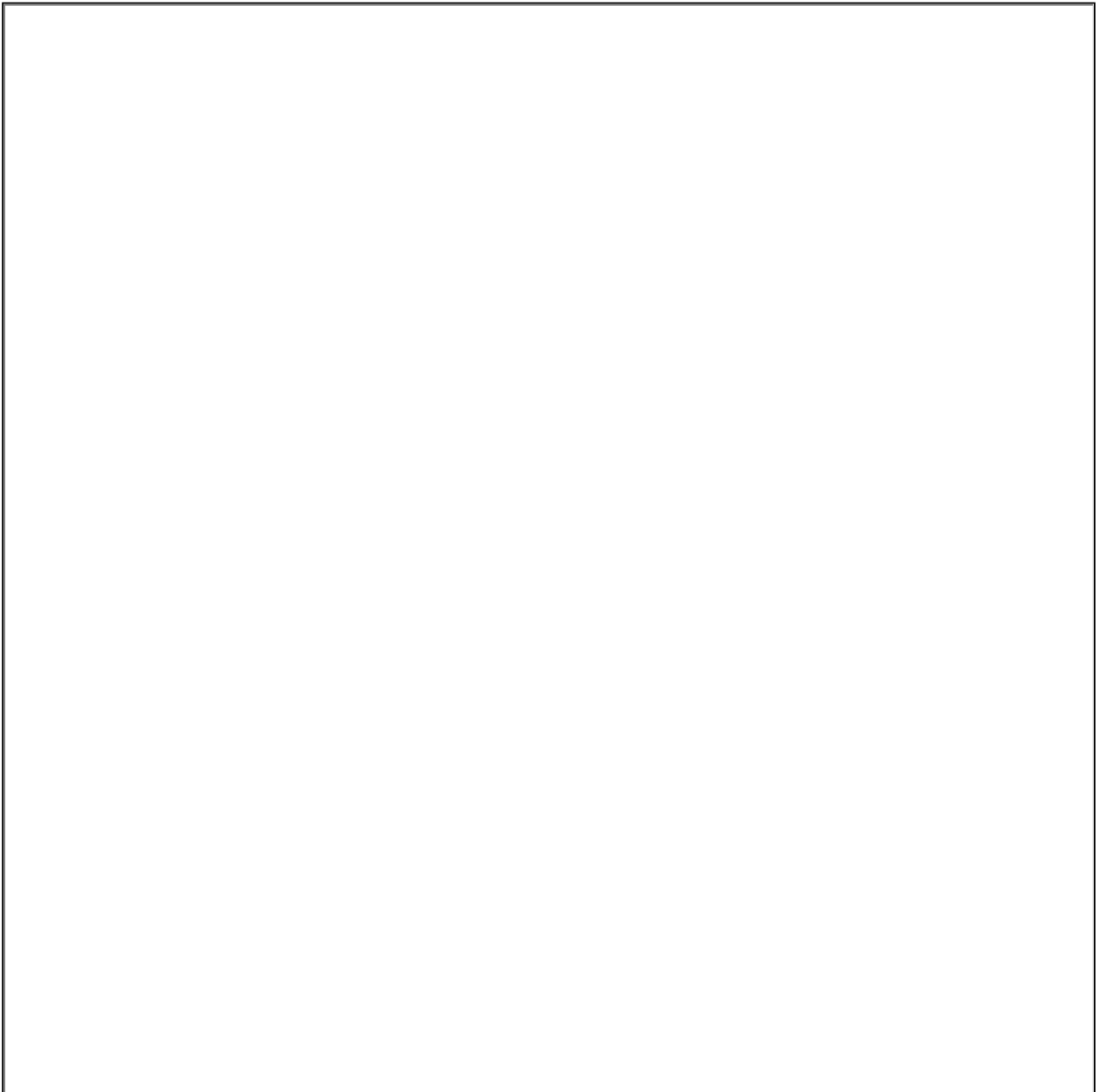
Upgrade scheduled for 12/05/2017 at 2:43 PM

Date   Time

 **Schedule Upgrade**    **Cancel Upgrade**

#### 4.4.4 Data Management

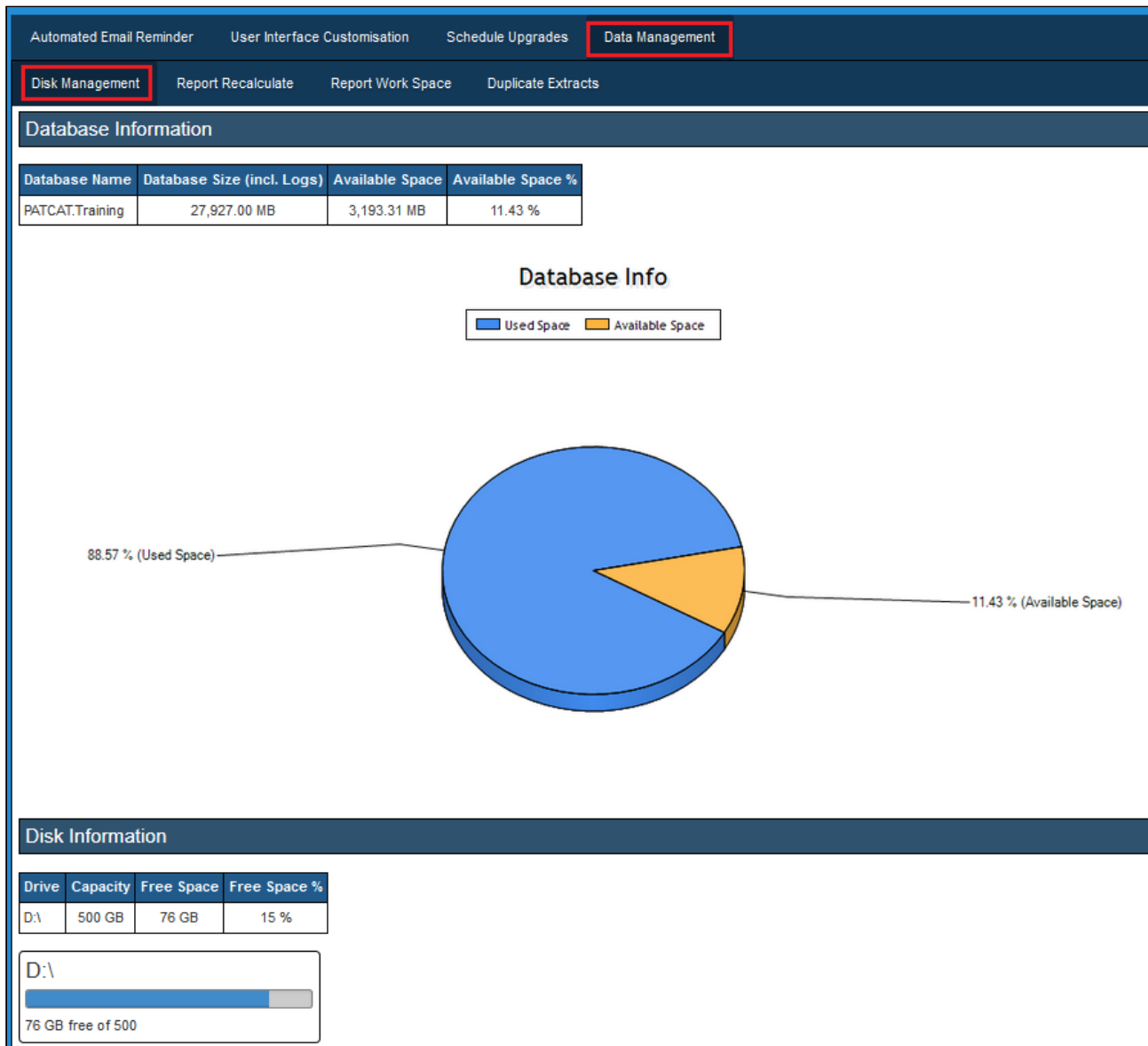
The data management tab allows you to view disk space, recalculate reports, customise your visible reports/tabs and to remove duplicate extracts that have been uploaded. To access these tabs you need to go to the Support tab and then click on 'Settings' in the menu:



- [Disk Management](#)(see page 40)
- [Report Recalculate](#)(see page 41)
- [Report Work Space](#)(see page 42)
- [Duplicate Extracts](#)(see page 43)

#### 4.4.4.1 Disk Management

The disk management tab shows information about the size of the database on disk and allows the hosting service to keep an eye on space requirements.



#### 4.4.4.2 Report Recalculate

After changes to PAT CAT it is sometimes required to recalculate your reports. This tab allows you to schedule the recalculation to a time suitable for your organisation and to select the reporting months you like to be recalculated. Recalculation takes time and the more data items and reporting months are selected, the longer the recalculation will take.

This particular important after new reports or new indicators for existing reports have been released, as it is your choice how far back you need the new data items. The recalculation can take a long time depending on your data, so don't schedule too much at once. You will be able to use PAT CAT but there will a noticeable impact on performance while reports are being recalculated. We recommend to do this over night or over a weekend!

Here is a short video showing the process:

PAT CAT Recalculation<sup>3</sup>

⚠ Please check with PEN CS support to get an estimate of how long this might take before scheduling!

Automated Email Reminder   User Interface Customisation   Schedule Upgrades   **Data Management**

**Report Recalculate**   Report Work Space   Duplicate Extracts

### Recalculation Options

Date   Time

**Important:** Recalculation is resource intensive and a long running process. Please schedule the recalculate outside your business or operating hours.  
The recalculate cannot be cancelled once it has started.

Please select which reports you wish to perform a recalculate.

Reports	December 2017	November 2017	October 2017	September 2017	August 2017	July 2017	June 2017	May 2017	April 2017	March 2017	February 2017	January 2017	December 2016
ACR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After Hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allergies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BMI - Average	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BMI - Count	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BMI - Incomplete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Child NKPI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Essential Immunisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Child Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chlamydia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cholesterol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CKD At Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CKD Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-morbidities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 4.4.4.3 Report Work Space

⚠ This functionality will be available with PAT CAT 3.4 and higher!

This feature enables you to determine which graphs are enabled in PATCAT. By ticking the report, you are telling PATCAT to only show and process report data for the selected reports.

If a report has no data, please use feature "Report Recalculate" to regenerate the report data. Unchecked reports will be unavailable in the the following areas / features:

- Reporting area (section below the filter)
- Export Patient
- Custom Timeline
- Report Recalculate

<sup>3</sup> <https://vimeo.com/245858565>

Excluding reports doesn't take very long as it simply saves the new configuration to apply the changes. If you have excluded a specific report and new data is uploaded, the excluded report will be empty. To populate the report you will have to first include it again and then recalculate using the [Report Recalculate](#) (see page 41) function.



The settings on this screen can have a major impact on the data available in your PAT CAT, so please ensure it is used responsibly!

Automated Email Reminder
User Interface Customisation
Schedule Upgrades
**Data Management**

Report Recalculate
**Report Work Space**
Duplicate Extracts

**Important:**

- This feature enables you to determine which graphs are enabled in PATCAT
- By ticking the report, you are telling PATCAT to only show and process report data for the selected reports
- If a report has no data, please use feature "Report Recalculate" to regenerate the report data
- Unchecked reports will be unavailable in the the following areas / features:
  - Reporting area (section below the filter)
  - Export Patient
  - Custom Timeline
  - Report Recalculate

<input checked="" type="checkbox"/> 5 Year Risk of a Cardiovascular Event	<input checked="" type="checkbox"/> ACR	<input checked="" type="checkbox"/> After Hours - Patient Count by MBS Item Number	<input checked="" type="checkbox"/> Alcohol	<input checked="" type="checkbox"/> Allergies
<input checked="" type="checkbox"/> BMI Average By Age Range	<input checked="" type="checkbox"/> BMI Count	<input checked="" type="checkbox"/> BP	<input checked="" type="checkbox"/> Child (Ages 1,2,5) nKPI Essential Immunisations at Last Birthday	<input checked="" type="checkbox"/> Child Immunisation Status
<input checked="" type="checkbox"/> Chlamydia	<input checked="" type="checkbox"/> Cholesterol	<input checked="" type="checkbox"/> CKD At Risk	<input checked="" type="checkbox"/> CKD Management	<input checked="" type="checkbox"/> Co-morbidities
<input checked="" type="checkbox"/> Creatinine Serum Status	<input checked="" type="checkbox"/> CV Event Risk Excluded and Incomplete	<input checked="" type="checkbox"/> Demographics	<input checked="" type="checkbox"/> Diabetes Indicator	<input checked="" type="checkbox"/> Diabetes SIP Items Recorded
<input checked="" type="checkbox"/> Disease Prevalence	<input checked="" type="checkbox"/> DTP	<input checked="" type="checkbox"/> eGFR	<input checked="" type="checkbox"/> Ethnicity	<input checked="" type="checkbox"/> Event Summary Age
<input checked="" type="checkbox"/> Event Summary Uploads	<input checked="" type="checkbox"/> FBG	<input checked="" type="checkbox"/> FOBT Last Recorded	<input checked="" type="checkbox"/> FOBT Orders and Results	<input checked="" type="checkbox"/> FOBT Summary Report Card
<input checked="" type="checkbox"/> Gonorrhoea	<input checked="" type="checkbox"/> HbA1c	<input checked="" type="checkbox"/> HDL	<input checked="" type="checkbox"/> Health Care Homes	<input checked="" type="checkbox"/> HepB
<input checked="" type="checkbox"/> HepC	<input checked="" type="checkbox"/> HIV	<input checked="" type="checkbox"/> HPV	<input checked="" type="checkbox"/> Incomplete Data Values for Calculating BMI	<input checked="" type="checkbox"/> Indicated Diagnoses
<input checked="" type="checkbox"/> Influenza	<input checked="" type="checkbox"/> INR	<input checked="" type="checkbox"/> Last Visit Date	<input checked="" type="checkbox"/> LDL	<input checked="" type="checkbox"/> Mammogram
<input checked="" type="checkbox"/> MBS Items Count	<input checked="" type="checkbox"/> MBS Items Not Recorded	<input checked="" type="checkbox"/> Medication Prevalence	<input checked="" type="checkbox"/> Medications Per Patient	<input checked="" type="checkbox"/> Microalbumin
<input checked="" type="checkbox"/> Missing Clinical/Accreditation Items	<input checked="" type="checkbox"/> Musculoskeletal Risk Factors	<input checked="" type="checkbox"/> My Health Record and SHS	<input checked="" type="checkbox"/> My Health Record Status	<input checked="" type="checkbox"/> National KPI
<input checked="" type="checkbox"/> OSR	<input checked="" type="checkbox"/> OSR Standard Report	<input checked="" type="checkbox"/> Pap Smear Done Date	<input checked="" type="checkbox"/> Pap Smear Recorded	<input checked="" type="checkbox"/> Pap Smear Summary Report
<input checked="" type="checkbox"/> Pertussis	<input checked="" type="checkbox"/> Physical Activity	<input checked="" type="checkbox"/> Pneumococcal	<input checked="" type="checkbox"/> Practice Data Quality Report	<input checked="" type="checkbox"/> QAIHC
<input checked="" type="checkbox"/> RBG	<input checked="" type="checkbox"/> Shared Health Summary Age	<input checked="" type="checkbox"/> Shared Health Summary Uploads	<input checked="" type="checkbox"/> Smoking	<input checked="" type="checkbox"/> Smoking Cessation
<input checked="" type="checkbox"/> Spirometry	<input checked="" type="checkbox"/> Syphilis	<input checked="" type="checkbox"/> Total Chol/HDL Ratio	<input checked="" type="checkbox"/> Trichomoniasis	<input checked="" type="checkbox"/> Triglycerides
<input checked="" type="checkbox"/> VZV	<input checked="" type="checkbox"/> Waist Measurement - CVD Risk	<input checked="" type="checkbox"/> Waist Measurement - Diabetes Risk		

☒ Select All
☐ Clear Selections

#### 4.4.4.4 Duplicate Extracts

It is possible that practices upload multiple extracts in a month. By default PAT CAT uses only the most recent extracts, but the duplicate (or more) uploads take up space on your server as they are imported into your database. This tab allows a clean-up of the extracts and will show you a colour coded list of practices and their uploads for each audit month. As shown in the graph below there are 6 practices that have uploaded this month, and one of the six has uploaded twice. This is indicated by the red highlight and the number of the extracts in brackets before the practice name.

You can tick the extract to remove and the click on 'Request to Exclude Extract' or 'Request to Exclude and Delete Extract'. Excluding extracts is the same as excluding an extract from the 'Import' window.

The second option will not just exclude the data but also delete it. This process is not instant and depending on the size of your database, the size of the extract and general performance will take some time. In no case is the raw data uploaded from the practice deleted.

Excluding/deleting an extract will require a recalculation of the virtual patient for the adjusted column. This will run as configured in the [User Interface Customisation](#)(see page 37) schedule, by default over night. Depending on how many extracts you exclude/delete the recalculation can take several days.

⚠ Before excluding/deleting duplicate extracts consider which one you want to keep. For example your practices might upload on the first day of the month, but a practice might have uploaded on the 15th of the month. You need to decide which extract to remove - the date and time of the extract is part of the extract name, in the format -YYMMDDHHMM- as shown below.

**Automated Email Reminder**   **User Interface Customisation**   **Schedule Upgrades**   **Data Management**

**Report Recalculate**   **Report Work Space**   **Duplicate Extracts**

**Important:**

- This feature enables you to remove duplicate or any extracts you want for a given month
- **Green** highlight = no duplicate extracts
- **Red** highlight= has duplicate extracts
- There is also an extract count indicator prefixed in the practice "[Number of Extracts]"

Audit Month

☐ December 2017

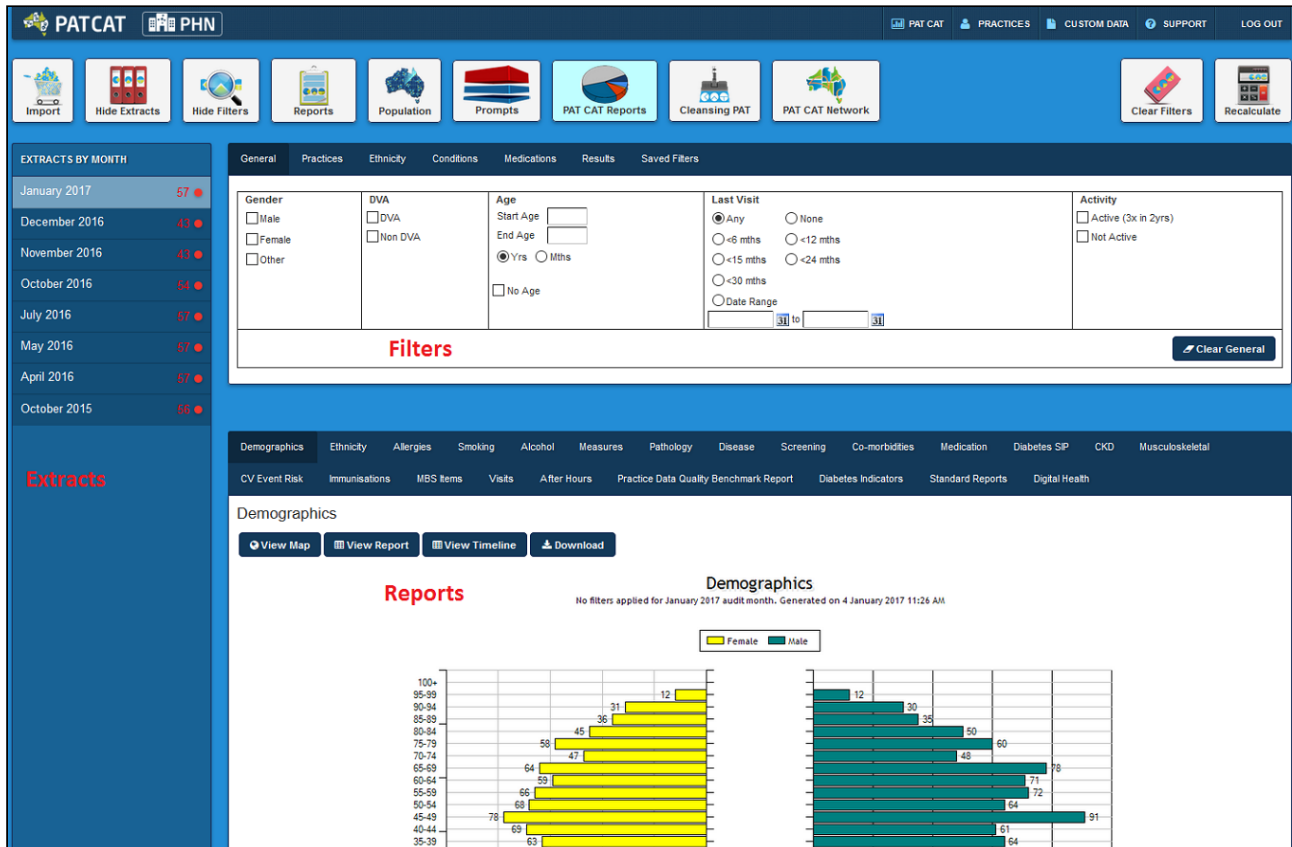
- ☐ [1] ☐ [1] ☐ [1]
- ☐ [2] ☐ [2]
- ☐ MedicalMicrodata-DEIDENTIFIED\_... -201712010201- -data.xml
- ☐ MedicalMicrodata-DEIDENTIFIED\_... -201712170201- -data.xml
- ☐ [1] ☐ [1]



## 5 THE PAT CAT USER INTERFACE

The user interface is divided into 3 sections

- Data **Extracts** collected for analysis (Left Hand Panel)
- Data **Filters** (Top Right Panel)
- Data **Reports** (Bottom Right Panel)

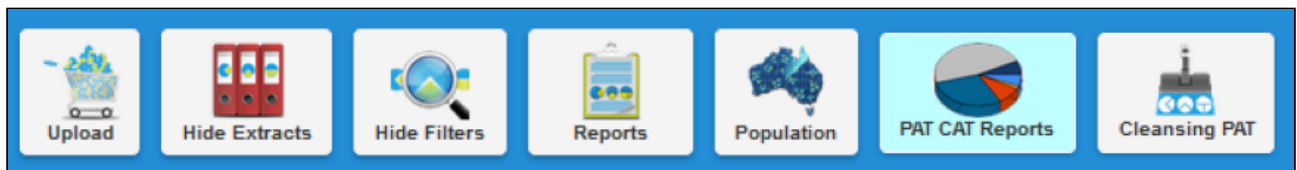


When a month is listed under **EXTRACTS BY MONTH** in the **Extracts** panel, it means that extracts have been loaded during that month from at least one practice registered within the system. Where the listed month is followed by a green dot, it means that all registered practices have an extract loaded for the month; a red dot means that only some of the registered practices have an extract loaded for the month.

**The red number next to a red dot indicates the number of practices that have uploaded in that month.**

**NOTE:** Individual practice extracts are not listed in the extracts pane, however data from a single practice may be analysed by selecting a month in the Extract pane and filtering by a specific practice. See the section on filtering for details: [Practices Filtering](#) (see page 87)

Click the **View/Hide Extracts** and the **View/Hide Filters** buttons to toggle between displaying and hiding the associated panels in user interface.



It is often handy to hide the data collection (Extracts) and data filter (Filters) areas of the screen in order to make best use of your screen space to view the data results (Reports). You can toggle between the View/Hide modes at any time.

## 6 SENDING DATA TO PAT CAT - SETUP



- [De-identify Data in CAT](#) (see page 47)
- [Compressing the de-identified extract file.](#) (see page 50)
- [Sending data](#) (see page 53)
- [Send data history](#) (see page 55)



With the release of CAT4 V4.15 the need to configure this functionality has been removed and a clinic will be able to do a manual upload by simply right-clicking on a de-identified extract and select the PAT CAT server they want to upload to. For most clinics only one PAT CAT server will be available, but some clinics are uploading to multiple PAT CAT servers - all will be listed.

### 6.1 De-identify Data in CAT

[Geocoding and De-identified Data](#) (see page 47)

[De-identify your Data](#) (see page 48)

#### 6.1.1 Geocoding and De-identified Data

##### Geocoding

The geo-coding process is achieved by the following steps:

1. CAT separating the patients address from de-identified demographic and clinical information to ensure they are never held anywhere together outside the practice.
2. CAT tagging the de-identified data with a unique and encrypted code so on arrival in PAT CAT it can be matched to a geographical location. This code has no meaning outside the PAT CAT system.
3. CAT sending the address securely to an Australian based mapping service which returns the geospatial location information for each address for usage by PAT CAT.
4. These codes are used to create a map in PAT CAT utilising the geospatial location information matched with the de-identified data to create a map displaying the number of patients with a specific profile and how they are distributed. This provides the ability to correlate patient problems with location and look for patterns.
5. PAT CAT will not display patients in an area where the number drops below 5.

To ensure patient privacy, all mapping of patient data in PAT CAT is of aggregated data, individual patients are never shown. In fact it requires at least five patients to be present within a map segment (SA2) for any information to be shown.

### Data De-identification

The data de-identification and geocoding process occurs through the De-identify Dataset / Add GTAGs functionality included in CAT4.

When an extract is run through the De-identify Dataset / Add GTAGs functionality;

- all patients who have withdrawn consent for their data to be used in clinical research are removed;
- the extract is de-identified by removing all identifiable information such as name, address and date of birth. The only personal information which remains in a de-identified extract is gender, ethnicity and the age of a patient in years.

de-identified data refers to patient clinical data (e.g. diagnosis, measurements, pathology etc) that does not contain information that can be used to reverse identify the patient. De-identified data is permissible for use where it is not practicable to obtain informed consent for use of data. PEN CS has provided tools within CAT4 that can be run by the practice to create a de-identified patient data set. These tools are collectively known as FAT CAT, the Filtering and Anonymisation Tool for CAT. They are incorporated into CAT4.

FAT CAT ensures that the de-identified data extract produced by Classic CAT strictly adheres to the National Privacy Principles.

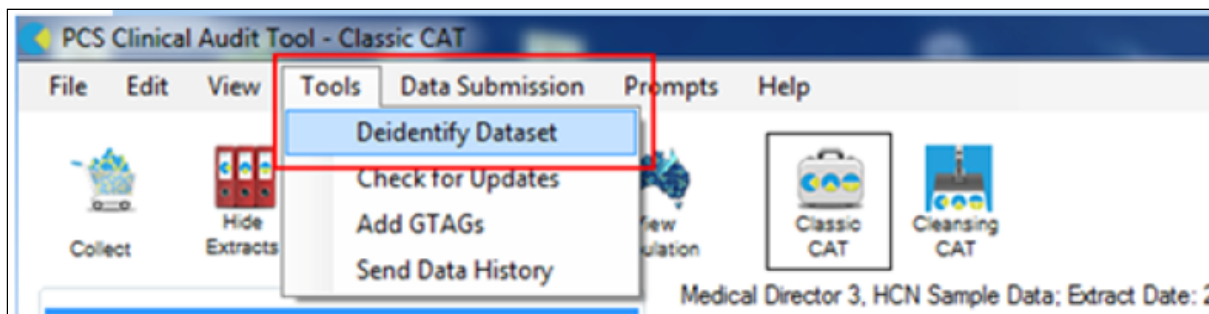
- The Filtering process removes any patients who have withdrawn their consent to share data from the de-identified dataset. These patients can be flagged within CAT (Refer [CAT Patient Consent Withdrawn Quick Reference Guide](#)<sup>4</sup>).
- The Anonymisation process de-identifies the data. All patient information that is identifiable or partially identifiable is removed from the de-identified extract (e.g. name, address, postcode, date of birth, Medicare number etc).

Classic CAT de-identified data files that have been through the FAT CAT process are tagged as “certified”. PAT CAT recognises FAT CAT “certified” data files and these are the only data files that PAT CAT will import and display and rejects the files that were not FAT CAT “certified”.

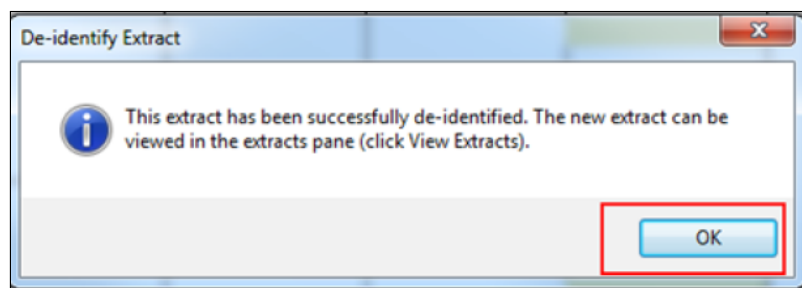
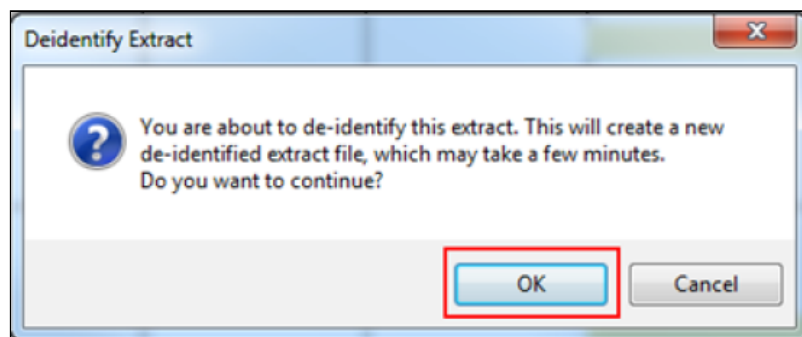
## 6.1.2 De-identify your Data

To start the de-identification open CAT4 and select an extract that you would like to send to PAT CAT. Please ensure that you select an Extract which does **NOT** already have the text "DEIDENTIFIED" in the extract name. If your PHN has advised to use the 'Add GTAGs' option please do so – this varies for different organisations. After loading the extract you want to send, open the "Tools" menu and select "Deidentify Dataset"

<sup>4</sup> <https://help.pencs.com.au/display/CG/Patient+Consent+Withdrawn+Settings>



Press the "OK" button on the Deidentify Extract window that will pop up to confirm you wish to de-identify the extract, then press 'OK' on the next window.



Notice that in the extracts panel, a new extract is listed with the text "DEIDENTIFIED" in the name. This is the file that is to be imported into PAT CAT. If you have used the GTAG function the file will have "DEIDENTIFIED\_GTAGGED" in the name.

File	Edit	View	Tools	Data Submission	Prompts
Collect	Hide Extracts	View Filter	Report	View Population	
21/05/2014 4:29 PM	28	DEIDENTIFIED_MH...			
21/05/2014 4:29 PM	28	MHCHOPC001			
21/05/2014 1:45 PM	28	DEIDENTIFIED_GT...			
21/05/2014 1:45 PM	28	MHCHOPC001			
21/05/2014 1:41 PM	28	DEIDENTIFIED_GT...			
21/05/2014 1:41 PM	28	MHCHOPC001			
21/05/2014 12:29 PM	32	BPS000000			
1/04/2014 1:23 PM	3968	DEIDENTIFIED_SMC			
6/02/2014 12:13 PM	28	DEIDENTIFIED_MH...			
1/01/2014 5:55 PM	20308	DEIDENTIFIED_BP...			

## 6.2 Compressing the de-identified extract file.

**OPTIONAL** - If the de-identified extract includes a large number of patients (e.g. more than 4000 patients) or the practice has a slow internet connection, it is advised that you compress the extract into a ".zip" file before undertaking the import process. This will create a new file which is significantly smaller in file size making it faster to upload. If you do not want to do this, skip to Section 6.3. When using the 'Send to PAT CAT' functionality, the extract will be compressed before being uploaded.

1. Open the directory where the extracts are stored (eg C:\ClinicalAudit) using My Computer or Explorer.

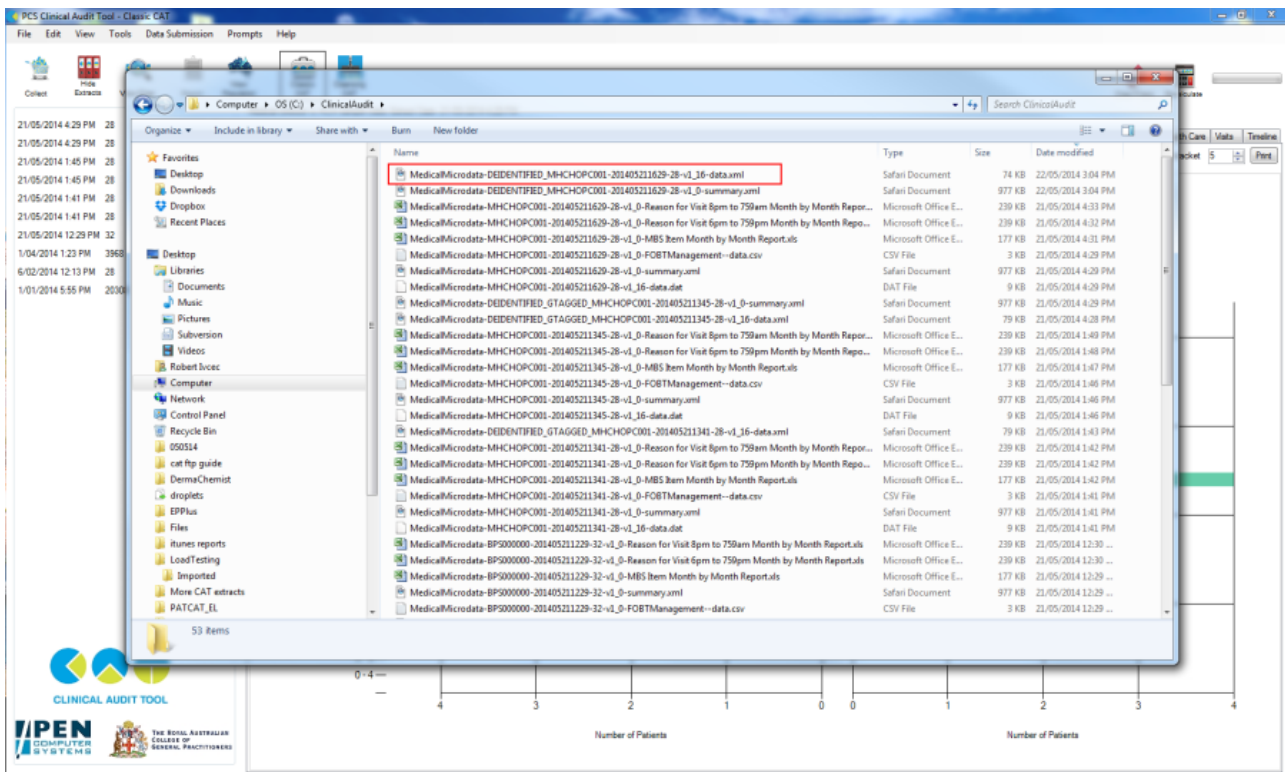


Figure 50: Data XML file

1. Find the de-identified extract file in the directory. Sorting the files by date modified may help you to find the file if there are a lot of extracts. When you have found the file, **RIGHT CLICK** and select **Send to -> Compressed (zipped) folder**.

**NOTE:** The file name MUST have the text "-data" near the end of the name. e.g. "MedicalMicrodata-DEIDENTIFIED\_PRACTICEID123-201405211629-28-v1\_16-data.xml".

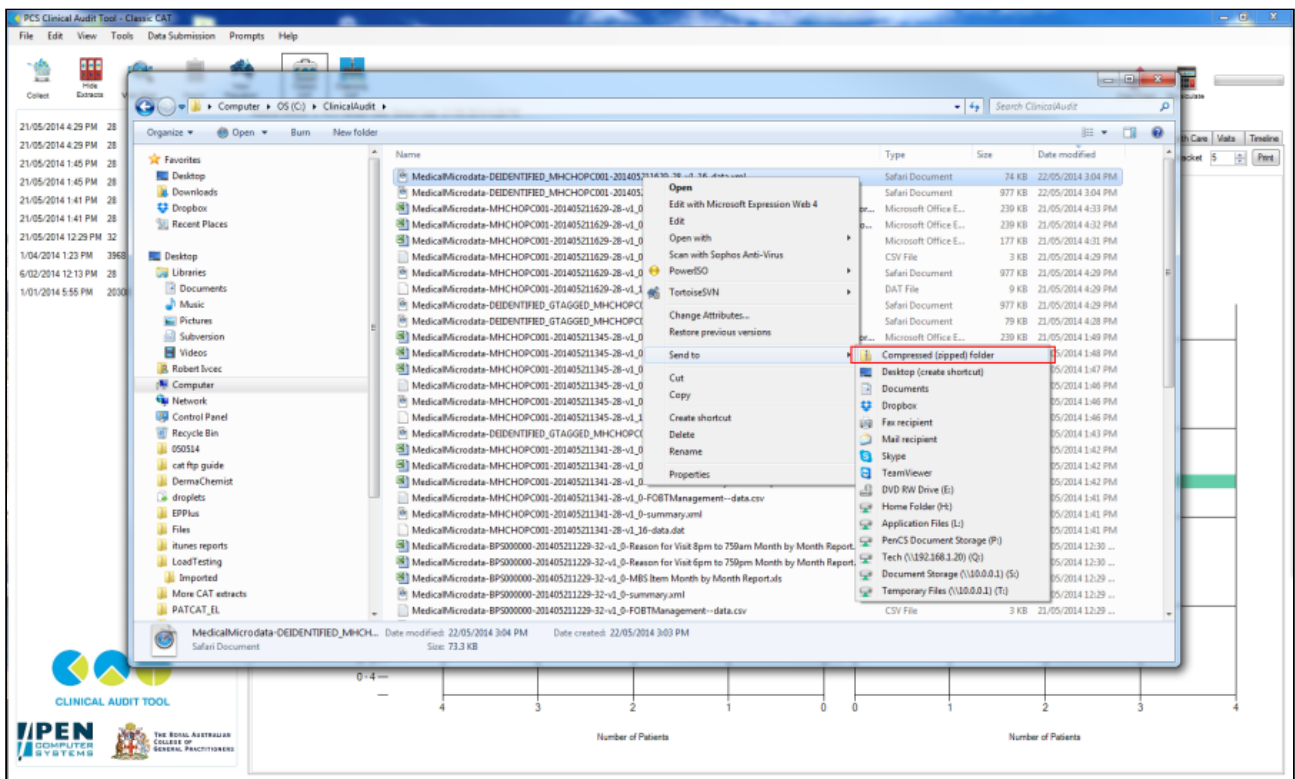


Figure 51: Compress File

A new file will be created with ".zip" as the extension. This file should be substantially smaller than the original extract size

**IMPORTANT:** Do NOT change the name of this file in any way.



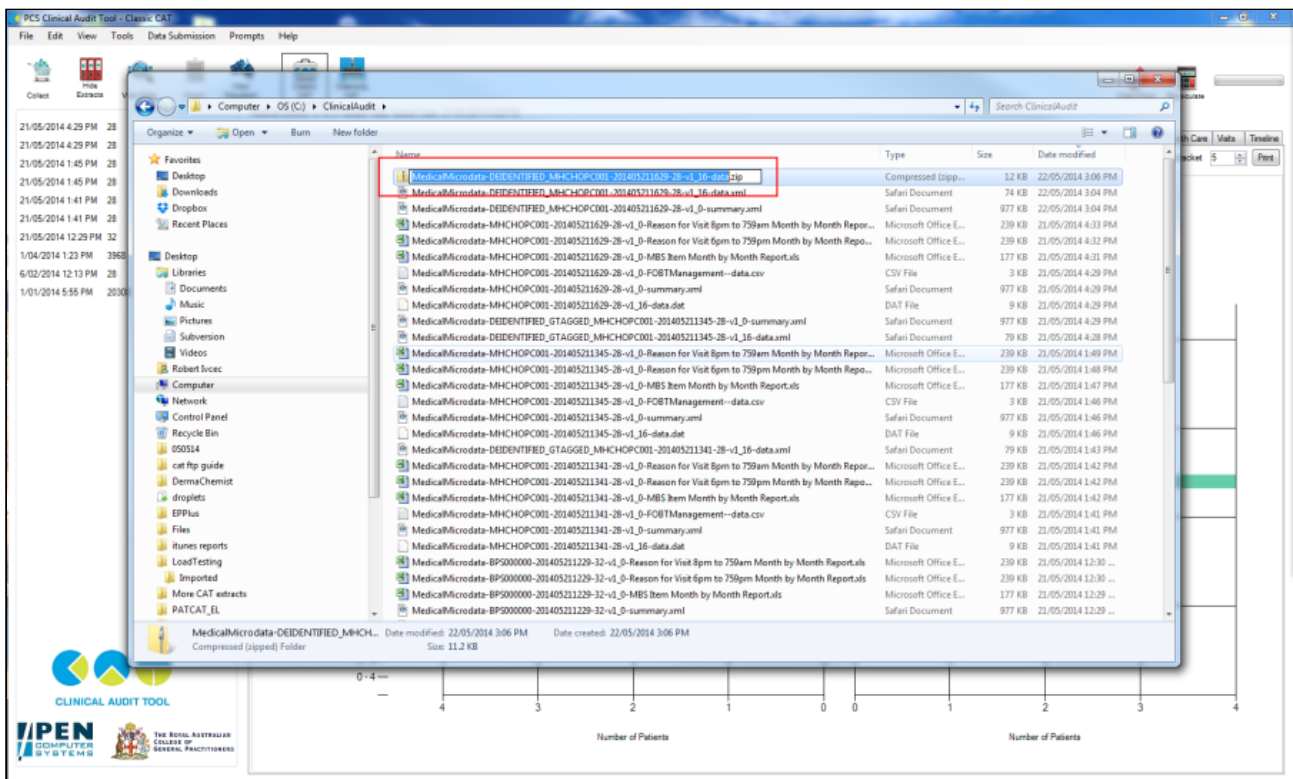


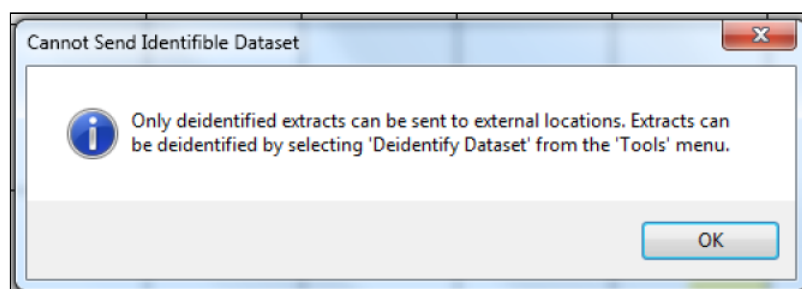
Figure 52: Identify Compressed Data File

## 6.3 Sending data

Once a dataset from the 'Extracts' panel is loaded and a send to location has been configured as described in the previous chapter the right-click function is available. This will display the list of send to locations that have been configured for the practice to choose from.

**NOTE: Only de-identified data can be sent.**

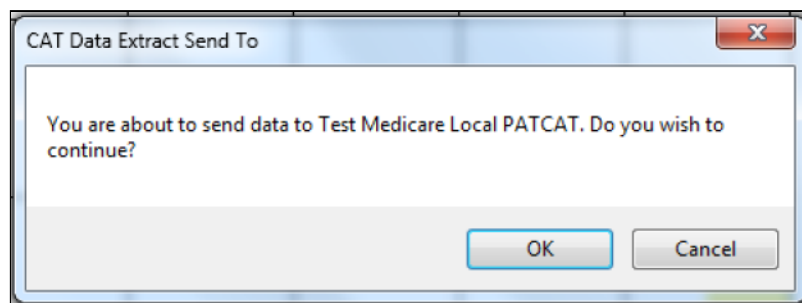
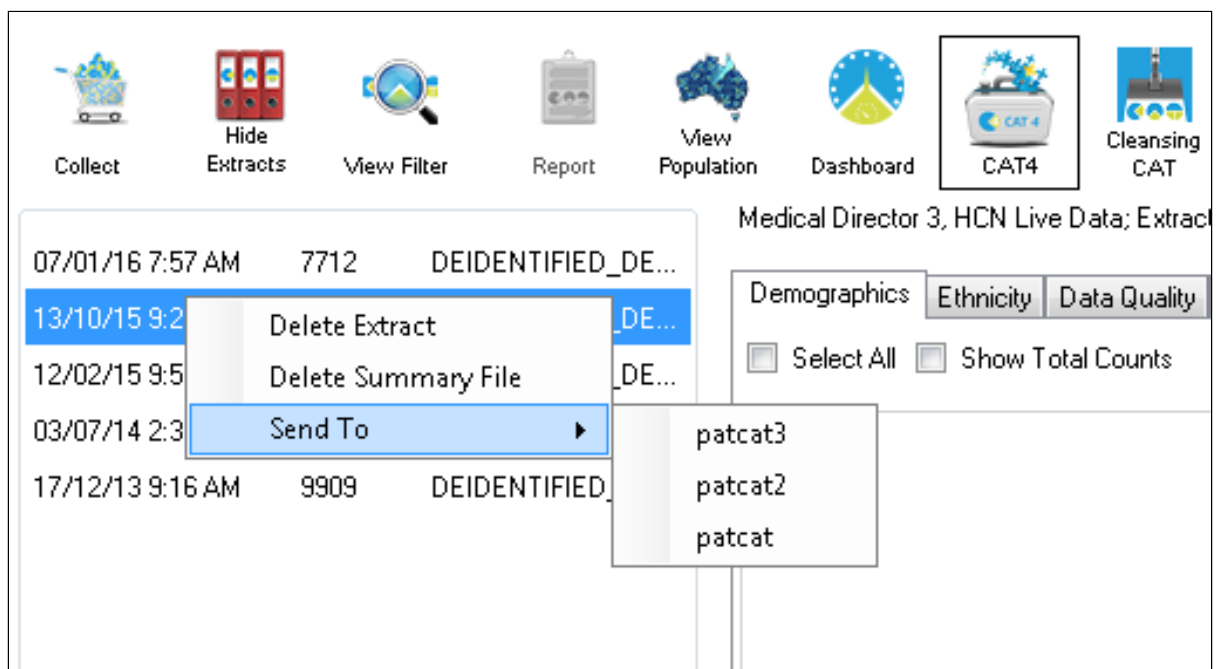
If a non-de-identified dataset is selected, the following error message is displayed.

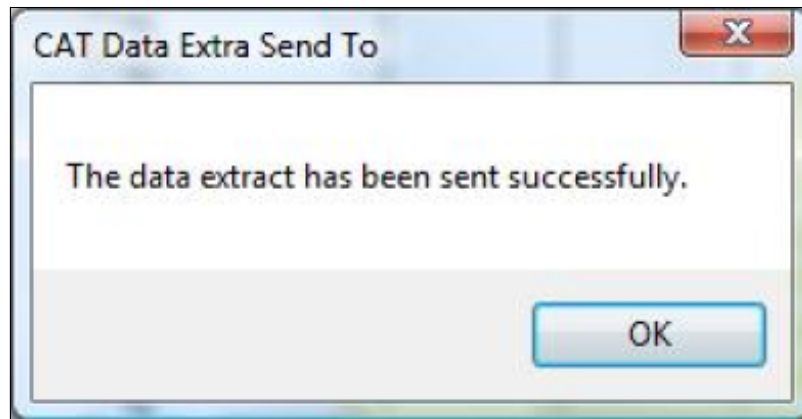
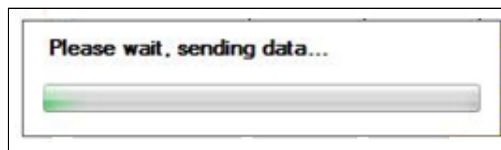


- Load the de-identified data set you wish to send
- Right-click on the extract listed in the extracts panel
- Select 'Send To'

- The list of configured locations will be available
- Select the location
- A confirmation dialogue box will appear
- Click OK
- A progress bar will display while the send is in progress
- Once completed a status message will be provided
- A history record will be written under menu option: Tools > Send Data History

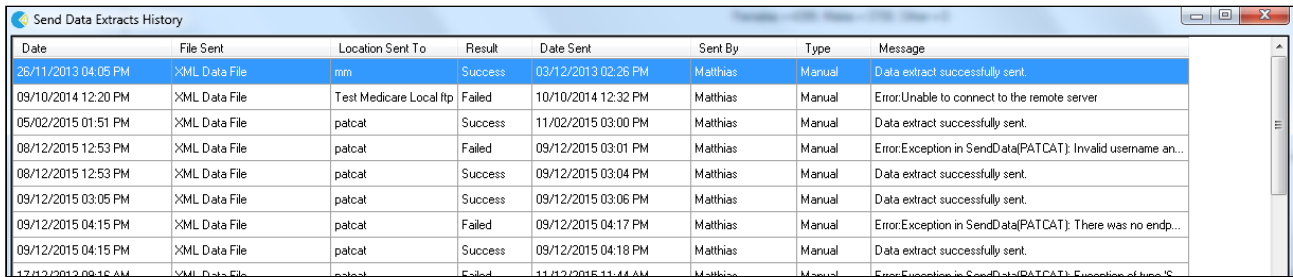
*The data will be uploaded and imported into PAT CAT automatically, but might not immediately appear in PAT CAT due to other data being imported first. All uploaded extracts are queued and will be processed in the order of their upload time.*






## 6.4 Send data history

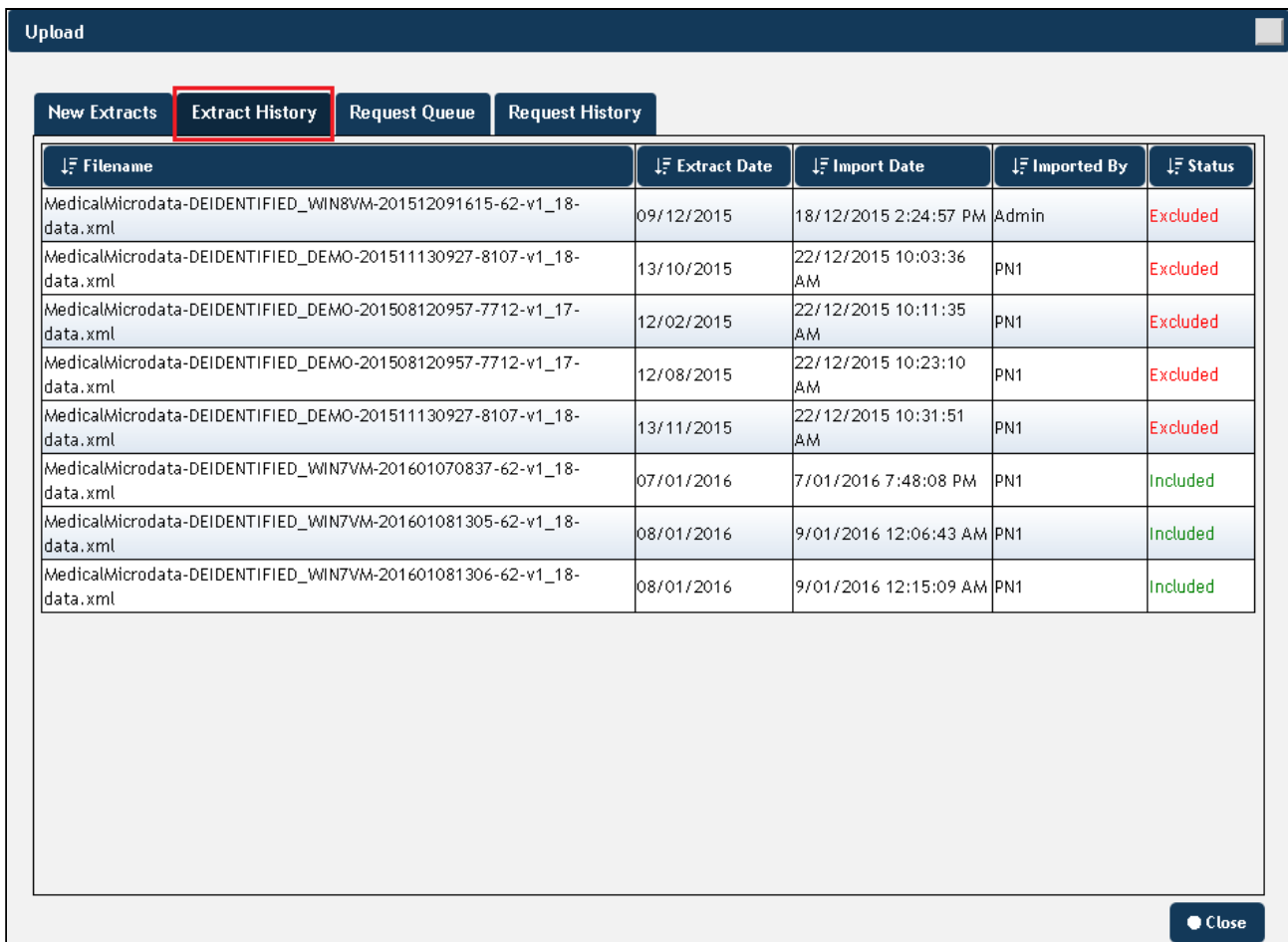
Any activity using the 'send to' function will be logged and the log is accessible under Tools/Send Data History. The history is presented in a new window and will show successful as well as unsuccessful attempts. This can be used for trouble shooting and provides a record for the clinic. The history shows which data file was sent, when, where and by who.



Date	File Sent	Location Sent To	Result	Date Sent	Sent By	Type	Message
26/11/2013 04:05 PM	XML Data File	mm	Success	03/12/2013 02:26 PM	Matthias	Manual	Data extract successfully sent.
09/10/2014 12:20 PM	XML Data File	Test Medicare Local Itp	Failed	10/10/2014 12:32 PM	Matthias	Manual	Error:Unable to connect to the remote server
05/02/2015 01:51 PM	XML Data File	patcat	Success	11/02/2015 03:00 PM	Matthias	Manual	Data extract successfully sent.
08/12/2015 12:53 PM	XML Data File	patcat	Failed	09/12/2015 03:01 PM	Matthias	Manual	Error:Exception in SendData(PATCAT): Invalid username an...
08/12/2015 12:53 PM	XML Data File	patcat	Success	09/12/2015 03:04 PM	Matthias	Manual	Data extract successfully sent.
09/12/2015 03:05 PM	XML Data File	patcat	Success	09/12/2015 03:06 PM	Matthias	Manual	Data extract successfully sent.
09/12/2015 04:15 PM	XML Data File	patcat	Failed	09/12/2015 04:17 PM	Matthias	Manual	Error:Exception in SendData(PATCAT): There was no endp...
09/12/2015 04:15 PM	XML Data File	patcat	Success	09/12/2015 04:18 PM	Matthias	Manual	Data extract successfully sent.
17/12/2015 09:16 AM	XML Data File	patcat	Failed	11/12/2015 11:44 AM	Matthias	Manual	Error:Exception in SendData(PATCAT): Exception of type 'S...

Figure 13: Send Data History

PAT CAT provides a similar function, displaying the uploaded data extracts with date time of the upload. This enables you to check if your data has been successfully uploaded from Classic CAT. To access the information log on to PAT CAT and click on the "Upload" button, then on the "Extract History". The Request Queue shows ongoing data imports and the Request History displays all uploads from this practice.



Filename	Extract Date	Import Date	Imported By	Status
MedicalMicrodata-DEIDENTIFIED_WIN8VM-201512091615-62-v1_18-data.xml	09/12/2015	18/12/2015 2:24:57 PM	Admin	Excluded
MedicalMicrodata-DEIDENTIFIED_DEMO-201511130927-8107-v1_18-data.xml	13/10/2015	22/12/2015 10:03:36 AM	PN1	Excluded
MedicalMicrodata-DEIDENTIFIED_DEMO-201508120957-7712-v1_17-data.xml	12/02/2015	22/12/2015 10:11:35 AM	PN1	Excluded
MedicalMicrodata-DEIDENTIFIED_DEMO-201508120957-7712-v1_17-data.xml	12/08/2015	22/12/2015 10:23:10 AM	PN1	Excluded
MedicalMicrodata-DEIDENTIFIED_DEMO-201511130927-8107-v1_18-data.xml	13/11/2015	22/12/2015 10:31:51 AM	PN1	Excluded
MedicalMicrodata-DEIDENTIFIED_WIN7VM-201601070837-62-v1_18-data.xml	07/01/2016	7/01/2016 7:48:08 PM	PN1	Included
MedicalMicrodata-DEIDENTIFIED_WIN7VM-201601081305-62-v1_18-data.xml	08/01/2016	9/01/2016 12:06:43 AM	PN1	Included
MedicalMicrodata-DEIDENTIFIED_WIN7VM-201601081306-62-v1_18-data.xml	08/01/2016	9/01/2016 12:15:09 AM	PN1	Included

Figure 14: Extract History

## 7 IMPORTING AND EXPORTING EXTRACTS

Importing an extract into PAT CAT is completed in 2 stages.

- Stage 1: Either adding G-tags and de-identifying an extract, or only de-identifying an extract. This stage is performed in CAT4 at the practice.
- Stage 2: Importing/Uploading the extract into PAT CAT.

**NOTE:** The process for importing an extract is slightly different depending on whether you are a practice or a PHN or other organisation; both methods are covered in this section.

PAT CAT will only use one extract in a month, so if a practice uploads multiple extracts in one particular month, only the most recent data will be used for reporting. This can be addressed by manually excluding data if required.

- [Adding G-tags to an Extract](#)(see page 57)
- [De-identifying an Extract](#)(see page 60)
- [Preparing Manual Data Upload](#)(see page 63)
- [Web Based Uploading from a Practice](#)(see page 64)
- [Importing an Extract as an Organisation](#)(see page 68)
- [Imported Extracts and Extract History](#)(see page 73)

### 7.1 Adding G-tags to an Extract

**NOTE:** Adding G-tags to an extract will also de-identify an extract. The g-tagging process includes de-identification.

**IMPORTANT:** There is a cost associated with adding G-tags to an extract and the user has to be licensed to use it. If no license is associated with the user account, the G-tag option will not be displayed.

1. Open CAT4 and select an extract that you would like to send to PAT CAT with G-tags. Please ensure that you select an Extract which does **NOT** have the text "DEIDENTIFIED\_GTAGGED" or "DEIDENTIFIED" in the extract name.

**NOTE:** You cannot add G-tags to an extract that has already been de-identified.

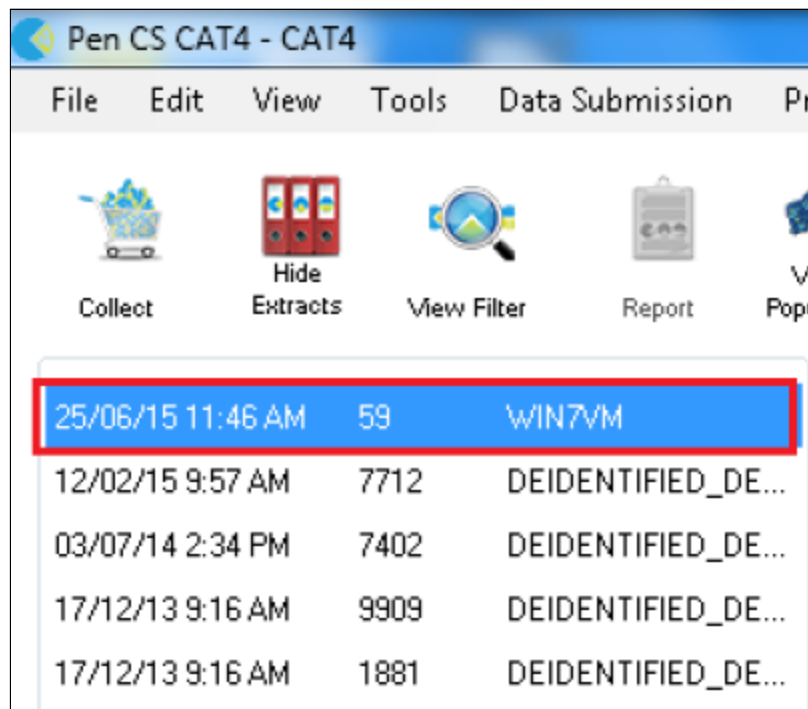


Figure 21: Select Extract for G-Tagging

1. Open the **Tools** menu and select **Add GTAGs**

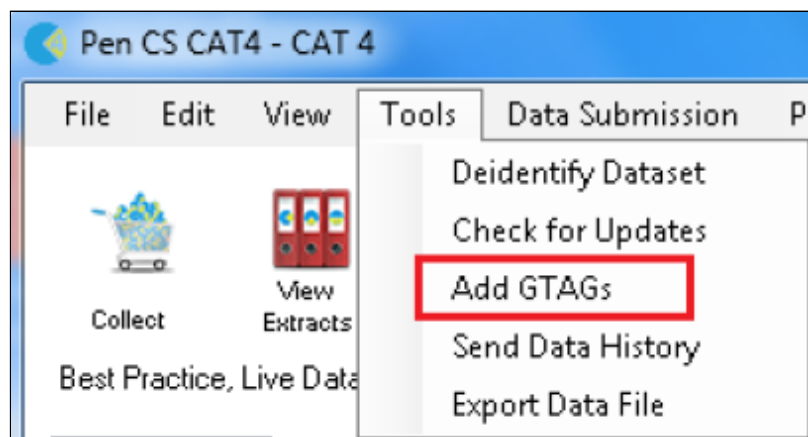


Figure 22: Select GTags from menu

1. Press the **OK** button to confirm you wish to de-identify the extract and add GTAG data.

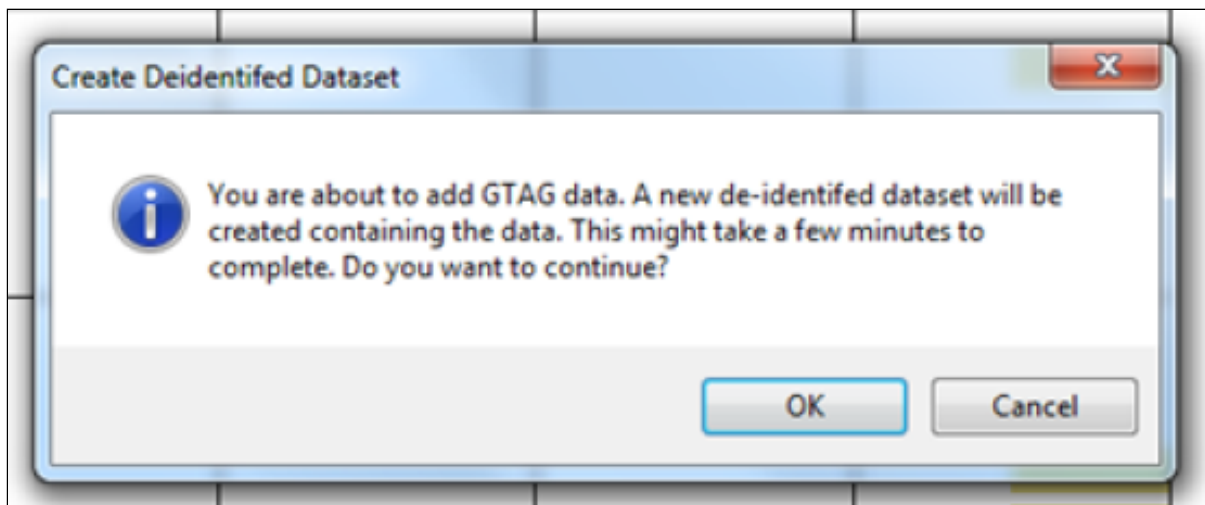


Figure 23: Confirm GTag process

1. Press the **OK** button when the Success dialog appears

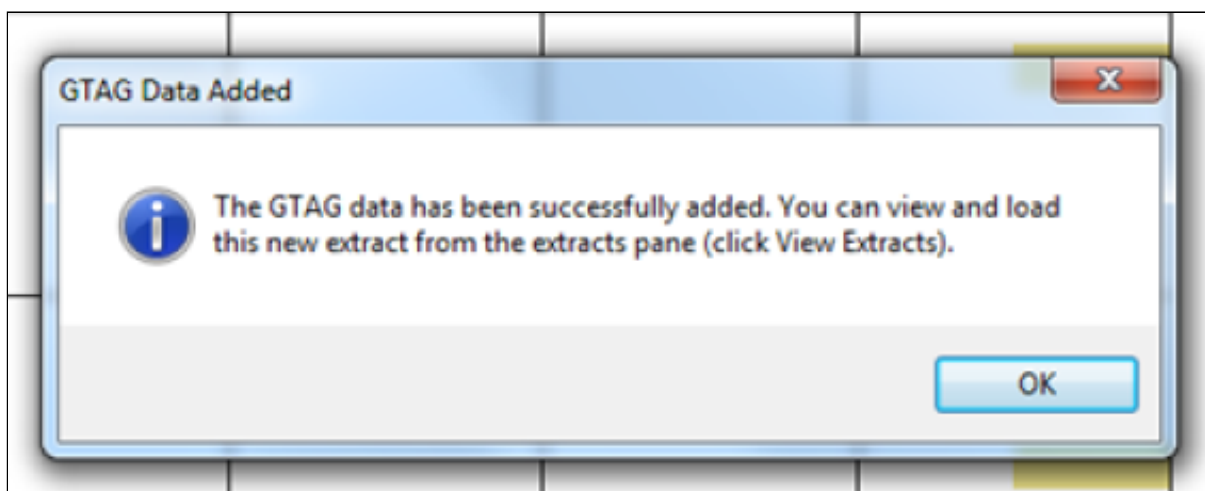


Figure 24: Confirm GTag step 2

1. Notice that in the extracts panel, a new extract is listed with the text "DEIDENTIFIED\_GTAGGED" in the name. This is the file that is to be imported into PAT CAT.

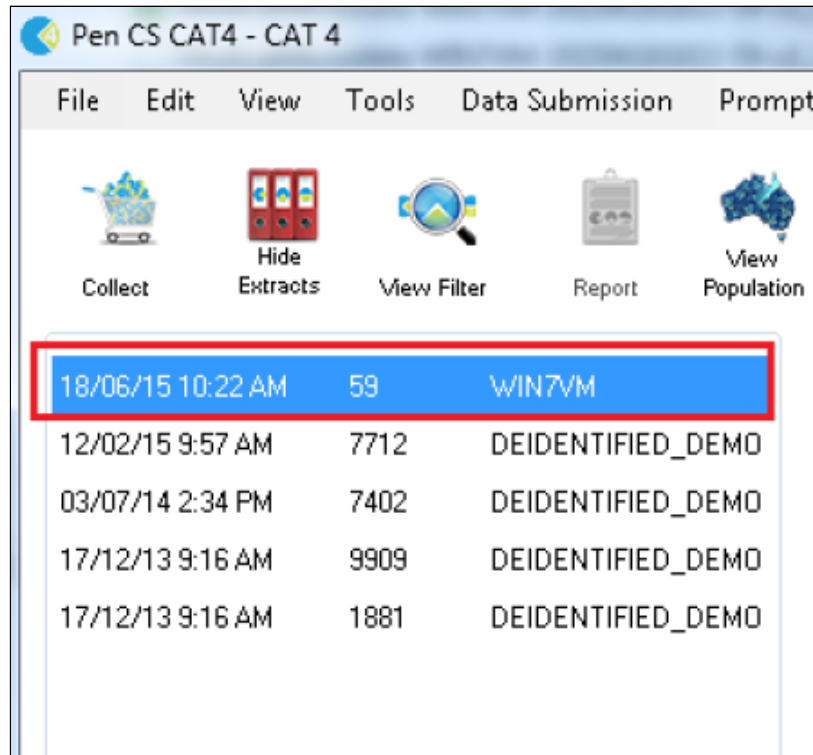
21/05/2014 1:41 PM	28	MHCHOPC001
21/05/2014 1:29 PM	48	DEIDENTIFIED_GTAGGED_DEMOPC
21/05/2014 1:29 PM	48	DEMOPC

Figure 25: GTag output

More information on the De-identification and G-tagging process can be found in **Appendix A**.

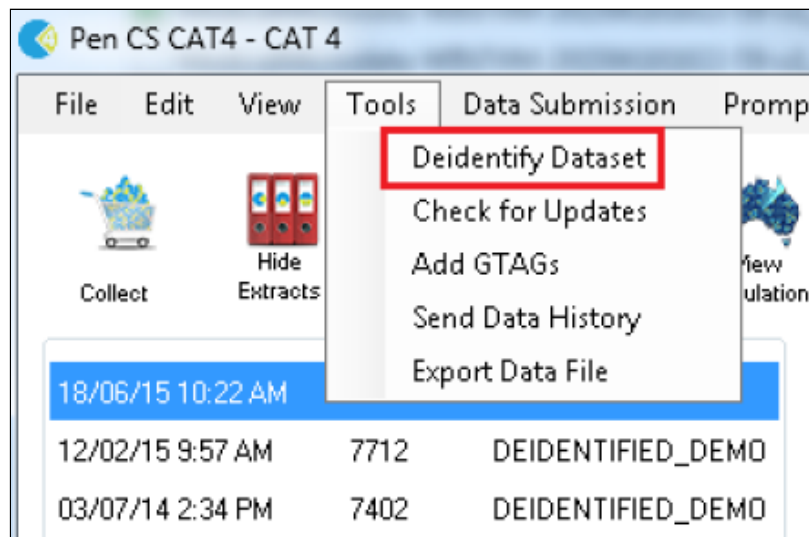
## 7.2 De-identifying an Extract

1. Open CAT4 and select an extract that you would like to send to PAT CAT. Please ensure that you select an Extract which does **NOT** have the text "DEIDENTIFIED" or "DEIDENTIFIED\_GTAGGED" in the extract name.

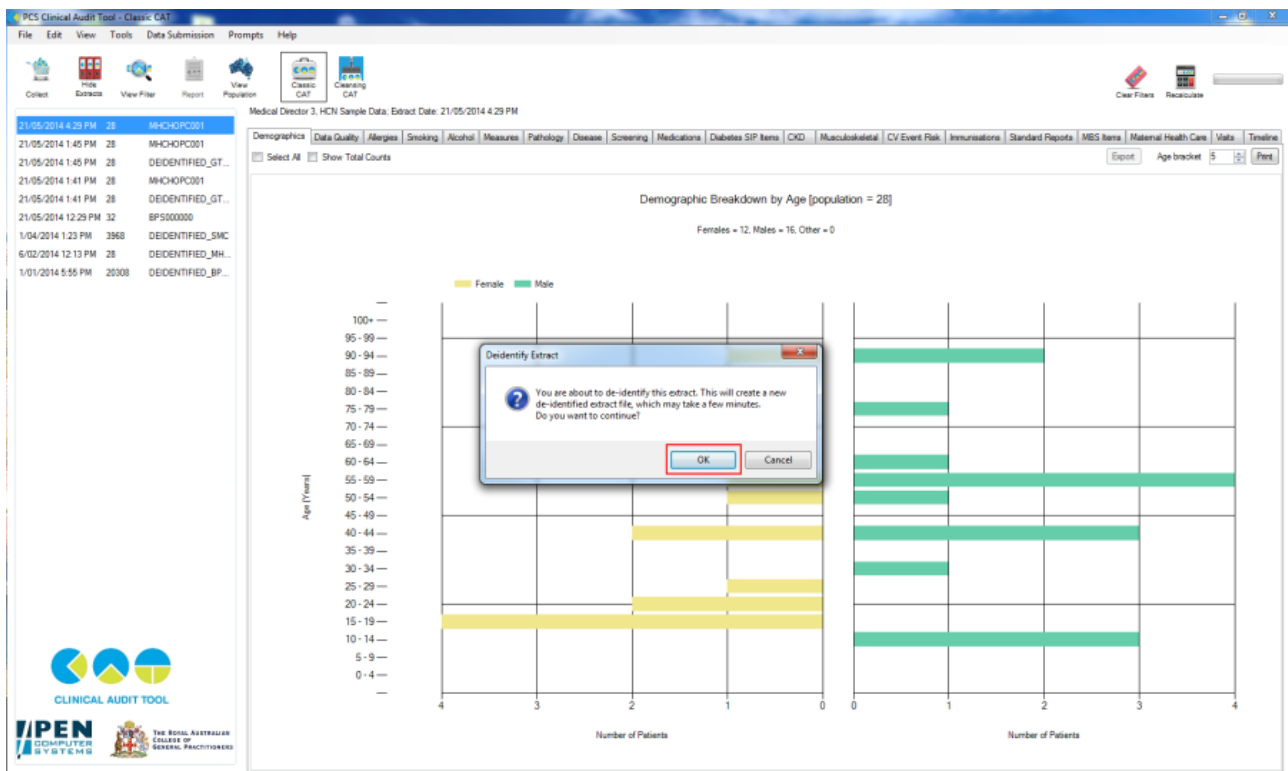


1. Open the **Tools** menu and select **Deidentify Dataset**

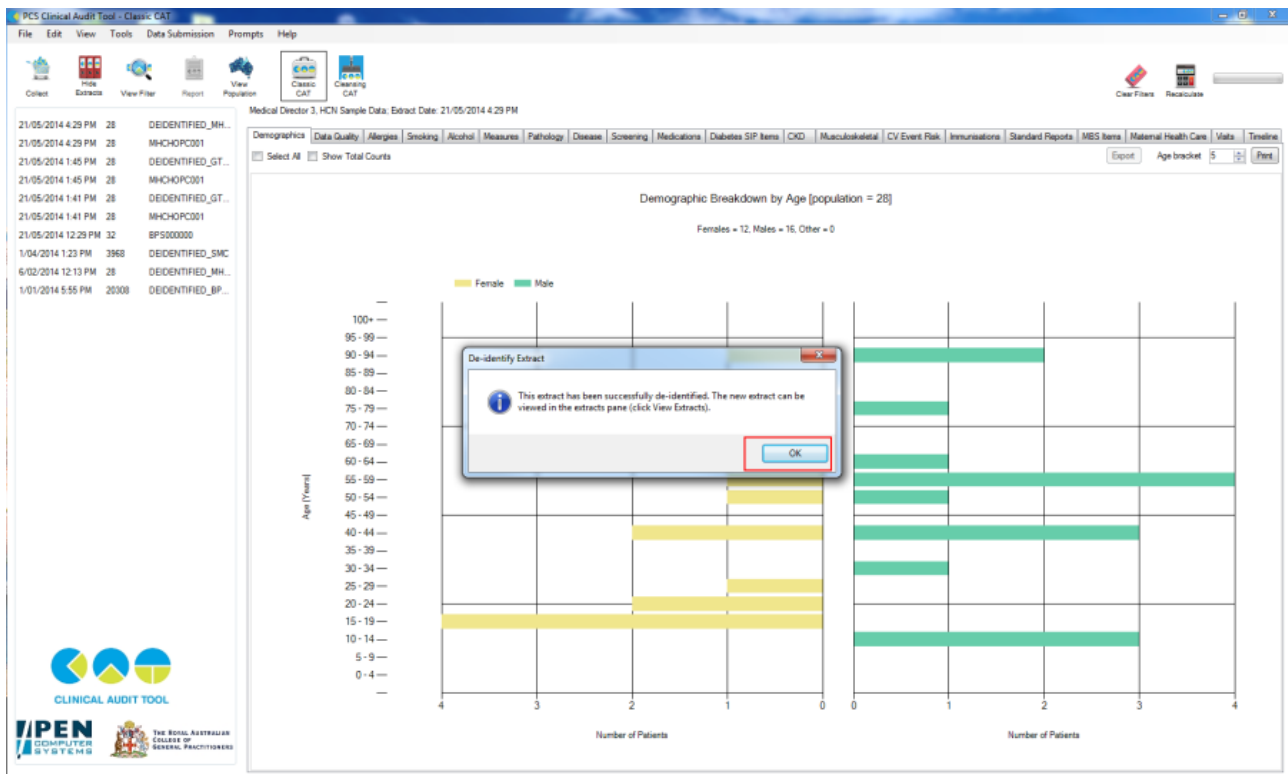




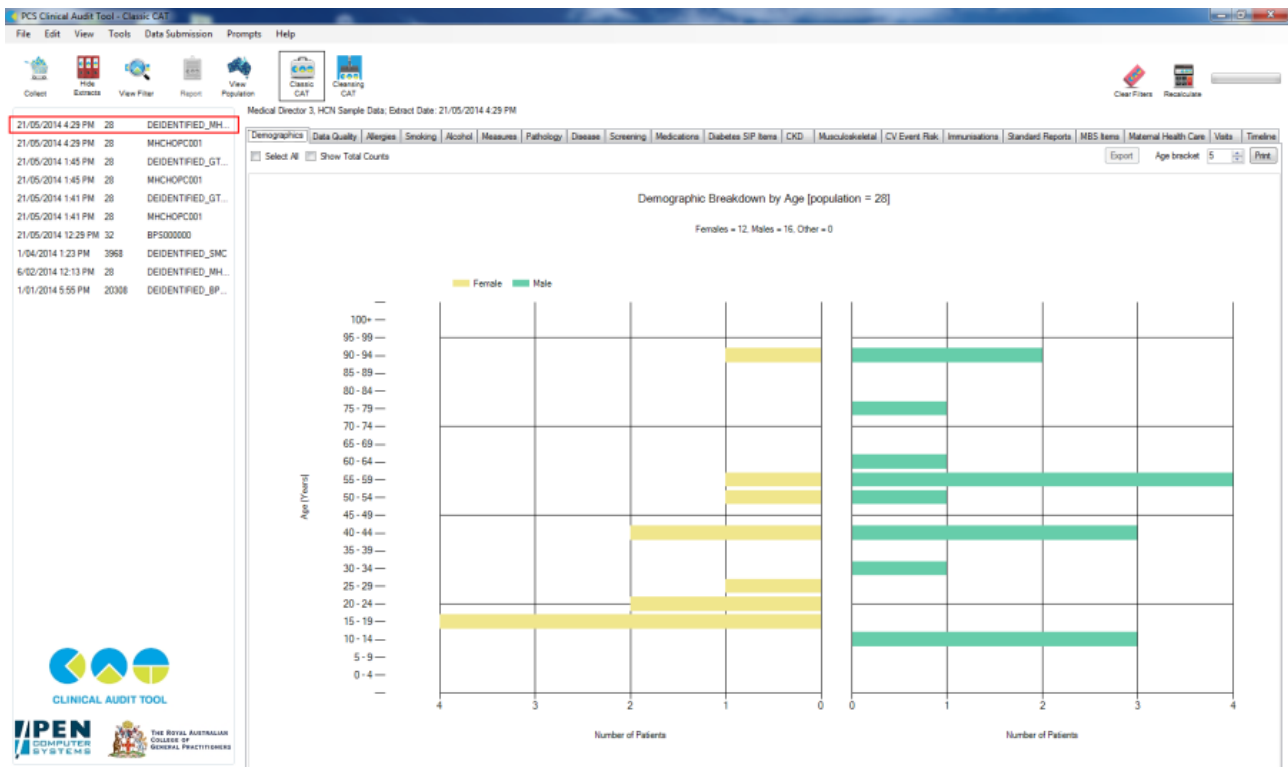
1. Press the **OK** button to confirm you wish to de-identify the extract



1. Press the **OK** button when the Success dialog appears



1. Notice that in the extracts panel, a new extract is listed with the text "DEIDENTIFIED" in the name. This is the file that is to be imported into PAT CAT.



More information on the De-identification and G-tagging process can be found in [Appendix A](#). (see page 230)

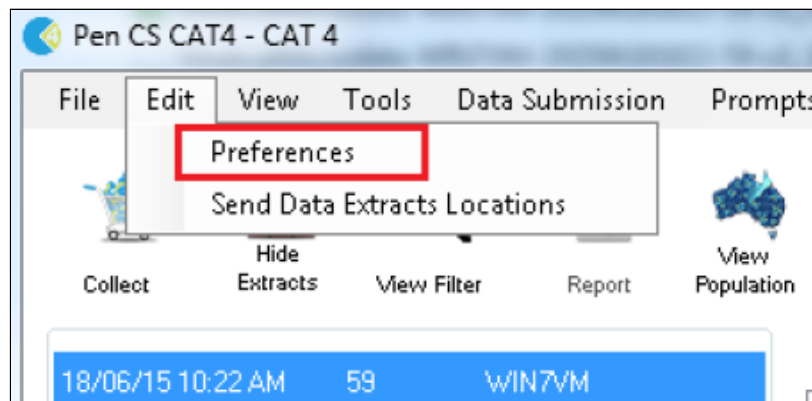
## 7.3 Preparing Manual Data Upload

If you choose not to use the 'Send to PATCAT' option described above you, you will need to locate where the de-identified extract file is located on the practice's computer. By default, the extract is saved to "C:\ClinicalAudit\", however this can vary from practice to practice and the data is often located on a shared network drive.

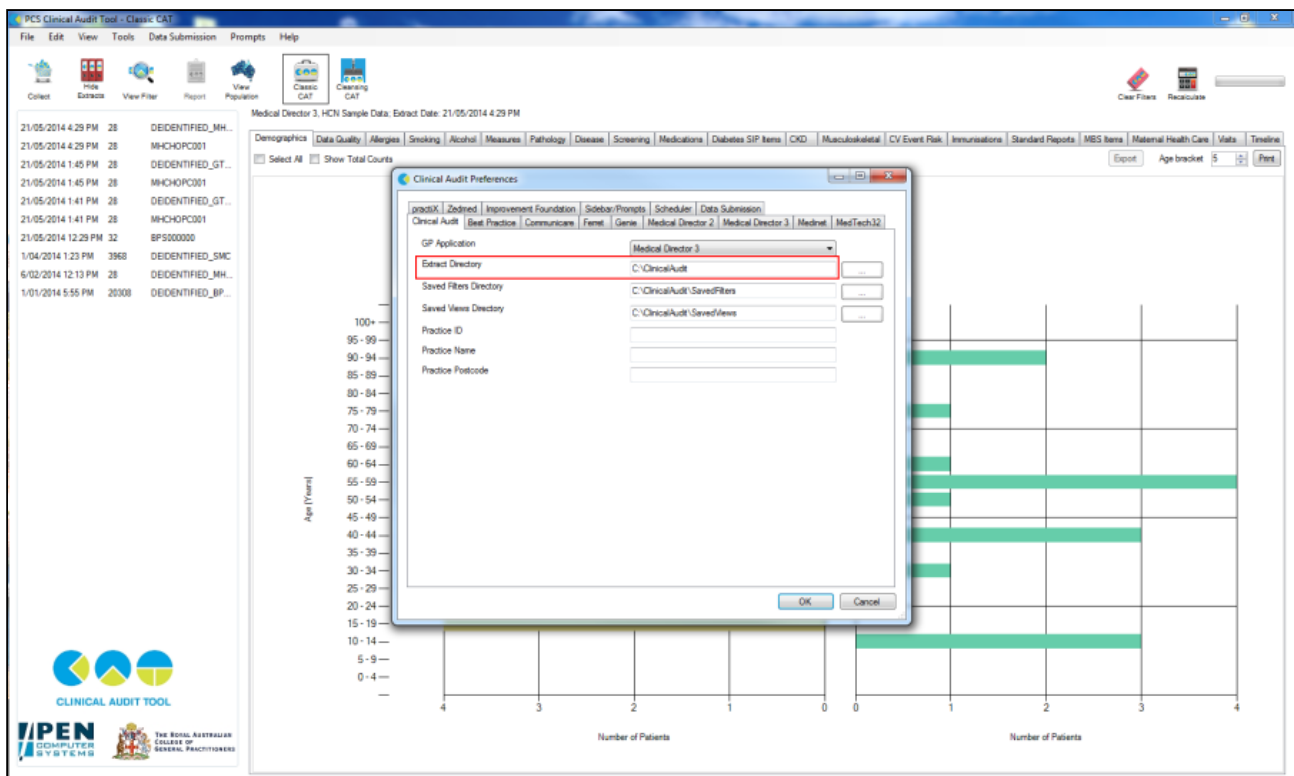
**NOTE:** The steps described in 5.4 (see page 63) and 5.5 (see page 50) are not required if you are using our built in 'Send to PAT CAT' module. It is strongly recommended to use the 'Send to PAT CAT' method to upload data as it is the easiest way and doesn't involve any direct access of file systems and other 'technical' steps. The details are shown here: [Upload Data to PAT CAT](#)<sup>5</sup>

To confirm where the extract is stored, open the **Edit** menu and select **Preferences**

<sup>5</sup> <https://help.pencs.com.au/display/ds/Upload+Data+to+PAT+CAT>



Within the **Clinical Audit Preferences** window, select the **Clinical Audit** tab, the **Extracts Directory** textbox shows where the extracts are stored.



## 7.4 Web Based Uploading from a Practice

There are a number of different ways data can be uploaded to PAT CAT. Practices can submit data to their PHN or other organisation directly from CAT4 (described above in 5.3 (see page 64)) by email, ftp or direct upload or data can

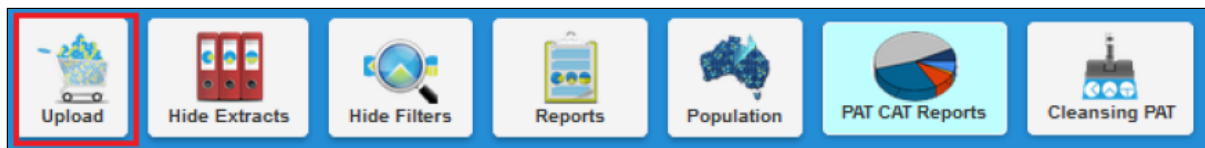
be submitted as described below after a practice has logged on to PAT CAT.

**With the release of CAT4 a new automatic data submission function has been added. In combination with our scheduler CAT4 can now be configured to automatically collect and submit data to PAT CAT. We recommend to use the 'Send to PATCAT' upload as it is the easiest and most secure way to upload data.**

This guide only describes how to upload data through the web interface of PAT CAT – uploading data through CAT4 is the easier and recommended option.

Logon details will have to be provided by the PHN or other organisation and practice access needs to be configured as described in chapter Setting up Practices<sup>6</sup>.

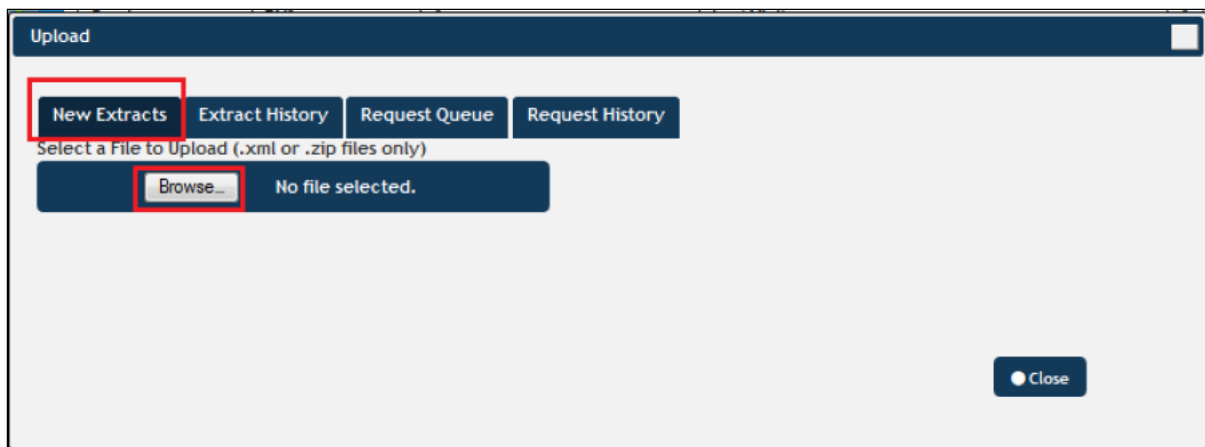
1. Click the Upload button, this will open the import window.



1. Click the **New Extracts** Tab.

1. Click **Choose File**.

**NOTE:** on some internet browsers the button may be labelled **Browse**.

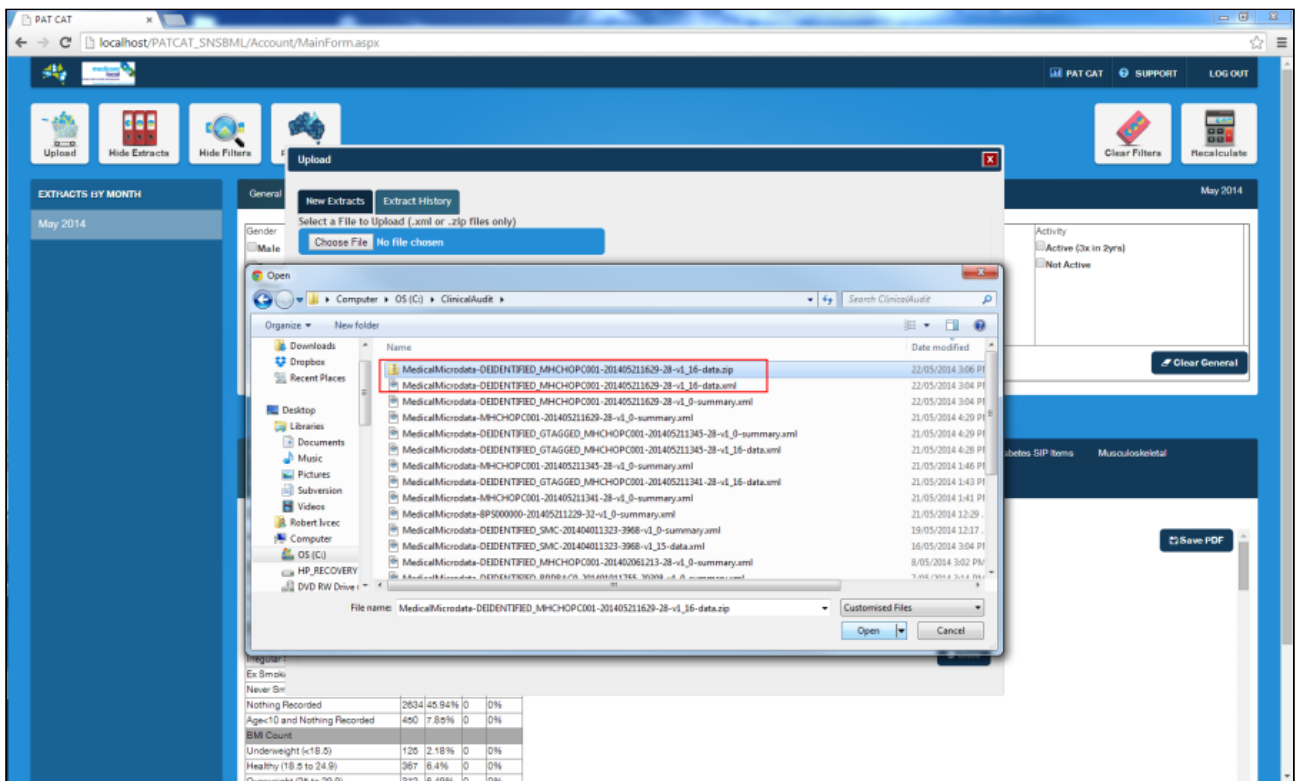


1. Go to the extracts directory (as identified previously(see page 63)) and locate the de-identified extract file.

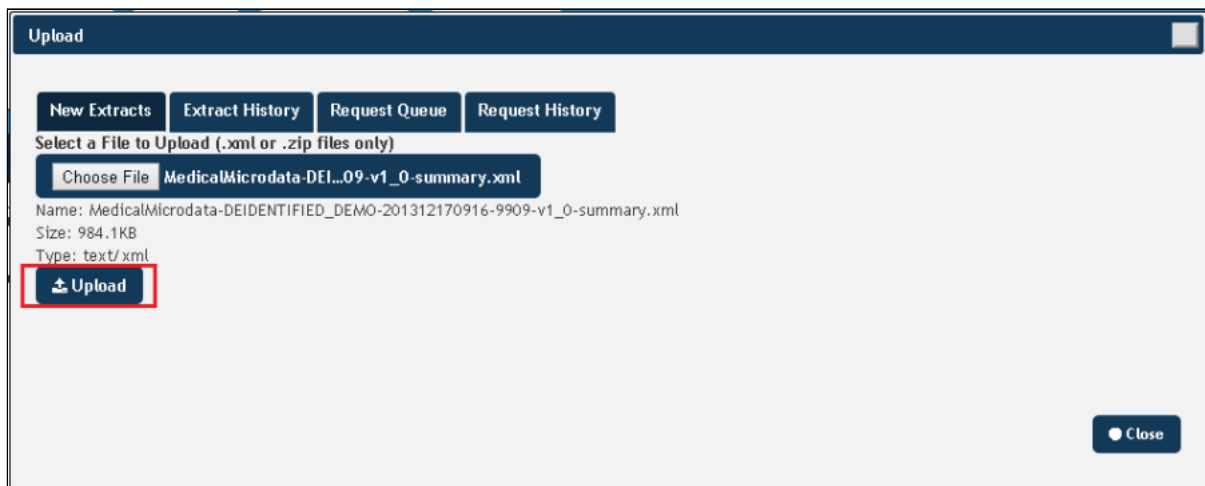
**NOTE:** Ensure the file has the text "DEIDENTIFIED" or "DEIDENTIFIED\_GTAGGED", and "-data" in the name. If you have compressed the extract file select the ".zip" file, otherwise select the "...data.xml" file.

1. Press the **Open** button.

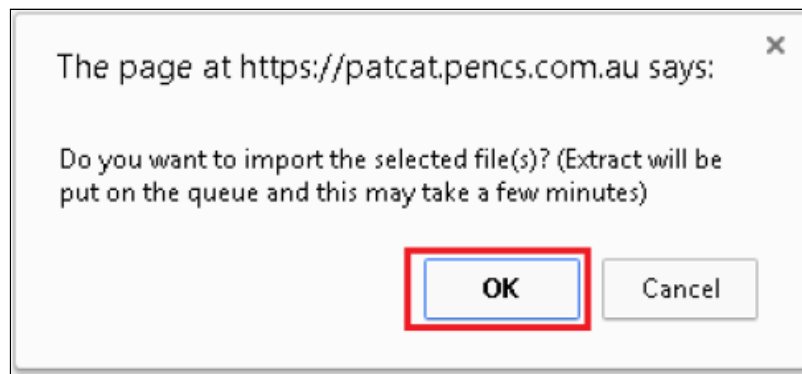
<sup>6</sup> <https://help.pencs.com.au/display/ds/Setting+up+Practices+pre+3.2>



1. Press the **Upload** button.



1. Press **OK** on the confirmation dialog that appears

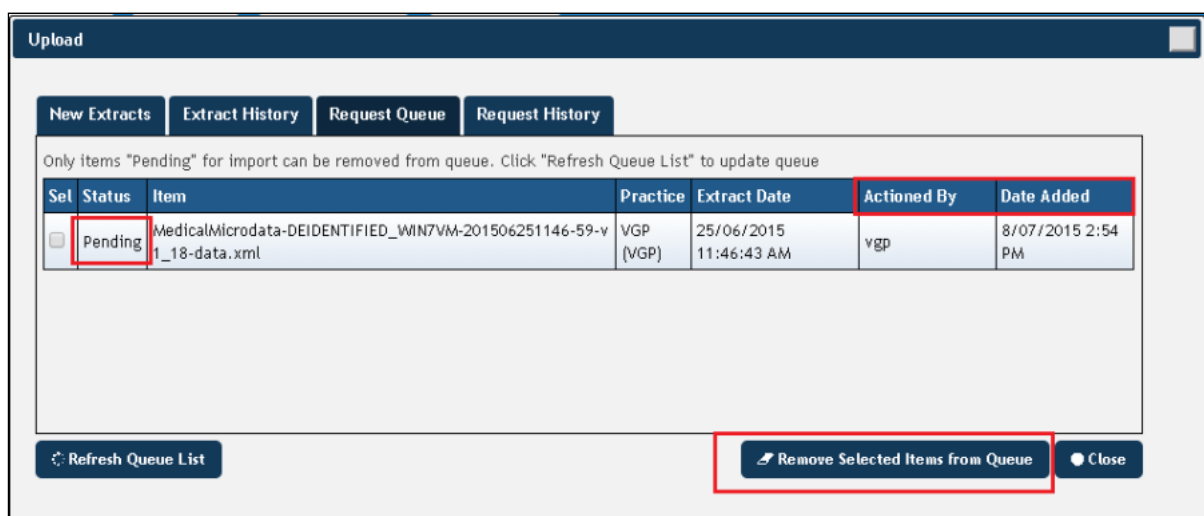


Wait for the file to be uploaded and imported into PAT CAT. You can check the progress of the import in the 'Request Queue' screen

**NOTE:** This can take several minutes.



To check the progress of the import, click on the 'Request Queue' tab. Here all extracts currently waiting to be imported are listed and can be removed if needed. PAT CAT will also show who uploaded the extract when.



The Request History tab shows what has been imported in the past:

Upload

New Extracts

Extract History

Request Queue

Request History

Status	Item	Practice	Extract Date	Actioned By	Date Added	Notes
Complete	MedicalMicrodata-DEIDENTIFIED_VGP-201506131626-15194-v1_15-data.xml	VGP (VGP)	13/06/2015 4:26:01 PM	Admin	8/07/2015 12:09 PM	-
Complete	MedicalMicrodata-DEIDENTIFIED_VGP-201505131626-15194-v1_15-data.xml	VGP (VGP)	13/05/2015 4:26:01 PM	Admin	8/07/2015 12:09 PM	-

1. When the upload and import is complete, the request queue will be empty and the extract will be show in the request history screen.

Upload

New Extracts

Extract History

Request Queue

Request History

Only items "Pending" for import can be removed from queue. Click "Refresh Queue List" to update queue

No Items Found.

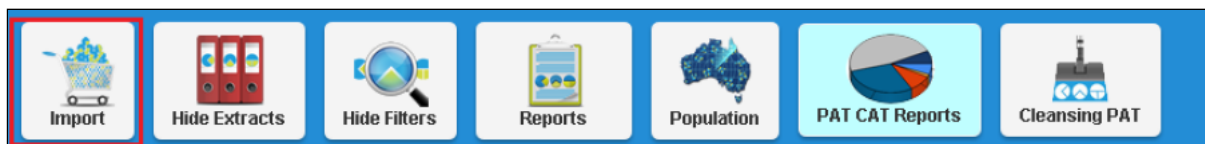
1. Click on the "Close" button in the Upload window. You have now uploaded the practice data into PAT CAT.

## 7.5 Importing an Extract as an Organisation

A PHN/other organisation can receive an extract via email, ftp or other method; these extracts can be imported manually following the steps below.

**We recommend using the 'Send To PAT CAT' from CAT4 for all data if possible!**

1. Ensure you are logged in to PAT CAT. Click the Import button; this will open the import window.



1. Click the **New Extracts** TAB. If there are any extracts already on your server but not imported yet you will be shown a list of the extracts and the corresponding clinics.



1. To add a new extract, click **Choose File**.

**NOTE:** on some internet browsers the button may be labelled **Browse**.

Import

New Extracts

Imported Extracts

Request Queue

Request History

Please use the "Extract Date" column/section to change the extract date. The "time" aspect of the extract date will remain the same. Only the day, month and year will be affected when you change the extract date.

Select Files to Import and Link to Practice ID

Total valid extracts that can be imported: 3

Set	Practice ID	Population Count	Extract Date	Filename
<input type="checkbox"/>	GTCMC	5734	01/07/2015	MedicalMicrodata-DEIDENTIFIED_GTCMC-201507011625-5734-v1_15-data.xml
<input type="checkbox"/>	GTCMC	4503	01/07/2015	MedicalMicrodata-DEIDENTIFIED_PCSMC-201507011624-4503-v1_15-data.xml
<input type="checkbox"/>	VGP	15194	01/07/2015	MedicalMicrodata-DEIDENTIFIED_VGP-201507011626-15194-v1_15-data.xml

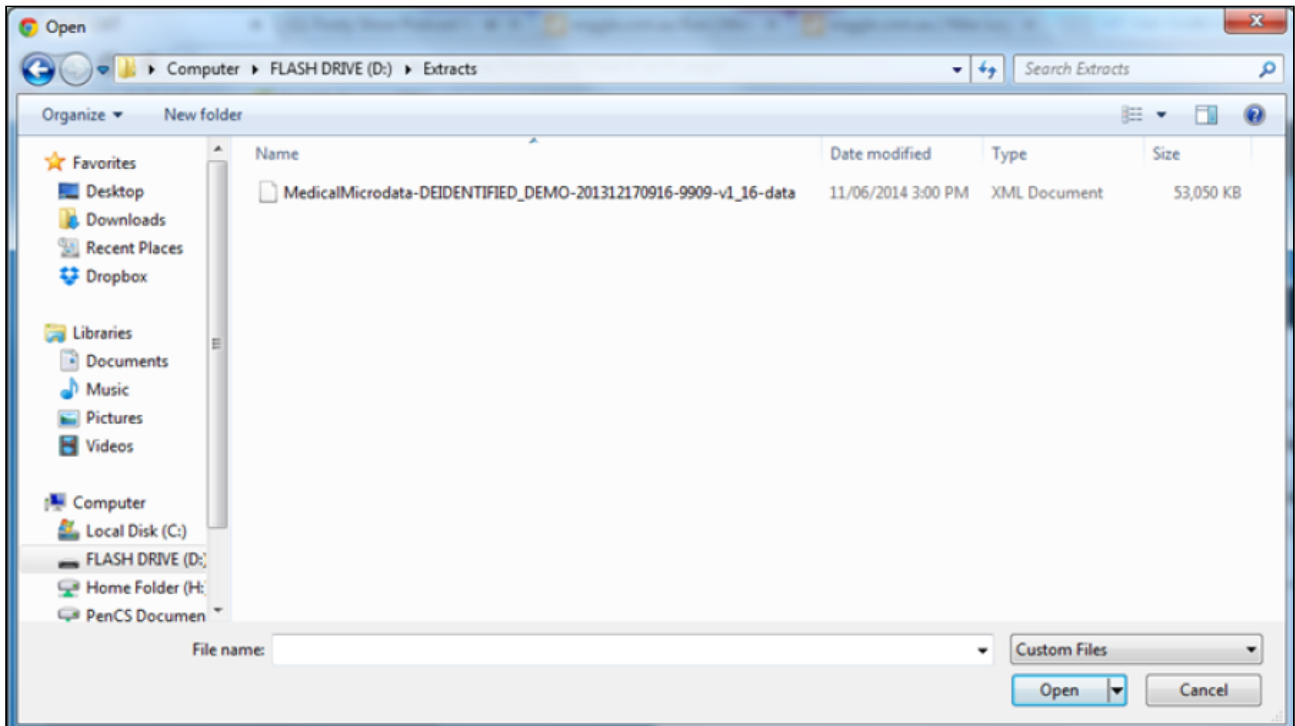
Select a File to Upload (.xml or .zip files only)

Choose File

No file chosen

Close

1. Browse to the storage media containing the de-identified extract file. In the example given below, the extract is stored on a USB stick



**NOTE:** Ensure the file has the text "DEIDENTIFIED" or "DEIDENTIFIED\_GTAGGED", and "-data" in the name. If you have compressed the extract file select the ".zip" file, otherwise select the "...data.xml" file.

1. Select the file and press the **Open** button.
1. Select the Practice ID that you wish to be associated with the data contained in the extract. PAT CAT uses the name of the extract to determine the correct practice but you can manually overrule this process.

Import

New Extracts
Imported Extracts
Request Queue
Request History

Please use the "Extract Date" column/section to change the extract date. The "time" aspect of the extract date will remain the same. Only the day, month and year will be affected when you change the extract date.

Select Files to Import and Link to Practice ID

Total valid extracts that can be imported: 3

Sel	Practice ID	Population Count	Extract Date	Filename
<input type="checkbox"/>	GTCMC	5734	01/07/2015	MedicalMicrodata-DEIDENTIFIED_GTCMC-201507011625-5734-v1_15-data.xml
<input type="checkbox"/>	GTCMC	4503	01/07/2015	MedicalMicrodata-DEIDENTIFIED_PCSMC-201507011624-4503-v1_15-data.xml
<input type="checkbox"/>	VGP	15194	01/07/2015	MedicalMicrodata-DEIDENTIFIED_VGP-201507011626-15194-v1_15-data.xml

Select a File to Upload (.xml or .zip files only)

Choose File MedicalMicrodata-DEI...46-59-v1\_18-data.xml

Name: MedicalMicrodata-DEIDENTIFIED\_WIN7VM-201506251146-59-v1\_18-data.xml  
Size: 255.84KB  
Type: text/xml

Upload

Close

**NOTE:** If the extract is for a Practice that does not appear in the drop down list, you need to add the practice as detailed in Section 4.

- More than one extract may be uploaded via a single import, repeat Steps 3-6 for all extracts you wish to import.
- Select all extracts you wish to import via the **Sel** tick box.

**Import**

**New Extracts** | **Imported Extracts** | **Request Queue** | **Request History**

Please use the "Extract Date" column/section to change the extract date. The "time" aspect of the extract date will remain the same. Only the day, month and year will be affected when you change the extract date.

Select Files to Import and Link to Practice ID Total valid extracts that can be imported: 3

Set	Practice ID	Population Count	Extract Date	Filename
<input checked="" type="checkbox"/>	GTCMC	5734	01/07/2015	MedicalMicrodata-DEIDENTIFIED_GTCMC-201507011625-5734-v1_15-data.xml
<input type="checkbox"/>	GTCMC	4503	01/07/2015	MedicalMicrodata-DEIDENTIFIED_PCSMC-201507011624-4503-v1_15-data.xml
<input type="checkbox"/>	VGP	15194	01/07/2015	MedicalMicrodata-DEIDENTIFIED_VGP-201507011626-15194-v1_15-data.xml

Select a File to Upload (.xml or .zip files only)

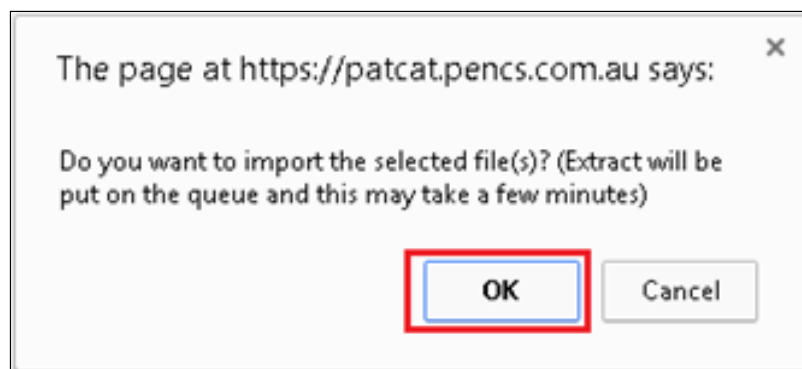
**Choose File** MedicalMicrodata-DEI...46-59-v1\_18-data.xml

Name: MedicalMicrodata-DEIDENTIFIED\_WIN7VM-201506251146-59-v1\_18-data.xml  
 Size: 255.84KB  
 Type: text/xml

**Upload**

**Delete File** **Add to Request Queue** **Close**

1. Press the **Add to Request Queue** button. You can also delete extracts from this screen by using the 'Delete File' button
1. Press **OK** on the confirmation dialog that appears



Wait for the file to be imported into PAT CAT – you can check the Request Queue for progress and see the Request History for already imported files.

**NOTE:** This can take some time; particularly if there are others extracts waiting in the queue.

Import							
New Extracts		Imported Extracts		Request Queue		Request History	
Status	Item	Practice	Extract Date	Actioned By	Date Added	Notes	
Complete	MedicalMicrodata-DEIDENTIFIED_WIN7VM-201506251146-59-v1_18-data.xml	VGP (VGP)	25/06/2015 11:46:43 AM	vgp	8/07/2015 2:54 PM	-	
Complete	MedicalMicrodata-DEIDENTIFIED_VGP-201506131626-15194-v1_15-data.xml	VGP (VGP)	13/06/2015 4:26:01 PM	Admin	8/07/2015 12:09 PM	-	
Complete	MedicalMicrodata-DEIDENTIFIED_VGP-201505131626-15194-v1_15-data.xml	VGP (VGP)	13/05/2015 4:26:01 PM	Admin	8/07/2015 12:09 PM	-	
Complete	MedicalMicrodata-DEIDENTIFIED_SMC-201506131624-4503-v1_15-data.xml	SMC (SMC)	13/06/2015 4:24:26 PM	Admin	8/07/2015 12:09 PM	-	
Complete	MedicalMicrodata-DEIDENTIFIED_SMC-201505131624-4503-v1_15-data.xml	SMC (SMC)	13/05/2015 4:24:26 PM	Admin	8/07/2015 12:09 PM	-	
Complete	MedicalMicrodata-DEIDENTIFIED_GTCMC-201506131625-5734-v1_15-data.xml	GTCMC (GTCMC)	13/06/2015 4:25:35 PM	Admin	8/07/2015 12:09 PM	-	
Complete	MedicalMicrodata-DEIDENTIFIED_GTCMC-201505131625-5734-v1_15-data.xml	GTCMC (GTCMC)	13/05/2015 4:25:35 PM	Admin	8/07/2015 12:09 PM	-	

1. Click on the "Close" button in the Upload window. You have now uploaded and imported the selected extracts into PAT CAT.

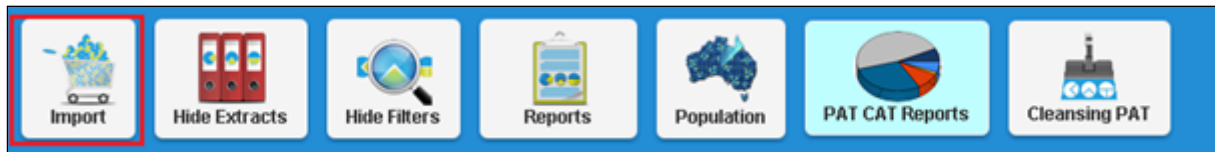
## 7.6 Imported Extracts and Extract History

- [Imported Extracts](#)(see page 73)
- [Request Queue](#)(see page 75)
- [Request History](#)(see page 75)
- [Changing the Practice for an Extract](#)(see page 75)
- [Changing Extract Details](#)(see page 76)
- [Extract History](#)(see page 77)
- [Finding Missing Extracts](#)(see page 78)
- [Download Extract Import Details and History](#)(see page 79)

### 7.6.1 Imported Extracts

The import window also allows access to a history of all imported extracts. To access this history:  
When you are logged on as a **PHN or other organisation**

1. Click the Import button, this will open the import window.



1. Click the **Imported Extracts** Tab.

Import

New Extracts

**Imported Extracts**

Request Queue

Request History

PATCAT BI

Download All

Please select extracts to Include and/or Exclude. Including and/or Excluding extracts will be put into the "Request Queue". Status will be updated once the request has been processed. Please see "Request Queue" before including and/or excluding extract to avoid duplicate requests.

Note: Data is altered when extracts are being included and/or excluded, as a result, graphs and/or reports may not be accurate while extracts are being included and/or excluded.

Practice Filter: -- No Filter -- Reset

1 2 3 4 5 6 7 8 9 10 ... Last

Sel	Practice ID	Practice	Extract Date	Import Date	Filename	Status
<input type="checkbox"/>	Matthias QA Clinic	Matthias QA Clinic	19 November 2018 01:58 PM	28 November 2018 08:48 AM	MedicalMicrodata-DEIDENTIFIED_DEMO_ALL_LOCALITIES-201811191358-737-v1_16-data.xml	Included
<input type="checkbox"/>	Haval ZedMed Clinic	Haval ZM Clinic	26 November 2018 06:50 PM	26 November 2018 06:51 PM	MedicalMicrodata-DEIDENTIFIED_8654-201811261850-687-v1_26-data.xml	Included
<input type="checkbox"/>	Haval BP Clinic	Haval BP Clinic	26 November 2018 06:01 PM	26 November 2018 06:08 PM	MedicalMicrodata-DEIDENTIFIED_BPS000000-201811261801-871-v1_26-data.xml	Included
<input type="checkbox"/>	Haval BP Clinic	Haval BP Clinic	26 November 2018 04:53 PM	26 November 2018 05:00 PM	MedicalMicrodata-DEIDENTIFIED_BPS000000-201811261653-870-v1_26-data.xml	Superseded
<input type="checkbox"/>	Haval ZedMed Clinic	Haval ZM Clinic	26 November 2018 04:45 PM	26 November 2018 04:46 PM	MedicalMicrodata-DEIDENTIFIED_8654-201811261645-687-v1_26-data.xml	Superseded

Download

Close

The 'Download' button in the right corner allows to download all information about the imported extracts in csv format. This is very useful to analyse who has uploaded what information. To find a particular practice use the Practice Filter option.

The Imported Extracts window shows all extracts loaded into PAT CAT for the entire PHN or other organisation, including details of:

- Practice ID** – the ID associated with the Practice currently assigned to the extract,
- Practice** – the name of the Practice currently assigned to the extract,
- Extract Date** – when the extract was performed in CAT4,
- Import Date** – when the extract was imported into PAT CAT,
- Imported By** – which user imported the extract,

**Filename** – the name of the file which contains the extract data,

**Status** – whether the extract is currently included, superseded or excluded from PAT CAT.

When working with a large number of extracts it may be handy to sort the list of extracts based on a specific detail, this is done by clicking on the column heading.

## 7.6.2 Request Queue

When an extract is included or excluded from the 'Imported Extracts' tab, the extract will appear in the request queue. Please check the request queue before including/excluding extracts to avoid duplicated requests. During the import process the data and graphs in PAT CAT is altered. Please make sure all requests have been processed before creating reports.

## 7.6.3 Request History

The request history tab shows how the different extracts have been processed – it provides a log of who has included/excluded data and when that was done.

## 7.6.4 Changing the Practice for an Extract

Access the Imported Extracts window as detailed above.

1. Click on the drop down box in the **Practice ID** column of the extract you wish to change, select the new Practice ID

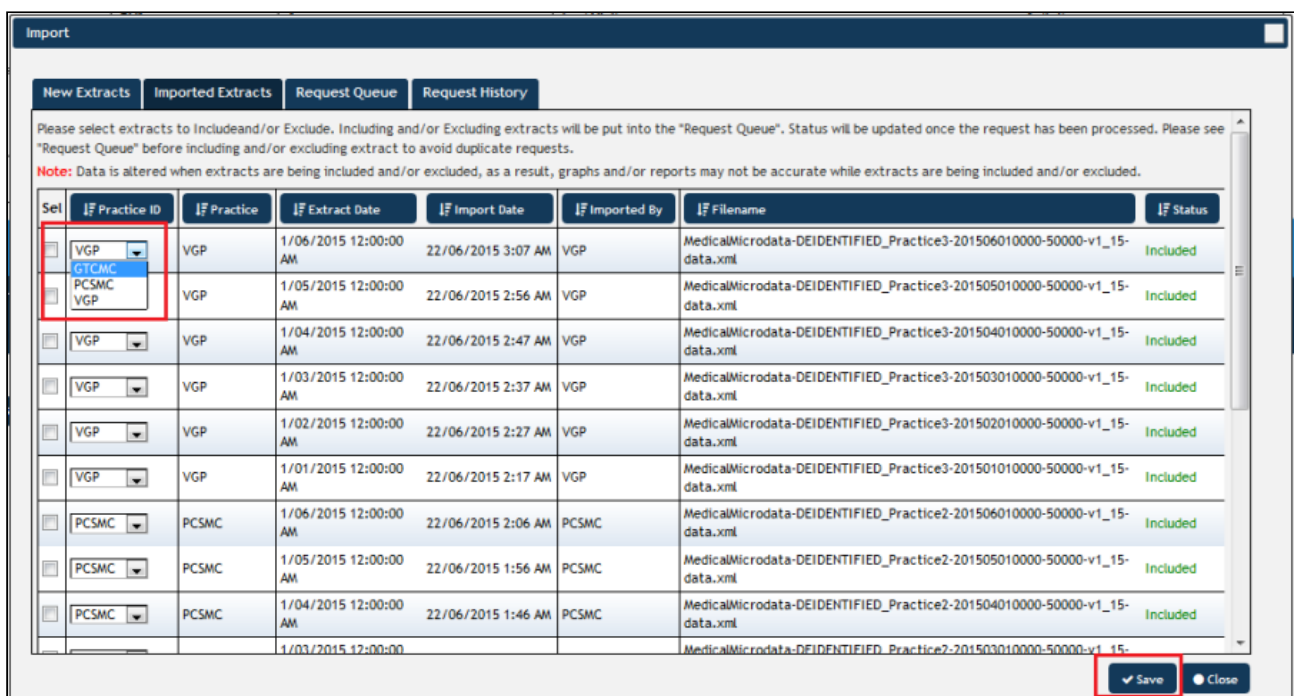


Figure 71: Select Practice

1. Click the **Save** button.

**NOTE:** If the Practice ID does not appear in the drop down list, you need to add the practice as detailed in [Section 3<sup>7</sup>](#).

## 7.6.5 Changing Extract Details

Access the Imported Extracts window as detailed above. Once at least one practice has been selected by using the tick box in the 'Sel' column, the following options to change an extract are available:

- Request to change month - you can change the month of the extract but only by one month earlier/later
- Request to include extract - this adds it back into PAT reports if for any reason the data should be included again.
- Request to exclude extract - can be used if an extract should no longer be used; i.e. if a practice has closed down, there are issues with the extract file such as invalid data or legal issues. It acts similar to a delete function, but without physically deleting anything.
- Request to exclude and delete extract - will exclude and delete the data from the PAT CAT database. The raw data from the uploaded extract will still be in your upload folder.

Follow the steps below to use these functions:

1. Select all Extracts you wish to Include or Exclude via the **Sel** tick box. Multiple extracts may be selected.

---

<sup>7</sup> <https://help.pencs.com.au/display/ds/Setting+up+Practices+pre+3.2>



**Import**

New Extracts Imported Extracts Request Queue Request History Download All

Please select extracts to Include and/or Exclude. Including and/or Excluding extracts will be put into the "Request Queue". Status will be updated once the request has been processed. Please see "Request Queue" before including and/or excluding extract to avoid duplicate requests.

**Note:** Data is altered when extracts are being included and/or excluded, as a result, graphs and/or reports may not be accurate while extracts are being included and/or excluded.

Practice Filter: -- No Filter -- Reset

Sel	Practice ID	Practice	Extract Date	Import Date	Filename	Status
<input checked="" type="checkbox"/>	Manfred Practice	Manfred Practice	01 March 2018 04:04 AM	12 March 2019 04:13 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201903010304-10324-v1_25-data.xml	Included
<input type="checkbox"/>	Manfred Training	Manfred Training Practice	01 January 2019 04:03 AM	12 March 2019 04:07 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201901010303-9427-v1_24-data.xml	Included
<input type="checkbox"/>	Manfred Training	Manfred Training Practice	01 July 2018 02:20 AM	12 March 2019 04:02 PM	MedicalMicrodata-DEIDENTIFIED_IND_DEMO-201807010220-7322-v1_24-data.xml	Included
<input type="checkbox"/>	Matthias QA Clinic	Matthias QA Clinic	01 November 2017 04:03 AM	12 March 2019 01:41 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201711010303-8575-v1_23-data.xml	Included
<input type="checkbox"/>	Matthias QA Clinic	Matthias QA Clinic	01 April 2018 03:03 AM	12 March 2019 01:34 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201804010303-9427-v1_24-data.xml	Included
<input type="checkbox"/>	Matthias QA Clinic	Matthias QA Clinic	01 February 2019 04:04 AM	28 February 2019 10:15 AM	MedicalMicrodata-DEIDENTIFIED_DEMO-201902010304-10324-v1_25-data.xml	Included

☒ Request to Change Month
 ☐ Request to Include Extract(s)
 ☐ Request to Exclude Extract(s)
 ☐ Request to Exclude & Delete Extract(s)

1. Click on the respective button as appropriate.

## 7.6.6 Extract History

**NOTE:** The above features are only available if you are logged on as a PHN or other organisation, if you are logged on as a practice you may still view the Extract History window.

When you are logged on as a **Practice**.

1. Click the Upload button, this will open the import window.

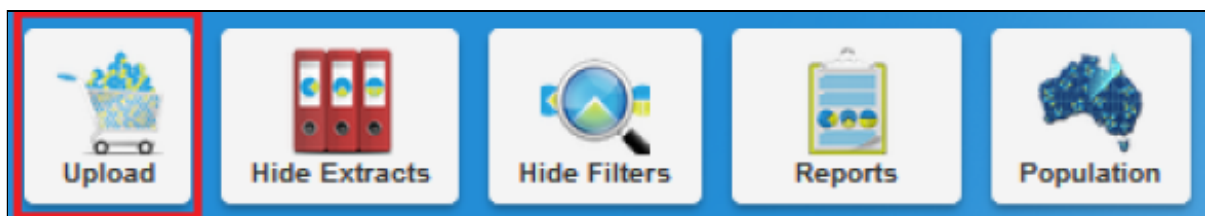


Figure 73: Upload Button

1. Click the **Extract History** Tab.

Upload				
New Extracts   Extract History   Request Queue   Request History				
Filename	Extract Date	Import Date	Imported By	Status
MedicalMicrodata-DEIDENTIFIED_VGP-201505131626-15194-v1_15-data.xml	13/05/2015	8/07/2015 12:25:15 PM	VGP	Included
MedicalMicrodata-DEIDENTIFIED_VGP-201506131626-15194-v1_15-data.xml	13/06/2015	8/07/2015 12:36:16 PM	VGP	Included
MedicalMicrodata-DEIDENTIFIED_WIN7VM-201506251146-59-v1_18-data.xml	25/06/2015	8/07/2015 2:54:12 PM	VGP	Included

Figure 74: Extract History

The Extract History window shows all extracts loaded into PAT CAT for the Practice, including details of:

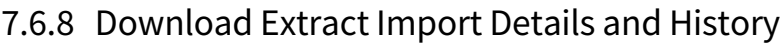
- Filename** – the name of the file which contains the extract data,
- Extract Date** – when the extract was performed in CAT4,
- Import Date** – when the extract was imported into PAT CAT,
- Imported By** – which user imported the extract,
- Status** – whether the extract is currently included or excluded from PAT CAT.

### 7.6.7 Finding Missing Extracts

PAT CAT indicates the status of each reporting period with a green or red dot next to the month in the extract panel. If any extracts are missing, the number in red indicates how many practices have not uploaded their data. In the example below there are 53 extracts missing for January.

EXTRACTS BY MONTH	
January 2017	53 ●
December 2016	44 ●
November 2016	42 ●
October 2016	54 ●

To identify which practice hasn't uploaded the data you can check the extract history, as described in the previous chapter, but over time there will be many extracts in the history and it might be difficult to identify to missing practice. There is an easier way to check which practice(s) are missing. In the filter panel, under the 'Practices' tab is a list of all practices and the colour of the practice name shows there upload status for the current month. Green stands for uploaded, red for missing.



Import

Download All

New Extracts

Imported Extracts

Request Queue

Request History

Download

Please select extracts to Include and/or Exclude. Including and/or Excluding extracts will be put into the "Request Queue". Status will be updated once the request has been processed. Please see "Request Queue" before including and/or excluding extract to avoid duplicate requests.

**Note:** Data is altered when extracts are being included and/or excluded, as a result, graphs and/or reports may not be accurate while extracts are being included and/or excluded.

Practice Filter:  [Reset](#)

1	2					
Sel	Practice ID	Practice	Extract Date	Import Date	Filename	Status
<input type="checkbox"/>	Manfred Practice	Manfred Practice	01 March 2018 04:04 AM	12 March 2019 04:13 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201903010304-10324-v1_25-data.xml	Included
<input type="checkbox"/>	Manfred Training	Manfred Training Practice	01 January 2019 04:03 AM	12 March 2019 04:07 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201901010303-9427-v1_24-data.xml	Included
<input type="checkbox"/>	Manfred Training	Manfred Training Practice	01 July 2018 02:20 AM	12 March 2019 04:02 PM	MedicalMicrodata-DEIDENTIFIED_IND_DEMO-201807010220-7322-v1_24-data.xml	Included
<input type="checkbox"/>	Matthias QA Clir	Matthias QA Clinic	01 November 2017 04:03 AM	12 March 2019 01:41 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201711010303-8575-v1_23-data.xml	Included
<input type="checkbox"/>	Matthias QA Clir	Matthias QA Clinic	01 April 2018 03:03 AM	12 March 2019 01:34 PM	MedicalMicrodata-DEIDENTIFIED_DEMO-201804010303-9427-v1_24-data.xml	Included
<input type="checkbox"/>	Matthias QA Clir	Matthias QA Clinic	01 February 2019 04:04 AM	28 February 2019 10:15 AM	MedicalMicrodata-DEIDENTIFIED_DEMO-201902010304-10324-v1_25-data.xml	Included

Close


IMPORTING AND EXPORTING EXTRACTS – 79

If you are interested in all four tabs you can either repeat this step on each tab or you can click on the 'Download All' button in the very top right - this will combine all information from the four tabs into one CSV file.

## 8 DATA FILTERING

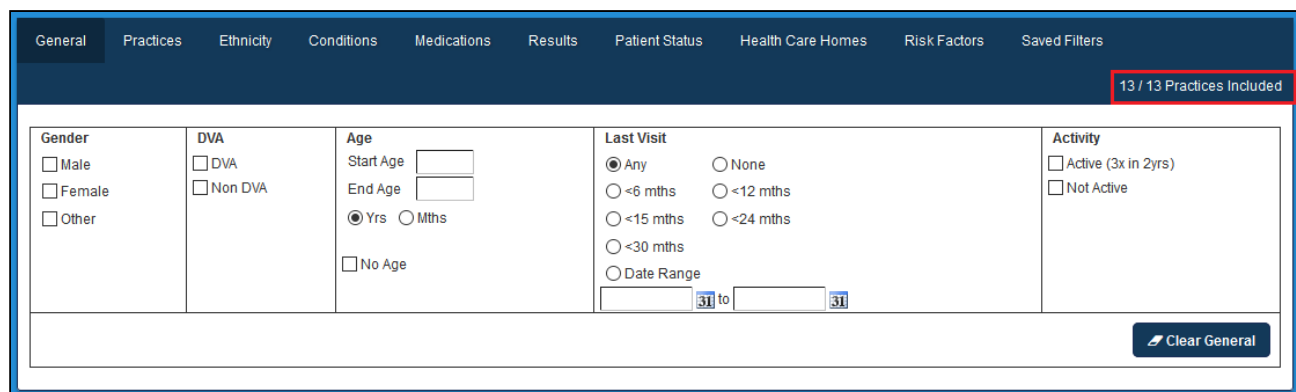
### Overview

Data filtering enables the creation of graphs and reports based on a specific set of criteria. For example if you wish to display a benchmark report the only includes data for; Females older than 40 with Diabetes, this may be done simply by use of data filters.

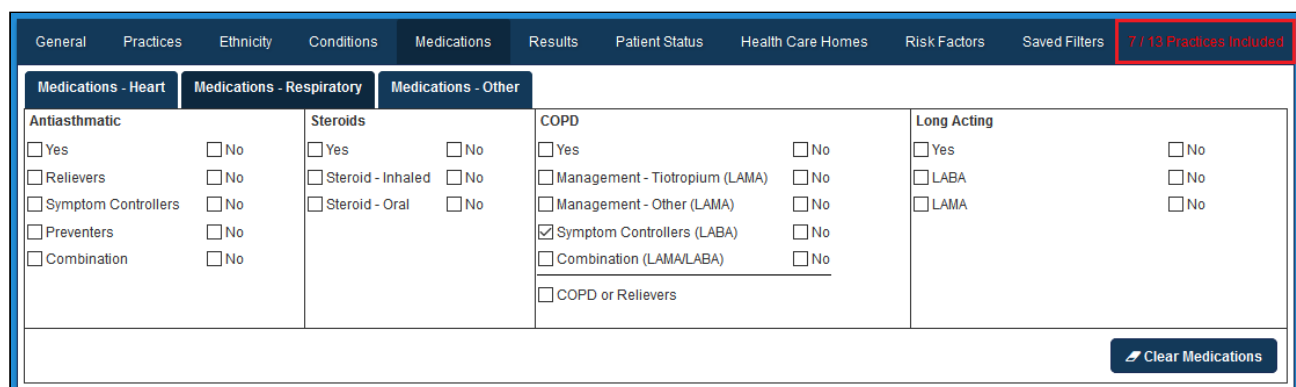
 PAT CAT provides access to de-identified aggregated data coming from CAT4 - to avoid duplication this guide does not provide in depth details of the filters as they are described in the CAT4 user guides. Please see here for full details on our filter options: [Data Filtering Details in CAT4](#)<sup>8</sup>

Due to the nature of aggregating data from different sources not all measurements and filter criteria are available from all clinical systems. To allow reporting for those practices who are providing fully compatible data, we will exclude practices with missing data when using a filter/report including a missing data item. The number of practices included is displayed on the top right of the filter panel and is updated when a new filter is added:


No filter applied:




Filter applied where not all practices are providing that data item:



<sup>8</sup> <https://help.pencs.com.au/display/CG/DATA+FILTERING>

 Please make sure that you check your reports for any missing practices to avoid inconsistencies with reporting. While we are aiming to provide the full data set from all clinical systems, we can't extract data if the indicator is not available in the clinical system in the first place.

After applying a filter that excludes a number of practices, these practices will be displayed in the

 **View Report**

with a dash in the fields to indicate that their data is not included:

Blood Pressure

Show / Hide Columns

There are hidden columns

Filtering By: Practice: (Haval BP Clinic, Matthias QA Clinic, santhoshmdclinic, Shiva Test PATBI, zedmed.topbar), Medications: (Symptom Controllers(LABA) - YES) for November 2018 audit month. Generated on 28/11/2018 9:39 AM

Measure	PHN-Test-3.3-A	PHN-Test-3.3-A %	Adjusted	Adjusted %	Matthias QA Clinic	Matthias QA Clinic %	Haval BP Clinic
Total Population	4		7		-		4
<= 130/80	1	25.00 %	0	0.00 %	-	-	1
> 140/90	0	0.00 %	2	28.57 %	-	-	0
No BP Recorded	3	75.00 %	5	71.43 %	-	-	3
Incomplete Data	0	0.00 %	0	0.00 %	-	-	0
> 130/80 and <= 140/90	0	0.00 %	0	0.00 %	-	-	0
Recorded	1	25.00 %	2	28.57 %			1

Data may be filtered based on a combination of the following criteria:

- **General**

The General tab allows filtering based on; Gender, Department of Veterans Affairs (DVA) status, Age, When the patient last visited a practices, and whether a patient is considered Active in the system or not.

- **Practices**

The Practices tab allows filtering based on which practice the data within an extract originated from.

**NOTE:** This filter is only available if you are logged on as a PHN or other organisation.

- **Ethnicity**

The Ethnicity tab allows filtering based on Indigenous status, including both Aboriginal and Torres Strait Islander status.

- **Conditions**

The Conditions tab allows filtering on a wide range of medical conditions, these broken down into Chronic, Mental Health and Other. Please refer to section 7.7 for more detail.

- **Medications**

The Medications tab allows filtering based on Heart, Respiratory and Other medication types. A wide range of medications are included under each type. Please see section 7.8 for more detail.

- **Results**

The Results tab allows filtering based on when a result was recorded.

To filter the data, simply select the criteria you wish to view, multiple selections may be made from within a single tab or across multiple tabs. Selections are generally made by ticking selection boxes, however some filters are

based on entering information such as a date range. The criteria on which you are filtering is displayed at the top of the Results panel, this display remains even if the Filter panel is hidden.

Any change to the filters will cause the 'Recalculate' button to turn red, indicating that it needs to be clicked to apply the filter.

Click **Recalculate**.

This will update the Results panel to look at only patients that match all the conditions ticked.

- **Patient Status**

The patient status filter allows users to filter for patients by their archived/deceased status and some other filter criteria only available for Communicare users

- **Health Care Homes**

The Health Care Homes filter tab provides filters to find patients flagged as enrolled into the Health Care Homes trial as well as specifics on their tier level

Example for a filter:

The screenshot shows the PATCAT filter panel with the 'General' tab selected. The panel includes several filter sections: Gender (Male, Female, Other), DVA (DVA, Non DVA), Age (Start Age, End Age, Yrs, Mths, No Age), Last Visit (Any, None, <15 mths, <6 mths, <30 mths, <24 mths, Date Range), Activity (Active (3x in 2yrs), Not Active), and Transient (Unique Patients, Duplicate Patients). A 'Clear General' button is located at the bottom right. Below the filter panel, a status bar indicates 'Filtering By: Females, Conditions: (Asthma - YES)'.

**NOTE: 'Filtering By' displays the criteria selected i.e. Females, Conditions: (Asthma - YES)**

Detailed examples for each of the filter types are provided in the following sections.

- [Changing Filters](#)(see page 84)
- [Clearing Filters](#)(see page 84)
- [General Filter Tab](#)(see page 85)
- [Practices Filtering](#)(see page 87)
- [Ethnicity Filtering](#)(see page 87)
- [Conditions Filtering](#)(see page 88)
- [Medications Filtering](#)(see page 90)
- [Date Range Results Filtering](#)(see page 92)
- [Saving Filters](#)(see page 93)
- [Patient Status Filter](#)(see page 94)
- [Health Care Homes Filter](#)(see page 94)
- [Risk Factor Filtering](#)(see page 95)
- [Date Range Visits Filtering](#)(see page 96)

## 8.1 Changing Filters

**NOTE:** The Results panel is not updated to a change in filter criteria until you click the Recalculate button. The **Recalculate** button will turn red when the filter criteria have changed but the button has not been clicked.

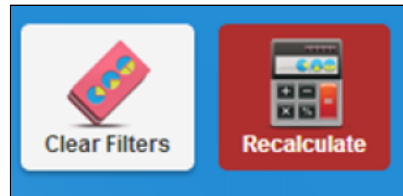


Figure 78: Recalculate Button

Only after the recalculate button has been clicked will the 'Filtering By' text be updated. The 'Filtering By' text always matches the criteria for the data been displayed in the Reports pane.

## 8.2 Clearing Filters

To clear filters that have been selected, either:

Click the **Clear Filters** button in the top right hand corner of the screen, this will clear all currently selected filters.

**NOTE:** When no data filters are applied, all data within an Extract is included in the graphs and reports displayed in the reports plane.

Click the '**Clear ...**' button at the bottom right hand corner of each tab to clear only the filters for that tab.

Figure 79: Clear General Button

**NOTE:** Make sure you click 'Recalculate' when you have changed the filters.



## 8.3 General Filter Tab

General	Practices	Ethnicity	Conditions	Medications	Date Range (Results)	Date Range (Visits)	Patient Status	Health Care Homes	Risk Factors	Saved Filters
2 / 2 Practices Included										
<b>Gender</b> <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other	<b>DVA</b> <input type="checkbox"/> DVA <input type="checkbox"/> Non DVA <b>Health Cover</b> <input type="checkbox"/> Medicare No. <input type="checkbox"/> No	<b>Age</b> Start Age <input type="text"/> End Age <input type="text"/> <input checked="" type="radio"/> Yrs <input type="radio"/> Mths <input type="checkbox"/> No Age	<input checked="" type="radio"/> Last Visit <input type="radio"/> First Visit <input checked="" type="radio"/> Any <input type="radio"/> None <input type="radio"/> <6 mths <input type="radio"/> <12 mths <input type="radio"/> <15 mths <input type="radio"/> <24 mths <input type="radio"/> <30 mths <input type="radio"/> Date Range <input type="text"/> 31 to <input type="text"/> 31	<b>Activity</b> <input type="checkbox"/> Active (3x in 2yrs) <input type="checkbox"/> Not Active	<input type="button" value="Clear General"/>					

Patient data can be filtered as follows:

<b>Gender</b>	Male Female Other No selection = All  <b>NOTE:</b> Ticking multiple boxes will create an OR criteria (i.e. Male OR Female).
<b>DVA</b>	DVA (Department Veteran Affairs) non DVA No selection = All
<b>Health Cover</b>	Filters for patients with or without Medicare card details entered
<b>Age</b>	1. Enter a numeric start age or end age to limit your selection Choose Years (default) or Months as your search filter for start/end age. <b>NOTE:</b> choosing Months will display the Demographics graph in months.  2. 'No Age' ticked will search for patients with a missing date of birth

<p><b>Last/First Visit</b></p>	<p><b><i>Note that in some clinical systems it is not possible to distinguish a clinical contact from other notes made in the patient record. This will affect the quality of the data reported. Check the 'General Data Mappings' Appendices for your Clinical system.</i></b></p> <p>The last visit date is the most recent date a patient contact has been recorded. The first visit date is the first time a patient has visited the practice.</p> <p>Note that in some clinical systems it is not possible to distinguish a clinical contact from other notes made in the patient record. This will affect the quality of the data reported. Check the 'General Data Mappings' Appendices for your clinical system.</p> <p>Values for selection are:  Any = the last/first visit was at any time (all patients will be selected)  None = no last/first visit is recorded  &lt;6 mths = has visited in the last 6 months  &lt;15 mths = has visited in the last 15 months  &lt;24 mths = has visited in the last 24 months  &lt;30 mths = has visited in the last 30 months  Date Range with from/to date selection = only patients whose <u>most recent visit</u> occurred within a period of time. Patients with a visit after the 'to date' will be excluded.</p> <p><u>The 'Date Range' filter</u> – to note:  The 'Date Range' filter <u>cannot</u> be used to retrospectively look at the data in a 'snapshot'. The 'snapshot' is only valid for the point in time at which it was taken.</p> <p>For example: If you filter on last visit between 1 and 2 years ago you will be excluding patients you have had a visit more recently. These patients may or may not have had a visit in the period of time you are selecting. You <u>will not</u> be selecting all patients who visited within that period.</p> <p><b><i>You <u>will not</u> be selecting all patients who visited within that period.</i></b></p>
<p><b>Activity</b></p>	<p>Activity is how many patient visits (or contacts) have been recorded with the practice.</p> <p>Values for selection are:  Active = has had 3 visits in the last 2 years (RACGP definition)  Not Active = a patient not meeting the RACGP definition of active</p> <p>And/Or  (Number of ) Visits in the last 6 mths  Has not visited in the last X mths; where X can be selected via the drop down.</p> <p>Activity is measured by changes to the patient's progress notes. Any clinical entry (see the general mapping details for your clinical system: <a href="#">Data Mapping<sup>9</sup></a>) in the progress notes will count as a visit. Administrative entries</p>

<sup>9</sup> <http://help.pencs.com.au/display/ADM/Data+Mapping>

will not be counted.

## 8.4 Practices Filtering

**NOTE:** The **Practices Filtering** function is only available when you are logged in as a PHN or other organisation, when logged on as a Practice you will not see the Practices tab.

Figure 81: Practices Filters

Data can be filtered by group or practice, no selection = ALL.

**IMPORTANT:** Practice names are shown in green if there is data from the practice present in the selected Month. Names are shown in red if no practice data is present in the selected Month.

**NOTE:** Individual Extracts from a practice may be included or excluded from PAT CAT, see section 6.5.

## 8.5 Ethnicity Filtering

Patient data can be filtered as follows:

<b>Ethnicity</b>	<p>Indigenous Aboriginal and Torres Strait Islander Aboriginal Torres Strait Islander Non-indigenous Not Recorded/Not Stated No selection = All</p> <p><b>NOTE:</b> Ticking multiple boxes on the top line of the table will create an OR criteria (i.e. Indigenous OR Non- Indigenous; Non-Indigenous OR Not Recorded, etc.) Ticking multiple boxes below the top line will create an AND criteria.</p>
------------------	--

## 8.6 Conditions Filtering

Conditions are divided into 3 tabs.

### Conditions – Chronic

Conditions included in Chronic are:

- Diabetes, including Gestational Diabetes
- Respiratory, including Asthma and COPD
- Cardiovascular, including Hypertension, Heart Failure, CVD, PVD, Stroke, Carotid Stenosis, MI, and Renal Artery Stenosis
  - when the subcategory Cardiovascular Disease (CVD) is selected, all conditions below are included as an OR search, meaning any patient with at least one of the conditions will be included in the filter
- Musculoskeletal, including Inflammatory Arthritis, Bone Disease, Osteoporosis and Osteoarthritis
- Renal Impairment, including Chronic Renal Failure, Acute Renal Failure and Undefined Renal Failure

General	Practices	Ethnicity	Conditions	Medications	Date Range (Results)	Date Range (Visits)	Patient Status	Health Care Homes	Risk Factors	Saved Filters	2 / 2 Practices Included			
<div> <div>Chronic</div> <div>Mental Health</div> <div>Cancer</div> <div>Other</div> </div>														
<b>Diabetes</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Type II <input type="checkbox"/> No <input type="checkbox"/> Type I <input type="checkbox"/> No <input type="checkbox"/> Undefined Diabetic <input type="checkbox"/> No <input type="checkbox"/> Type I or II <input type="checkbox"/> Gestational <input type="checkbox"/> No			<b>Respiratory</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Asthma <input type="checkbox"/> No <input type="checkbox"/> COPD <input type="checkbox"/> No			<b>Cardiovascular</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Hypertension <input type="checkbox"/> No <input type="checkbox"/> Cardiovascular Disease (CVD): <input type="checkbox"/> Heart Failure <input type="checkbox"/> No <input type="checkbox"/> CHD <input type="checkbox"/> No <input type="checkbox"/> PVD <input type="checkbox"/> No <input type="checkbox"/> Stroke <input type="checkbox"/> No <input type="checkbox"/> Carotid Stenosis <input type="checkbox"/> No <input type="checkbox"/> MI <input type="checkbox"/> No <input type="checkbox"/> Renal Artery Stenosis <input type="checkbox"/> No			<b>Musculoskeletal</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inflammatory <input type="checkbox"/> No <input type="checkbox"/> Musculoskeletal <input type="checkbox"/> No <input type="checkbox"/> Bone Disease <input type="checkbox"/> No <input type="checkbox"/> Osteoporosis <input type="checkbox"/> No <input type="checkbox"/> Osteoarthritis <input type="checkbox"/> No			<b>Renal Impairment</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Chronic Renal Failure <input type="checkbox"/> No <input type="checkbox"/> Acute Renal Failure <input type="checkbox"/> No		
											Clear Conditions			

### Conditions – Mental Health

Conditions included in Mental Health are:

- Mental Health, including High Prevalence (Anxiety, Depression), Low Prevalence (Schizophrenia and Bipolar)
- MH – Degenerative, including Dementia
- MH – Development, including ADHD and Autism
- MH – Other including Postnatal Depression.

General	Practices	Ethnicity	Conditions	Medications	Results	Patient Status	Health Care Homes	Risk Factors	Saved Filters	13 / 13 Practices Included
<div> <div>Chronic</div> <div>Mental Health</div> <div>Other</div> </div>										
<b>Mental Health</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> High Prevalence <input type="checkbox"/> Anxiety <input type="checkbox"/> No <input type="checkbox"/> Depression <input type="checkbox"/> No <input type="checkbox"/> Low Prevalence <input type="checkbox"/> Schizophrenia <input type="checkbox"/> No <input type="checkbox"/> Bipolar <input type="checkbox"/> No			<b>MH - Degenerative</b> <input type="checkbox"/> Dementia <input type="checkbox"/> No		<b>MH - Developmental</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ADHD <input type="checkbox"/> No <input type="checkbox"/> Autism <input type="checkbox"/> No		<b>MH - Other</b> <input type="checkbox"/> Postnatal Depression <input type="checkbox"/> No			
										Clear Conditions

### Conditions – Other

Conditions included in Other are:

- Atrial Fibrillation
- Hyperlipidaemia
- Pregnancy
- Drug Abuse
- Hepatitis and Liver
- STI, including Chlamydia, Gonorrhoea, Trichomoniasis and Syphilis

General	Practices	Ethnicity	Conditions	Medications	Results	Patient Status	Health Care Homes	Risk Factors	Saved Filters	13 / 13 Practices Included	
<div> <div>Chronic</div> <div>Mental Health</div> <div>Other</div> </div>											
<b>Atrial Fibrillation</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Familial Hypercholesterolemia</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Hyperlipidaemia</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Pregnancy</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Drug Abuse</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Hepatitis and Liver</b> <input type="checkbox"/> Hepatitis A <input type="checkbox"/> No <input type="checkbox"/> Hepatitis B <input type="checkbox"/> No <input type="checkbox"/> Hepatitis C <input type="checkbox"/> No <input type="checkbox"/> Liver Disease <input type="checkbox"/> No		<b>STI</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Chlamydia <input type="checkbox"/> No <input type="checkbox"/> Gonorrhoea <input type="checkbox"/> No <input type="checkbox"/> Trichomoniasis <input type="checkbox"/> No <input type="checkbox"/> Syphilis <input type="checkbox"/> No	
										Clear Conditions	

Selecting Conditions by ticking the boxes will limit your data to look at only patients that match all the conditions ticked:

- Condition – Yes, No,
- no selection = All

You can select to filter by patients that

- Have a condition (tick the Yes box)
- Do not have a condition (tick the No box)

If you tick one of the main condition headings (bolded) the sub-heading selections will not be available and all patients matching any of the conditions listed below will be selected. This is an OR search, as opposed to selecting each condition separately which will result in an AND search.

In some filters there is a heading in *italics and underlined*, for example the *Cardiovascular Disease (CVD)* and *Bone Disease* in the screenshot above. Selecting this heading will create a filter for patients with any of the specific

conditions listed below, in the case of *Cardiovascular Disease (CVD)* it will include patients with any of the conditions CHC, Stroke, MI, PVD, Carotid Stenosis and Renal Artery Stenosis. This is an OR search, meaning that all patients with at least one of the listed conditions will be shown.

### 8.6.1 Pregnancy

Pregnancy is included under the **Conditions > Other** filter. Ticking this as 'Yes' will give you a list of the patients who are currently flagged as pregnant in the clinical system.

### 8.6.2 Cancer Filter

This filter will allow to filter for patients with an active cancer condition and works in the same way as the other filters. Individual diagnosis or groups can be selected and, if needed, combined with other filters.

General Practices Ethnicity Conditions Medications Results Patient Status Health Care Homes Risk Factors Saved Filters 7 / 7 Practices Included									
Chronic		Mental Health		Cancer		Other			
Blood and Immune System		Breast		Digestive		Genitourinary and Gynecologic		Skin	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Breast	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Melanoma	<input type="checkbox"/> No
<input type="checkbox"/> Leukemia	<input type="checkbox"/> No			<input type="checkbox"/> Bowel (Colorectal)	<input type="checkbox"/> No	<input type="checkbox"/> Cervical	<input type="checkbox"/> No		<input type="checkbox"/> Lung
<input type="checkbox"/> Lymphoma	<input type="checkbox"/> No			<input type="checkbox"/> Pancreatic	<input type="checkbox"/> No	<input type="checkbox"/> Ovarian	<input type="checkbox"/> No		
<input type="checkbox"/> Multiple Myeloma	<input type="checkbox"/> No					<input type="checkbox"/> Prostate	<input type="checkbox"/> No		
						<input type="checkbox"/> Uterine	<input type="checkbox"/> No		
<a href="#">Clear Conditions</a>									

Please check the 'conditions mapping' for your clinical system for full details on which conditions are mapped to the filter options. Diagnosis mapping for cancer can be found here

Best Practice: [BP cancer diagnosis mapping](#)<sup>10</sup>

MD3: [MD3 cancer diagnosis mapping](#)<sup>11</sup>

Zedmed: [Zedmed cancer diagnosis mapping](#)<sup>12</sup>

## 8.7 Medications Filtering


Medications are divided into 3 tabs to allow for a greater number of medications to be selected. These are

- Medications – Heart
- Medications - Respiratory
- Medications Antidiabetics
- Medications – Other

<sup>10</sup> <http://help.pencs.com.au/display/ADM/Conditions+Data+Category+Mappings+BP#ConditionsDataCategoryMappingsBP-cancerBP>

<sup>11</sup> <http://help.pencs.com.au/display/ADM/Conditions+Data+Category+Mapping+MD3#ConditionsDataCategoryMappingMD3-cancerMD>

<sup>12</sup> <http://help.pencs.com.au/display/ADM/ICPC-2+PLUS+GROUPERS+ZEDMED#ICPC-2PLUSGROUPERSZEDMED-cancerZedmed>

General	Practices	Ethnicity	Conditions	Medications	Date Range (Results)	Date Range (Visits)	Patient Status	Health Care Homes	Risk Factors	Saved Filters
2 / 2 Practices Included										
<b>Medications - Heart</b>		<b>Medications - Respiratory</b>		<b>Medications - Antidiabetics</b>		<b>Medications - Other</b>				
<b>ACE or ARB</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ACE <input type="checkbox"/> No <input type="checkbox"/> ARB <input type="checkbox"/> No		<b>Antithrombotics</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Aspirin <input type="checkbox"/> No <input type="checkbox"/> Clopidogrel <input type="checkbox"/> No <input type="checkbox"/> Dabigatran <input type="checkbox"/> No <input type="checkbox"/> Warfarin <input type="checkbox"/> No		<b>Beta Blockers</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Antihypertensives <input type="checkbox"/> No <input type="checkbox"/> Chronic Heart Failure <input type="checkbox"/> No <input type="checkbox"/> Myocardial Infarction <input type="checkbox"/> No		<b>Calcium</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Diuretics</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Lipid M/tying</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Statins <input type="checkbox"/> No <input type="checkbox"/> Other <input type="checkbox"/> No
 Clear Medications										


Selecting Medications by ticking the boxes, Yes or No will limit your data to look at only patients that match the medication status selected:

- Medication – Yes, No, no selection = All

You can select to filter by patients that

- Have a current medication (tick the Yes box)
- Do not have a current medication (tick the No box)

If you tick one of the main medication headings (bolded) the sub-heading selections will not be available and all patients matching that broad medication category will be selected.

 This guide is only an overview as the filters are aligned with CAT4. For full details on all medication filters please see here: [Medications Filtering CAT4](https://help.pencs.com.au/display/CG/Medications+Filtering)<sup>13</sup>  
For details on the respiratory medication filter please see here: [Respiratory Medications Filter](https://help.pencs.com.au/display/CG/Respiratory+Medications)<sup>14</sup>

<sup>13</sup> <https://help.pencs.com.au/display/CG/Medications+Filtering>

<sup>14</sup> <https://help.pencs.com.au/display/CG/Respiratory+Medications>

## 8.8 Date Range Results Filtering

General Practices Ethnicity Conditions Medications **Date Range (Results)** Date Range (Visits) Patient Status Health Care Homes Risk Factors Saved Filters

1 / 1 Practices Included

**Last Recorded Result**

The date range selected will filter out results or events that are not within the selected period and treat them as not recorded. This filter is not applicable to graphs that display time periods. Use for: Measures, Pathology, MBS Items, After Hours, Visit Types and Digital Health (SHS/ES uploads), Smoking/Alcohol, Influenza

☐ All
 ☐ <= 6 months
 ☐ <= 12 months
 ☐ <= 15 months
 ☐ <= 24 months

☐ Date Range (from - to)

31 to  31

[Clear Results](#)

This filter allows the user to view the last recorded result that falls within a specified time period or date range. This filter is not applicable to graphs that display time periods.

Use for:

- Measures
- PathologyMBS Items
- After Hours
- Visit Types
- Digital Health (SHS/ES uploads)
- Smoking
- Alcohol
- Influenza

By selecting a date range of

- <= 6mths
- <=12 mths
- <=15 mths
- <=24 mths
- User defined range

PAT CAT will filter out results that have not been measured within the selected period.

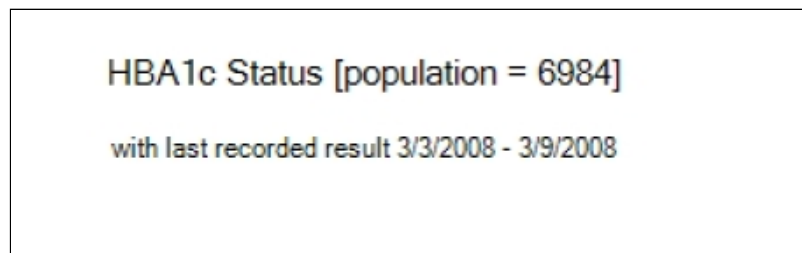
**Results outside the selected period are treated as 'Not recorded'.**

This will give a more meaningful picture for charts like HbA1c where old results are generally not relevant.

The filter is only applicable to some charts. Where the filter has been applied the chart title will include the selected period.

For example:





## 8.9 Saving Filters

PAT CAT allows users to save filters for later use. This will save all selections on all filter tabs and allows for faster reporting and also allows PAT CAT users who are not so familiar with all filtering options to use PAT CAT based on existing filters. To create a new saved filter first apply your filter criteria – in my example I am using active patients with Diabetes who had results in the last 6 months.

After recalculating go to the 'Saved Filters' tab and click on '+ Save Filter':

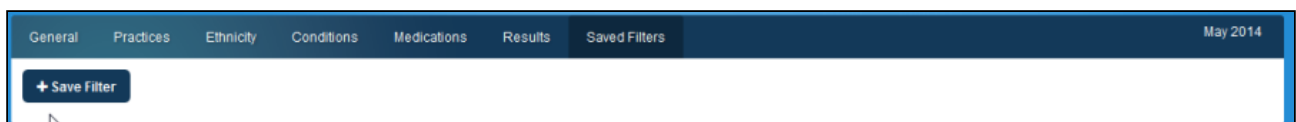


Figure 87: Add Saved Filter

This will prompt you for a name – choose a meaningful name but remember that all filter criteria will be shown in the saved filter selection, too.

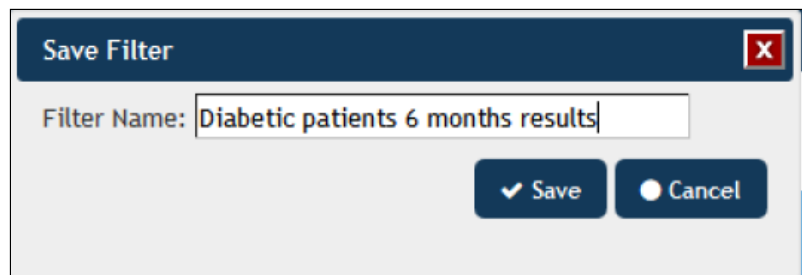


Figure 88: Name Saved Filter

PAT CAT will save the filter and display it for all users under the 'Saved Filters' tab. To apply it to your data simply click the 'Load' button.

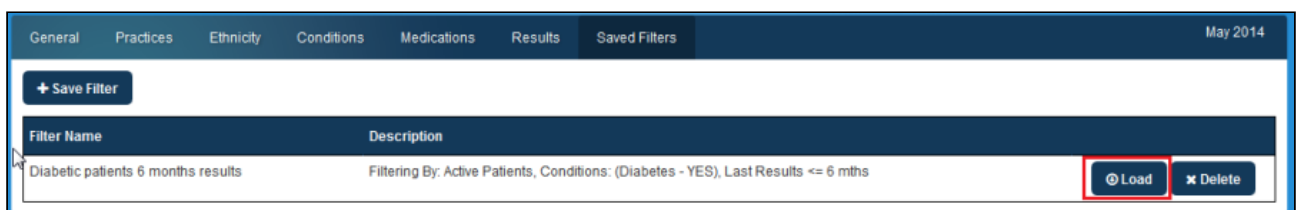


Figure 89: Saved Filter

## 8.10 Patient Status Filter

This filter allows to filter for the following criteria:

- All patients not archived (made inactive) and not deceased including
  - Current (Communicare only)
  - Transient (Communicare/Zedmed only)
  - Banned (Communicare only)
- Archived (made inactive/past patients)
  - Inactive
  - Past (Communicare only)
- Deceased

By default all patients not archived/made inactive/past patients are selected which is the same population you would see in CAT4 and have seen in the past. Most practices don't upload archived or deceased patients, but even if they do, the default settings exclude those patients from the reports. Not all clinical systems allow to record this information and/or CAT4 is not extracting all information. Currently the filters around banned/transient are going to affect data from Communicare and Zedmed clinics

- Communicare users have additional options to describe patient status and these can be used to further filter your data. By default all but archived and/or deceased patients are included in the reports, but patients listed as transient or banned can be removed by un-ticking the respective boxes.
- Zedmed users can record a patient status as 'casual' - this will be mapped to 'transient' in CAT4 and those patients can be removed from your reports by unticking the 'Transient' box.

General	Practices	Ethnicity	Conditions	Medications	Results	<b>Patient Status</b>	Health Care Homes	Saved Filters
<input checked="" type="checkbox"/> <b>All patients in the practice who are not archived (inactive/past) and are not deceased</b>								
<input checked="" type="checkbox"/> Current								
<input checked="" type="checkbox"/> Transient								
<input checked="" type="checkbox"/> Banned								
<input type="checkbox"/> <b>Archived (Inactive/Past)</b>								
<input type="checkbox"/> Inactive								
<input type="checkbox"/> Past								
<input type="checkbox"/> <b>Deceased</b>								

## 8.11 Health Care Homes Filter

This filter allows to filter for patients who have been flagged as enrolled in the HCH trial using CAT4 or Topbar. This functionality is not available to all users, as it is currently under trial in selected practices only.

You can filter for patients using the following criteria:

- Enrolled
  - Tier 1
  - Tier 2
  - Tier 3
- Not Enrolled
  - Never Enrolled

- Withdrawn

General	Practices	Ethnicity	Conditions	Medications	Results	Patient Status	Health Care Homes	Saved Filters
<b>Patient Enrolment</b> <b>Important:</b> When saving a filter or creating prompts, any selections made here are ignored								
<input type="checkbox"/> Enrolled			<input type="checkbox"/> Not Enrolled					
<input type="checkbox"/> Tier 1 <input type="checkbox"/> Tier 2 <input type="checkbox"/> Tier 3			<input type="checkbox"/> Never Enrolled <input type="checkbox"/> Withdrawn					

## 8.12 Risk Factor Filtering

The risk factor filter provides indicators around risk such as smoking, alcohol, pregnancy and more. As with all filters in PAT CAT the functionality is the same as in CAT4 and full details for the risk factor filter are provided here:

[Risk Factors Filtering CAT4](#)<sup>15</sup>

The option to filter for patients at risk for pneumococcal disease uses a complex list of criteria, for full details see here: [Details of Risk Factor Filter Pneumococcal](#)<sup>16</sup>

General	Practices	Ethnicity	Conditions	Medications	Results	Patient Status	Health Care Homes	Risk Factors	Saved Filters	13 / 13 Practices Included
<b>Risk Factors</b>										
<b>Substance Abuse</b> <input type="checkbox"/> Smoking <input type="checkbox"/> Alcohol - Drinker <input type="checkbox"/> Alcohol - Drinker High Risk * <input type="checkbox"/> Medication/Drug abuse **			<b>Requires Immunisation</b> Has Conditions increasing risk of <input type="checkbox"/> Pneumococcal				<b>Other Risk Categories</b> <input type="checkbox"/> Pregnancy <input type="checkbox"/> Obesity			
* 2 or more drinks on a regular occasion or more than 4 drinks on any occasion ** Diagnosis										
										<input type="button" value="Clear Risk Factors"/>

<sup>15</sup> <https://help.pencs.com.au/display/CG/Risk+Factors+Filtering>

<sup>16</sup> <https://help.pencs.com.au/display/CG/Details+of+Risk+Factor+Filter+Pneumococcal>

## 8.13 Date Range Visits Filtering

GeneralPracticesEthnicityConditionsMedicationsDate Range (Results)Date Range (Visits)Patient StatusHealth Care HomesRisk FactorsSaved Filters

2 / 2 Practices Included

**Date Range for Visit**

The date range selected will filter out patients who have not visited within the selected period.

☐ All

☐ <= 6 months    ☒ <= 12 months    ☐ <= 15 months    ☐ <= 24 months

☐ Date Range (from - to)

31 to  31

Clear Visits

This filter allows to filter for patients that have visited in a specific time period. This filter will remove all patients that have not visited in the specified period for most reports.

Unlike the 'Last Visit' filter criteria on the 'General' tab, this filter can be used to analyse data from patients that have visited at any period of time and will show data for those patients who have visited in the specified time only.

## 9 LOOKING AT YOUR DATA

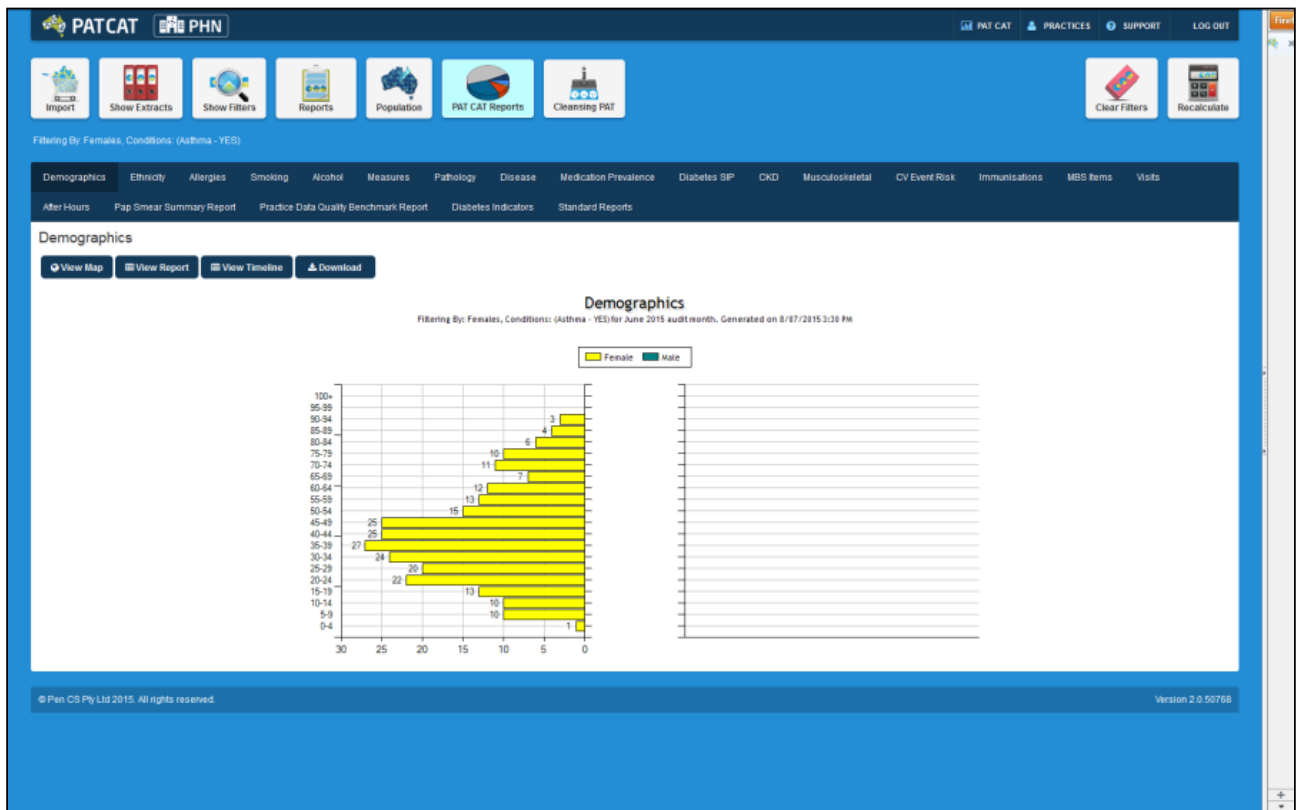
PAT CAT is showing available data in a number of reports. These reports often have to be filtered to provided meaningful information. Filter criteria will be displayed on the report graph and any exported report data. Data can be viewed as an graph or exported into a table, where the data will be displayed broken down by total for your organisation, by each group total (if used) and by individual practice/service if available.

- [Reports Overview](#)(see page 98)
  - [View Population](#)(see page 98)
  - [Viewing and Exporting Report Data](#)(see page 99)
  - [Adjusted Column Details](#)(see page 101)
- [Data Set Reports](#)(see page 103)
  - [Downloading Report Data](#)(see page 105)
  - [Demographics Report](#)(see page 105)
  - [Ethnicity](#)(see page 106)
  - [Allergies](#)(see page 107)
  - [Smoking](#)(see page 107)
  - [Alcohol](#)(see page 109)
  - [Measures](#)(see page 110)
  - [Pathology](#)(see page 112)
  - [Disease](#)(see page 115)
    - [Cancer Report](#)(see page 116)
  - [Screening](#)(see page 117)
    - [Pap Smear Reports](#)(see page 117)
    - [Mammogram](#)(see page 118)
    - [FOBT Report](#)(see page 122)
    - [Cervical Screening](#)(see page 128)
  - [Co-Morbidities](#)(see page 130)
  - [Medication Prevalence and Per Patient](#)(see page 131)
  - [Diabetes SIP Items](#)(see page 133)
  - [CKD](#)(see page 134)
  - [Musculoskeletal](#)(see page 136)
  - [CV Event Risk](#)(see page 136)
    - [CIS Calculated CV Event Risk](#)(see page 139)
  - [Immunisations](#)(see page 139)
    - [COVID-19 Vaccinations](#)(see page 141)
  - [MBS Items](#)(see page 144)
    - [COVID-19 Vaccinations MBS Items](#)(see page 148)
  - [Visits](#)(see page 149)
  - [After Hours](#)(see page 150)
  - [Pap Smear Summary Report](#)(see page 152)
  - [Practice Data Quality Benchmark](#)(see page 152)
  - [Diabetes Indicators](#)(see page 161)
  - [Standard Reports](#)(see page 161)
  - [Digital Health](#)(see page 161)
    - [My Health Record and SHS](#)(see page 161)
    - [My Health Record Status](#)(see page 162)
    - [SHS Uploads](#)(see page 163)
    - [SHS Age](#)(see page 164)
  - [STI Screening PAT CAT](#)(see page 164)
    - [STI Screening Graphs PAT CAT](#)(see page 165)
  - [QIM Reports](#)(see page 166)

## 9.1 Reports Overview

Once you have selected your data set extract and your data filters, click 'Recalculate'. You are ready to work with the data set of patients that match the selected conditions.

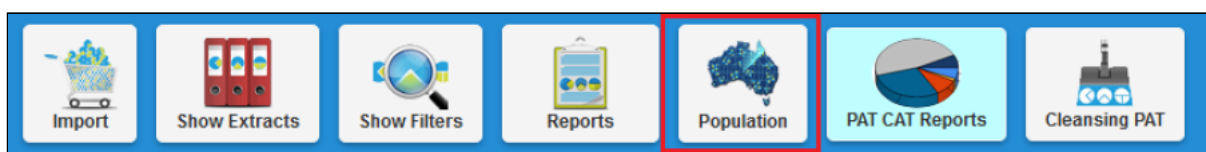
The data set for this example has been filtered on Gender = Female and Condition = Asthma.



- [View Population](#)(see page 98)
- [Viewing and Exporting Report Data](#)(see page 99)
- [Adjusted Column Details](#)(see page 101)

### 9.1.1 View Population

Click the '**Population**' button at the top of the screen to get a summary of the population that has been selected in the currently filtered dataset.



This will pop up the 'View Population' window showing the Total Population figure for filtered population as well as the population figure broken down for each practice.

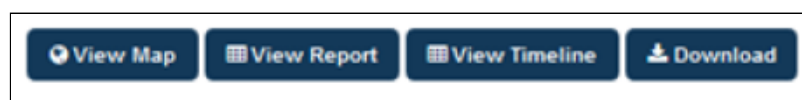
View Population				
<b>Total Population: 8,870</b>				
Filtering By: Active Patients for June 2015 audit month. Generated on 9/07/2015 10:15 AM				
Practice	Total Population	Extract Population	Extract Date	Date Loaded
GTCMC	1,990	5,734	13/06/2015 4:25:35 PM	8/07/2015 12:14 PM
SMC	1,562	4,503	13/06/2015 4:24:26 PM	8/07/2015 12:21 PM
VGP	5,318	15,194	13/06/2015 4:26:01 PM	8/07/2015 12:36 PM

**NOTE:** If you are logged on as a practice, you will still see the Total Population figure, but you will only see the population for the practice which you have logged on as.

### 9.1.2 Viewing and Exporting Report Data

Every report tab has the options below to work with the data represented as a graph in the report.

- View Map will open the map view - please see [VIEW MAP FUNCTION](#)(see page 171) for full details
- View Report will show the data in a table as detailed below
- View Timeline will show a line graph - please see [TIMELINE REPORTING](#)(see page 178) for full details
- Download will download the data in CSV format - please note that all filters will be applied to the downloaded data, but not your show/hide column preferences



Clicking on **View Report** will open a new window to show the data specific to the report selected. The example below is from the 'Smoking' report.

Smoking Status

Show / Hide Columns

No filters applied on June 2015. Generated on 24/06/2015 11:11 AM

Measure	PENCs	PENCs %	Adjusted	Adjusted %	TGR	TGR %	GTCMC	GTCMC %	VGP	VGP %	GTCMC	GTCMC %	PCSMC	PCSMC %	VGP	VGP %
Total Population	150,000		150,000		100,000		50,000		50,000		50,000		50,000		50,000	
Daily Smoker	9,176	6.12 %	9,176	6.12 %	6,131	6.13 %	3,061	6.12 %	3,070	6.14 %	3,061	6.12 %	3,045	6.09 %	3,070	6.14 %
Irregular Smoker	2,126	1.42 %	2,126	1.42 %	1,420	1.42 %	708	1.42 %	712	1.42 %	708	1.42 %	706	1.41 %	712	1.42 %
Ex Smoker	13,805	9.20 %	13,805	9.20 %	9,206	9.21 %	4,574	9.15 %	4,632	9.26 %	4,574	9.15 %	4,599	9.20 %	4,632	9.26 %
Never Smoked	44,466	29.64 %	44,466	29.64 %	29,665	29.67 %	14,790	29.58 %	14,875	29.75 %	14,790	29.58 %	14,801	29.60 %	14,875	29.75 %
Nothing Recorded	69,773	46.52 %	69,773	46.52 %	46,467	46.47 %	23,299	46.60 %	23,168	46.34 %	23,299	46.60 %	23,306	46.61 %	23,168	46.34 %
Age<10 and Nothing Recorded	10,654	7.10 %	10,654	7.10 %	7,111	7.11 %	3,568	7.14 %	3,543	7.09 %	3,568	7.14 %	3,543	7.09 %	3,543	7.09 %

The first two columns show the aggregated data (numbers and %) for your organisation and the next two columns show the 'Adjusted' totals and percentage. Please see [this page](#) (see page 101) for more details on how the adjusted column works and how it can be used when combined with filters.

The Benchmark Report can be saved as PDF file, by clicking the 'Save PDF' button in the top right hand corner of the report pane.

▲ Show / Hide Columns

The button allows you to customise which columns are displayed – this makes working with large numbers of clinics easier:

Show Hide Columns

Practice Grouping

☒ DiabGrp
 

☒ GTCMC
 ☒ SMC

☒ SGP
 


☒ SMC
 ☒ VGP

Individual

☒ GTCMC
 ☒ SMC
 ☒ VGP

☒ Select All
 ☐ Clear




 Regardless of the Show/Hide settings you have applied, the export to CSV will always export all columns.

**NOTE:** If you are logged on as a practice, you will still see the Org and Adjusted columns in the 'View report', but you will only see the population for the practice which you have logged on as.

Clicking on **View Map** will allow for the information to be mapped, functions are described in the View Map Function(see [page 171](#)) chapter

Clicking on the '**View Timeline**' button will allow you to see the report data (filtered or unfiltered) for all uploaded extracts plotted over time, please see Section 10(see [page 178](#)) for more details

### 9.1.3 Adjusted Column Details

 With PAT CAT version 3.3 and above we have introduced the following behaviour for a number of different patient statuses:

- If a duplicate patient is "Deceased" then virtual patient is marked as "Deceased"
- If any of the duplicate patients is status "Current", "Transient" or "Banned" then virtual patient is marked as "Active"

The Adjusted column is designed to remove duplicate patients i.e. it will count patients who have visited multiple practices in a PHN catchment only once.

Where a patient has records from multiple practices, a virtual patient record is created which combines the records into one (refer [Virtual Patient]). The number in the 'Adjusted' column will count the 'virtual' patient record for these patients rather than the separate records that have been uploaded .

The Adjusted column will give a more accurate count of patients in the PHN catchment in contrast to the PHN (or other Organisation) total column which includes all patients records that have been uploaded from the individual clinics, and hence patients who have visited more than one practice in an organisation's catchment will be counted more than once.

#### Adjusted Column without Practice Filters

When used for the whole catchment (no Practice filters) the Adjusted column will normally show a lower number than the PHN total column, as all patients are included and duplicates are removed. Based on observed numbers this can be between 10 and 25% less patients as visiting more than one practice is very common.

Occasionally though when using filters, the adjusted column can be higher than the total. Consider this example:

1. A patient has visited multiple practices
2. The patient has a diagnosis of Asthma recorded at one practice but not the other - this means the virtual patient has a diagnosis of Asthma
3. The patient is an active patient (3 or more visits to one practice) at one practice but not the other - this means the virtual patient is an active patient

Patient	Asthma	Active Status
Practice 1	Yes	No
Practice 2	No	Yes
Virtual Patient	Yes	Yes

1. Filter for Active patients with Asthma.
2. The virtual patient meets the criteria for both but neither of the individual patient records do. When you apply the filter for Active patients with Asthma there will be none in the PHN Total column but one patient in the Adjusted column

Using this example, we can show how the Adjusted column can appear to have more patients than the Total practice population count. We have found these cases are rare and usually the differences in the counts are very small.

Practice Name	Total Population	Adjusted Population
Practice 1	0	1
Practice 2	0	1

### Adjusted Column with Practice Filters

When used with practice filters, the Adjusted column will include patients that have had any visit to the practice(s) selected. The data for the virtual patient may include data that has originated from another practice that is not part of the filter. This often has the effect of returning higher numbers in the Adjusted column compared to the PHN total column.

It should be noted that the virtual patient record, which is a combined record from multiple practices, provides a more complete picture of the patient than the data from one practice alone. This can provide very interesting insights when filtering for one practice alone as it enables a view of how much patient data has been recorded elsewhere and is missing from the practice's own records.

In the example below the filters applied are for one practice and for patients with diabetes. The PHN total column shows there are 819 patients at the practice that meet this criteria but the Adjusted column shows 1061. This means there are 242 patients who have been diagnosed with diabetes at one or more other practices and the diagnosis is missing in the practice's own records.

The practice actually has 1,061 patients with diabetes. This might be because there are patients that have come to the practice once for something minor so the history wasn't recorded in detail and the diabetes diagnosis was never made, or for a number of other reasons.

Disease Prevalence						
<a href="#">Show / Hide Columns</a>						
Filtering By: Practice: practice XXX Conditions: (Diabetes - YES) for August 2016 audit month. Generated on 31/08/2016 10:38 AM						
Measure	PHN	PHN %	Adjusted	Adjusted %	practiceXXX	practiceXXX %
Total Population	819		1,061		819	
Diabetes Type II	584	71.31 %	786	74.08 %	584	71.31 %
Diabetes Type I	93	11.36 %	106	9.99 %	93	11.36 %
Undefined Diabetes	145	17.70 %	174	16.40 %	145	17.70 %
Asthma	115	14.04 %	158	14.89 %	115	14.04 %
COPD	59	7.20 %	86	8.11 %	59	7.20 %
CHD	114	13.92 %	171	16.12 %	114	13.92 %
Heart Failure	26	3.17 %	44	4.15 %	26	3.17 %
Hypertension	400	48.84 %	589	55.51 %	400	48.84 %
Stroke	44	5.37 %	76	7.16 %	44	5.37 %
Anxiety	63	7.69 %	102	9.61 %	63	7.69 %
Depression	123	15.02 %	192	18.10 %	123	15.02 %
Schizophrenia	7	0.85 %	14	1.32 %	7	0.85 %
Bipolar	5	0.61 %	9	0.85 %	5	0.61 %
ADHD	4	0.49 %	4	0.38 %	4	0.49 %
Autism	1	0.12 %	1	0.09 %	1	0.12 %
Dementia	7	0.85 %	14	1.32 %	7	0.85 %
Postnatal Depression	0	0.00 %	1	0.09 %	0	0.00 %
Osteoporosis	42	5.13 %	64	6.03 %	42	5.13 %
Osteoarthritis	164	20.02 %	254	23.94 %	164	20.02 %
Inflammatory Arthritis	17	2.08 %	28	2.64 %	17	2.08 %

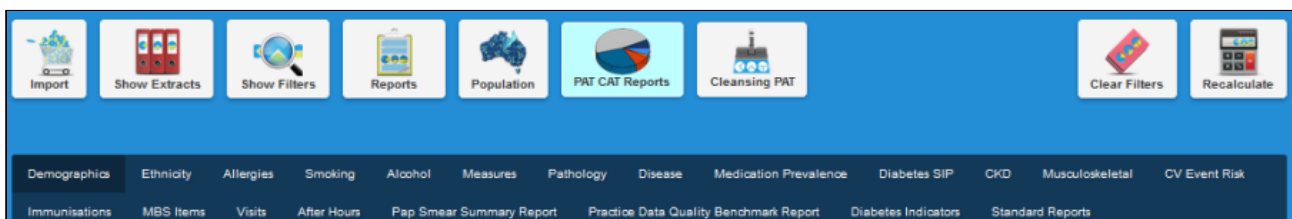
The adjusted column was not designed for this function but it can provide interesting data as it enables the PAT CAT user to see information about patient groups that has been entered at other clinics than the one(s) filtered for. It does not provide information where the information was entered, but it might still be useful for some research.

Generally we don't recommend to use the adjusted data for reporting when filtering by practice(s), but as the above example shows, there can be valuable information gained from this report when filtering for one practice.

## 9.2 Data Set Reports

**Remember:** Click the Hide Extracts and Hide Filter buttons to maximise the use of your screen for viewing results after applying the relevant filters.

The tabs along the top of the reports panel allow you to view various graphical representations of your data set.



All views and reports are of the filtered data set not the full data set. Each report has a number of additional options to display the data – the default is the graph, but the buttons on the report screen provide access to the other data formats and are described in this guide.

All reports are based on the data extracted by CAT4 from the different clinical systems. Please check the relevant mapping guides for details on what is extracted from which system. The guides are available at: [help.pencs.com.au/cat.htm](http://help.pencs.com.au/cat.htm)<sup>17</sup>

Currently available reports in PAT CAT:

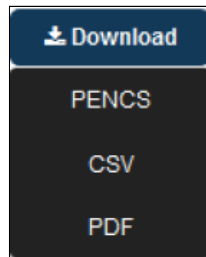
- [Downloading Report Data](#)(see page 105)
- [Demographics Report](#)(see page 105)
- [Ethnicity](#)(see page 106)
- [Allergies](#)(see page 107)
- [Smoking](#)(see page 107)
- [Alcohol](#)(see page 109)
- [Measures](#)(see page 110)
- [Pathology](#)(see page 112)
- [Disease](#)(see page 115)
  - [Cancer Report](#)(see page 116)
- [Screening](#)(see page 117)
  - [Pap Smear Reports](#)(see page 117)
  - [Mammogram](#)(see page 118)
  - [FOBT Report](#)(see page 122)
  - [Cervical Screening](#)(see page 128)
- [Co-Morbidities](#)(see page 130)
- [Medication Prevalence and Per Patient](#)(see page 131)
- [Diabetes SIP Items](#)(see page 133)
- [CKD](#)(see page 134)
- [Musculoskeletal](#)(see page 136)
- [CV Event Risk](#)(see page 136)
  - [CIS Calculated CV Event Risk](#)(see page 139)
- [Immunisations](#)(see page 139)
  - [COVID-19 Vaccinations](#)(see page 141)
- [MBS Items](#)(see page 144)
  - [COVID-19 Vaccinations MBS Items](#)(see page 148)
- [Visits](#)(see page 149)
- [After Hours](#)(see page 150)
- [Pap Smear Summary Report](#)(see page 152)
- [Practice Data Quality Benchmark](#)(see page 152)
- [Diabetes Indicators](#)(see page 161)
- [Standard Reports](#)(see page 161)
- [Digital Health](#)(see page 161)
  - [My Health Record and SHS](#)(see page 161)
  - [My Health Record Status](#)(see page 162)
  - [SHS Uploads](#)(see page 163)
  - [SHS Age](#)(see page 164)
- [STI Screening PAT CAT](#)(see page 164)
  - [STI Screening Graphs PAT CAT](#)(see page 165)
- [QIM Reports](#)(see page 166)

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<sup>17</sup> <http://help.pencs.com.au/cat.htm>

### 9.2.1 Downloading Report Data

Clicking on '**Download**' will show a dialog which allows to save the data of the current report as either an image, comma delimited data (csv) or as portable document format (pdf). You can choose the folder where the file will be saved in the dialogue window of your browser or you might be prompted to open the file depending on your web browser preferences.



*Figure 97: Download Report Data Choices*

**NOTE:** If you are logged on as a practice you will be offered to save either the aggregated data graph or your own practice data graph. In the example above only the PHN or other organisation data is available as a graph as we are logged on as an organisation.

### 9.2.2 Demographics Report

Demographics displays your entire data set as a breakdown of males/females and age group. The data is displayed as a bar chart showing the number of patients per age group.

Choosing to view demographics in months allows children to be targeted.

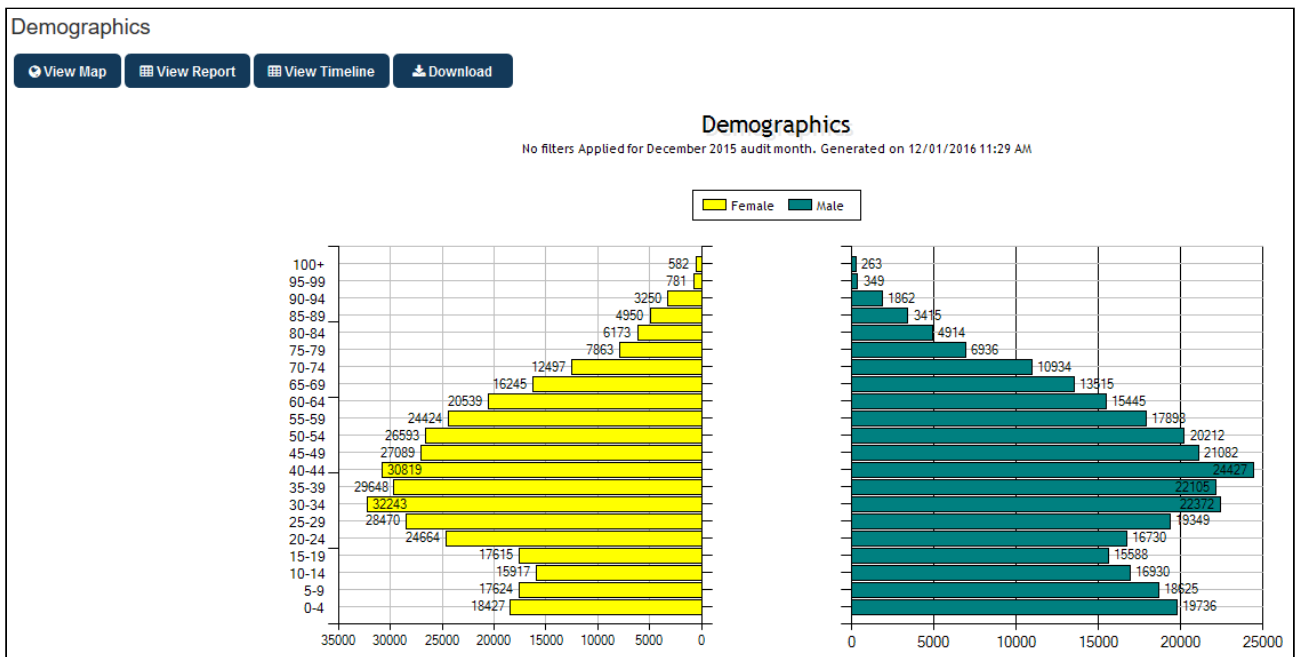


Figure 98: Demographics Chart

## 9.2.3 Ethnicity

Ethnicity is displayed as a pie chart with the pie chart breaking down the population by Aboriginal and Torres Strait Islander, Aboriginal, Torres Strait Islander, Non-Indigenous and Not Recorded.

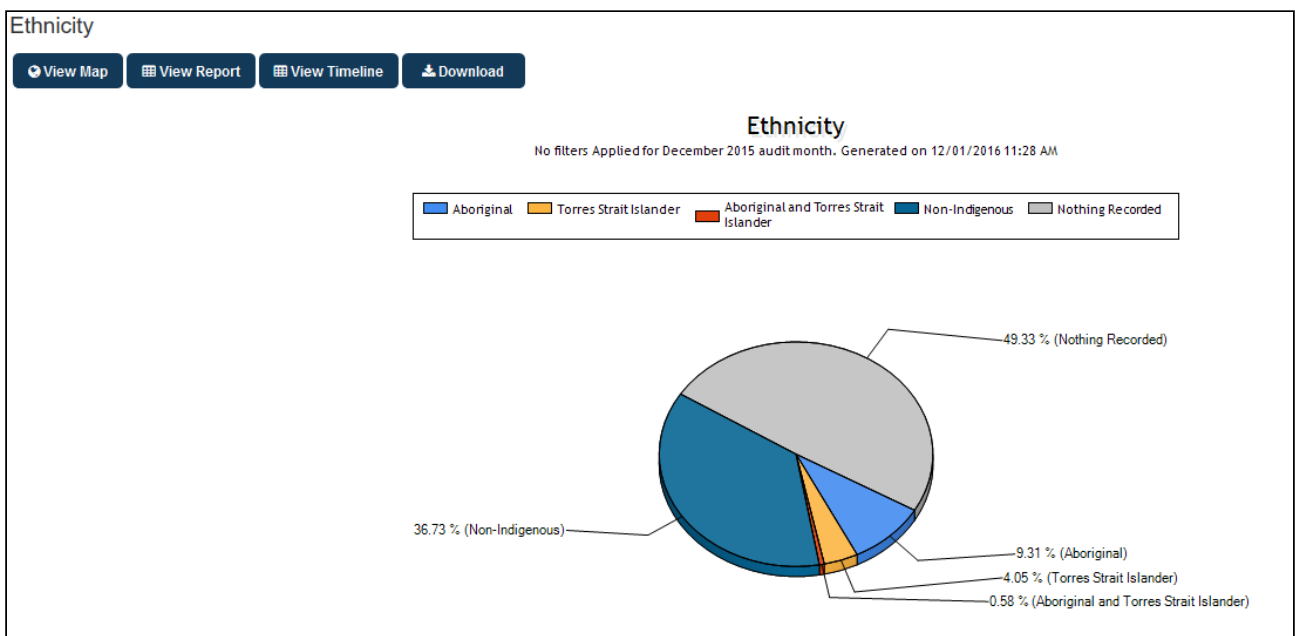


Figure 99: Ethnicity Report

## 9.2.4 Allergies

The Allergies report displays your data as a breakdown of allergy status: Allergy Recorded, No Known Allergies, Nothing Recorded. The data is displayed as a pie chart.

The percentage in each allergy status group is displayed for each segment of the pie chart.

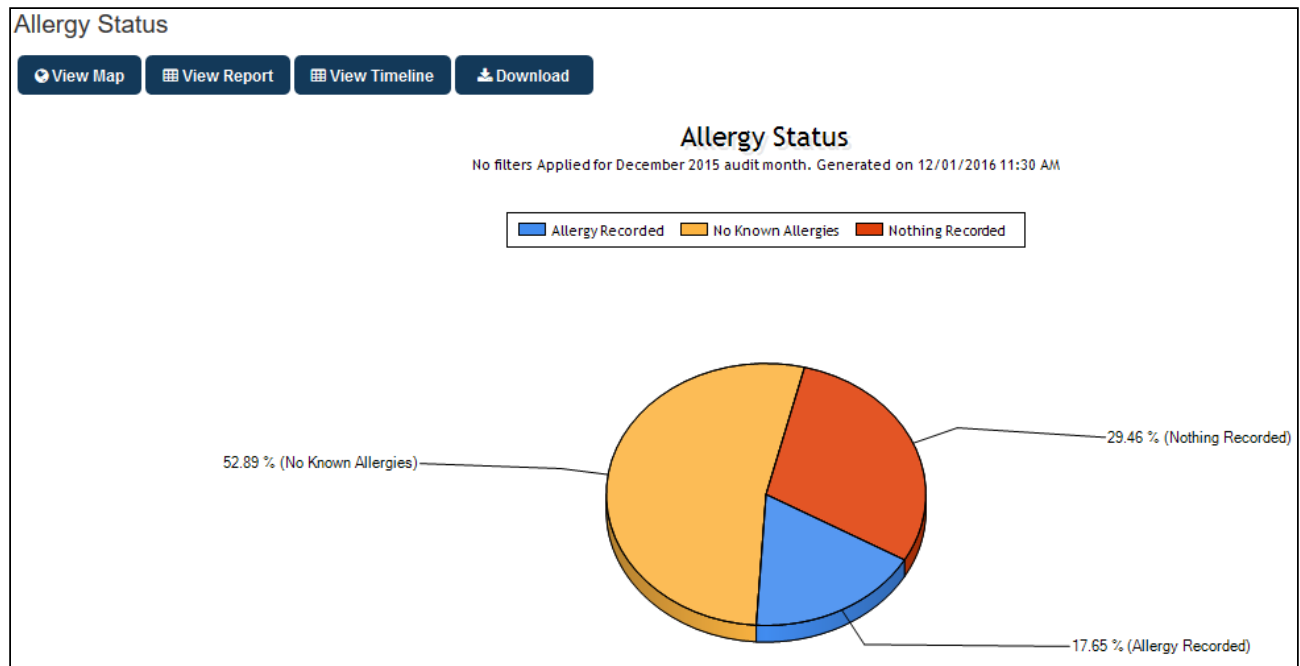
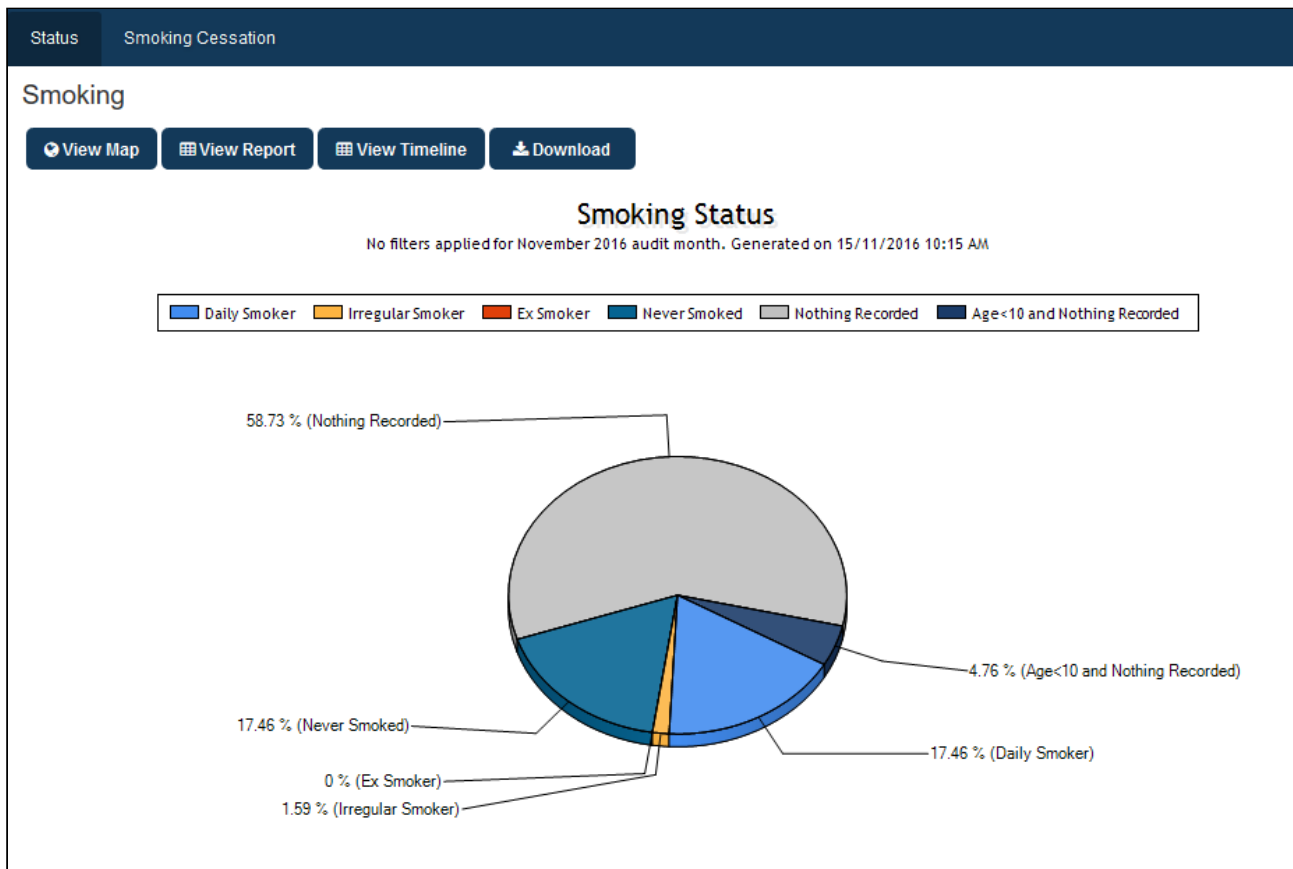


Figure 100: Allergies Chart

## 9.2.5 Smoking

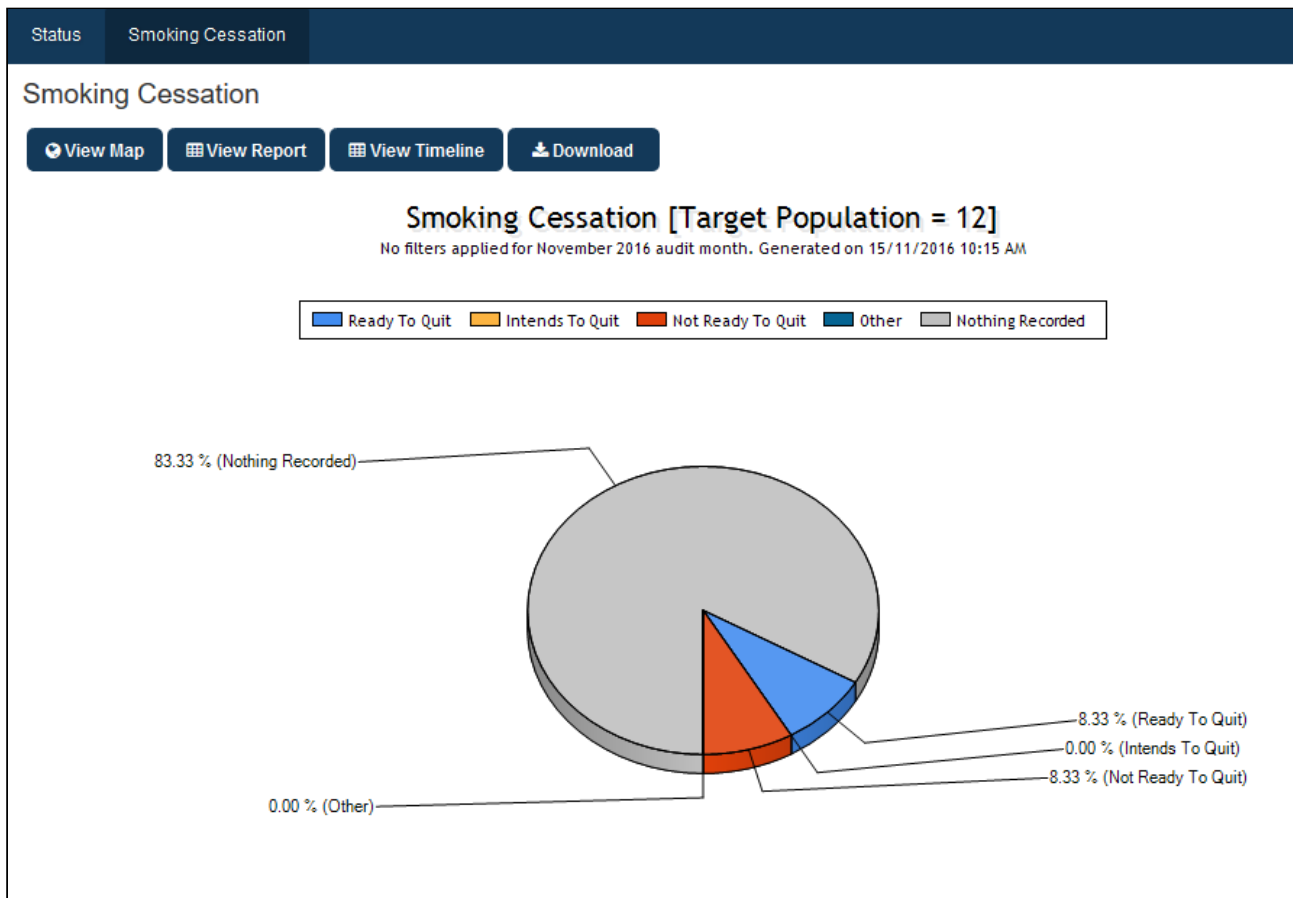
Smoking displays your data as a breakdown of smoking status: Daily Smoker, Irregular Smoker, Ex Smoker, Never Smoked, Nothing Recorded. The data is displayed as a pie chart.



The 'Cessation' report is currently only available for MD3 users and shows the 'Stage of change assessment' from the patients smoking assessment. This report is using the daily and irregular smokers only as cessation is not relevant for non or ex-smokers.

The pie chart shows the number and percentage of patients ready to quit, intending to quit, not ready to quit, nothing recorded or 'other', with 'other' being a 'recent quitter' in the MD3 patient record.





## 9.2.6 Alcohol

Alcohol displays your data as a breakdown of alcohol status: Drinker, Non Drinker, Nothing Recorded. The data is displayed as a pie chart.

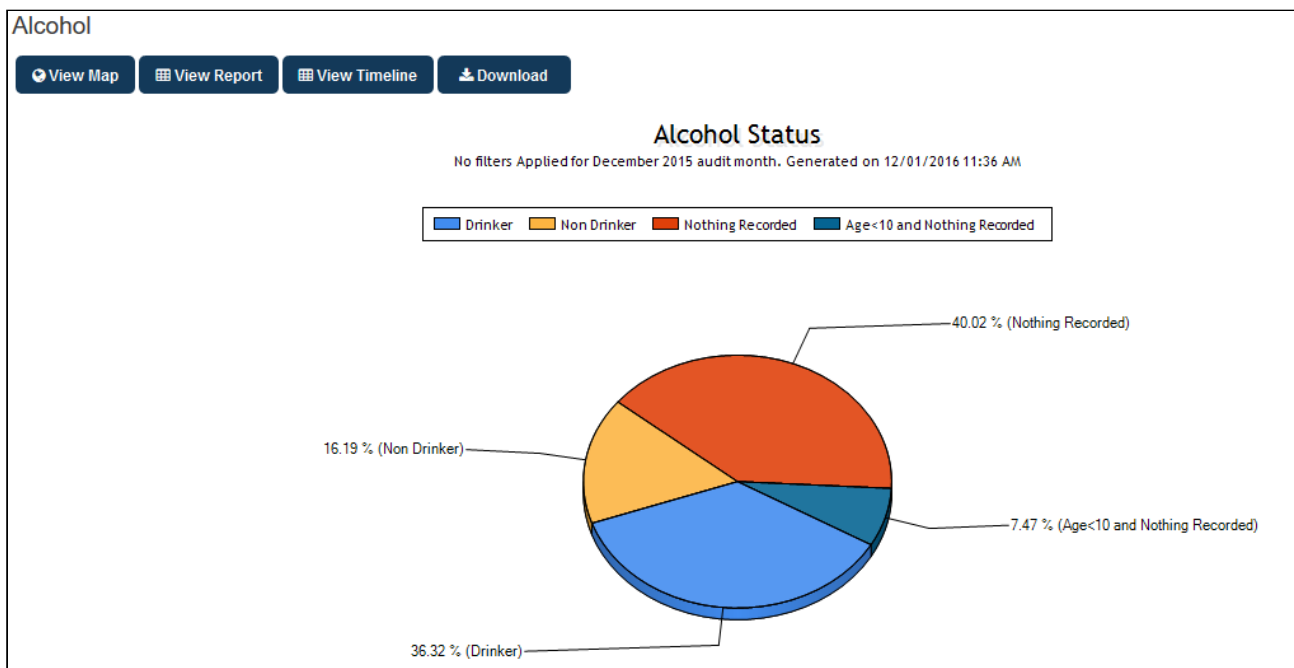


Figure 102: Alcohol Chart

## 9.2.7 Measures

Measurements reports against:

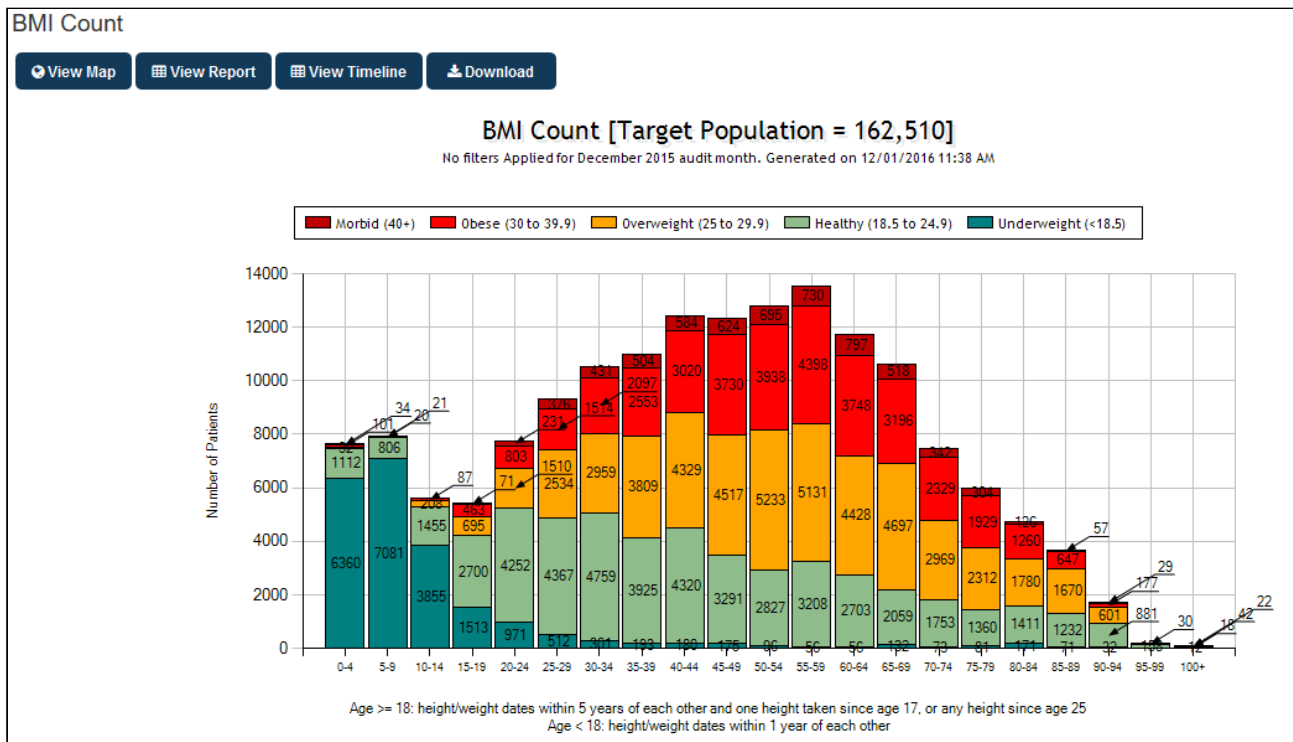
- BMI (Body Mass Index)
- Waist
- BP (Blood Pressure)
- Spirometry
- Physical Activity

### BMI (Body Mass Index)

Measurements > BMI displays your data as a breakdown of BMI status: Morbid Obesity (40+), Obese(30 to 40), Overweight(25 to 29.9), Healthy(18.5 to 24.9), Underweight(<18.5).

The data is displayed as

- Count per age range in a bar chart



## Waist

Measurements > Waist displays your data as a breakdown of risk status. The risk ranges differ depending on whether you are measuring waist for risk of CVD or Diabetes. CAT provides 2 separate tabs:

- Waist > CVD Risk
- Waist > Diabetes Risk

Ranges are displayed in pie charts:

CVD Risk	Diabetes Risk
Male <94, 94-102, >102, no waist recorded Female <80, 80-88, >88, no waist recorded	Non ATSI Male < 102, 102-110, >110 Non ATSI Female <88, 88-100, >100 ATSI Male <90, 90-100, >100 ATSI Female <80, 80-90, >90

and No Waist Recorded.

## BP (Blood Pressure)

Measurements > BP displays your data as a breakdown of BP status: <=130/80, 130/80-140/90, >140/90, Incomplete Data, No BP Recorded. The data is displayed as a pie chart.

**NOTE:** A patient's BP must have both systolic and diastolic values recorded on the same day to be valid. The most recent recording is used. If only one value is recorded this will be invalid and display in the 'No BP Recorded' category.

A patient's BP will be shown in the higher segment if either of the systolic or diastolic values is above the cut-off. For

example a BP of 141/85 will end up in the >140/90 category.

### Spirometry

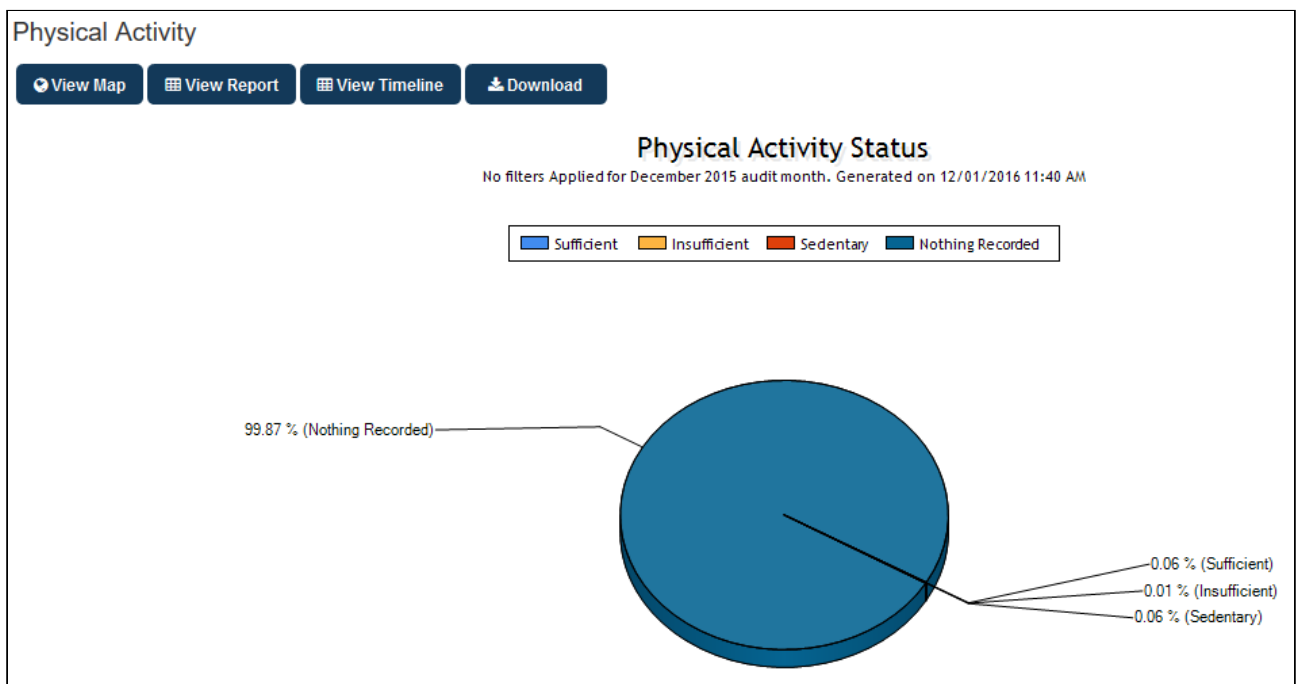
Measurements > Spirometry displays your data as a breakdown of date last recorded: FEV1/FVC <0.7, FEV1/FVC >=0., Nothing Recorded. The data is displayed as a pie chart.

For all Measurements Reports, clicking on **View Report** will open a sub-set of the Benchmark Report to show data specific to BMI, Waist, BP or Spirometry.

Clicking on **View Map** will allow for measurements information to be mapped, functions are the same as described for View Map Function (Section 9)

### Physical Activity

Measurements > Physical Activity displays information in regards to the physical activity status of the patients in a pie chart. The data is broken down into Sufficient (activity), insufficient, Sedentary and Nothing Recorded.



## 9.2.8 Pathology

Pathology reports against:

- Lipids (includes Cholesterol, HDL, LDL, Triglycerides, Total Chol/HDL Ratio)
- eGFR (Estimated Glomerular Filtration Rate)
- ACR (Albumin Creatinine Ratio)
- Microalbumin
- HbA1c
- FBG (Fasting Blood Glucose)
- RBG (Random Blood Glucose)
- INR
- Creatinine Serum

For all pathology reports the same options to view the data as for the other reports are available:

### Lipids

Pathology > Lipids displays your data as a breakdown of:

- Cholesterol: <4.0, >4.0 and <=5.5, >5.5 and <=6.5, >6.5 and <=7.5, >7.5, No Cholesterol Recorded.
- HDL: <1.0, >1.0 and <=2.0, >2.0, No HDL Recorded
- LDL: <2.5, >2.5 and <=4.0, >4.0, No LDL Recorded
- Triglycerides: <2.0, >2.0 and <=4.0, >4.0, No Triglycerides Recorded
- Total Chol/HDL Ratio: <3.5, >3.5 and <5.0, >5.0, No Total Chol/HDL Ratio Recorded

The data is displayed as a pie chart.

### eGFR (Estimated Glomerular Filtration Rate)

Pathology > eGFR displays your data in mg/ml as a breakdown of:

- >= 90
- >=60 to <90
- >=45 to <60
- >=30 to <45
- >=15 to <30
- <15
- No Data

The eGFR value is obtained through pathology results or via calculation (see below). Where both are available the latest value is displayed in the graph.

The data is displayed as a pie chart.

Calculation method:

eGFR (ml/min) is calculated using the CKD-EPI formula from serum creatinine measurement (in  $\mu\text{mol/L}$ ), age and gender. This formula is

$$\text{eGFR} = 141 \times \min(\text{SCr}/k, 1)^a \times \max(\text{SCr}/k, 1)^{-1.209} \times 0.993^{\text{Age}} \times [1.018 \text{ if Female}] \times [1.159 \text{ if Black}]$$

where SCr is serum creatinine in mg/dL (convert from  $\mu\text{mol/L}$  to mg/dL by dividing by 88.4)

k is 0.7 for females and 0.9 for males

a is -0.329 for females and -0.411 for males

min indicates the minimum of SCr/k or 1, and max indicates the maximum of SCr/k or 1

The CKD-EPI formula is for age  $\geq 18$ .

For children the Schwartz equation is used:

$GFR (mL/min/1.73 m^2) = (0.41 \times \text{Height}) / (\text{Serum creatinine} / 88)$

### ACR (Microalbumin Creatinine Ratio)

Pathology > ACR displays your data as a breakdown of:

- <2.5 Male
- <3.5 Female
- 2.5 – 25 Male
- 3.5 – 35 Female
- >25 Male
- >35 Female
- No Gender
- No Data

ACR is either collected directly or is calculated as

$ACR (mg/mmol) = \text{microalbumin} (mg/L) / \text{urinary creatinine} (mmol/L)$

where microalbumin and urinary creatinine have the same date

The data is displayed as a pie chart.

### Microalbumin

Pathology > MALB displays your data as a breakdown of:

- $\leq 15$  mg/L
  - 15 mg/L
- No Data

The data is displayed as a pie chart.

### HBA1c

Pathology > HBA1c displays your data as a breakdown of HBA1c status:

% ranges	Mmol/mol ranges
<6%	<42
$\geq 6\%$ and $\leq 6.5\%$	$\geq 42$ and $\leq 48$
$> 6.5\%$ and $\leq 7$	$> 48$ and $\leq 53$
$> 7$ and $\leq 8$	$> 53$ , $\leq 64$
$> 8$ and $< 10$	$> 64$ , $< 86$
$\geq 10$	$\geq 86$
not recorded	

**NOTE:** The reporting of HbA1c units changed in 2012/13. Refer to page 6 of the guidelines for Diabetes Management available at

{+}<sup>18</sup> <http://www.diabetesaustralia.com.au/en/For-Health-Professionals/Diabetes-National-Guidelines/>

#### **FBG and RBG**

Fasting Blood Glucose displays your data as a breakdown of FBG status: <5.5%, 5.5 – 7.0, > 7.0%, No FBG Recorded.

Random Blood Glucose displays your data as a breakdown of RBG status: <7.8%, 7.8 – 11.2, > 11.2%, No RBG Recorded.

The data is displayed as a pie chart.

#### **INR**

International Normalised Ratio - INR displays your data as a breakdown of INR status: <1.5, 1.5-2.0, 2.0-3.0, 3.0-4.0, >4.0, No INR Recorded. The data is displayed as a pie chart.

#### **Creatinine Serum**

Creatinine Serum status displays your data as a breakdown of the following measurements: <45, >= 45 and < 60, >=60 and <90, >90 and <= 110, > 110, No Creatinine Serum Recorded. The data is displayed as a pie chart

For all Pathology Reports, clicking on **View Report** will open a sub-set of the Benchmark Report to show data specific to the Pathology type.

Clicking on **View Map** will allow for pathology information to be mapped, functions are the same as described for View Map Function (Section 9).

## **9.2.9 Disease**

The Disease Prevalence is calculated by identifying the number of patients with a specific disease diagnosis and expressing it as a percentage of the total population.

The disease categories are the same as the conditions provided in the conditions filter (except for some Mental Health Conditions).

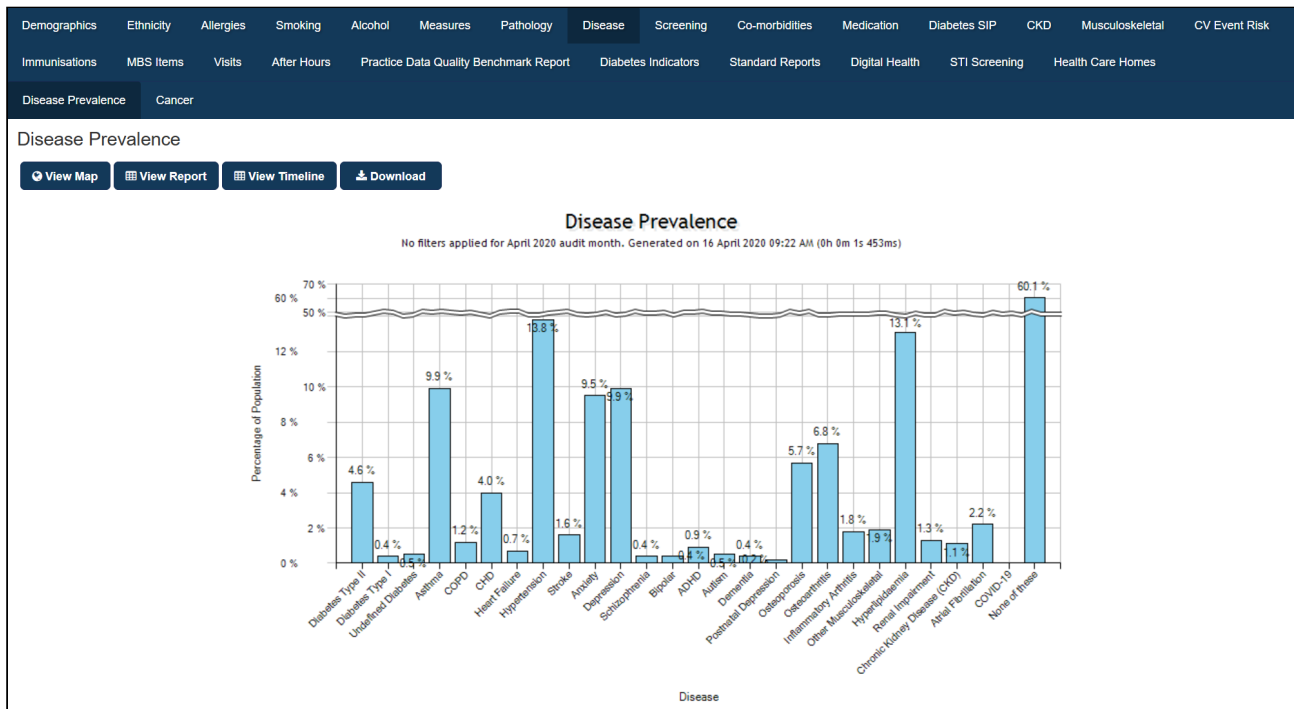
The data is displayed as:

- Prevalence per condition as a percentage of this population in a bar chart

A bar is also provided on the chart for patients that have 'None of these' disease categories.

---

<sup>18</sup> <http://www.diabetesaustralia.com.au/en/For-Health-Professionals/Diabetes-National-Guidelines/>



### 9.2.9.1 Cancer Report

This report shows the number of patients diagnosed with a range of cancer conditions. As with all CAT4 reports, this report relies on the cancer being diagnosed in coded format in your clinical system.

Please check the 'conditions mapping' for your clinical system for full details on which conditions are mapped to the filter options. Diagnosis mapping for cancer can be found here:

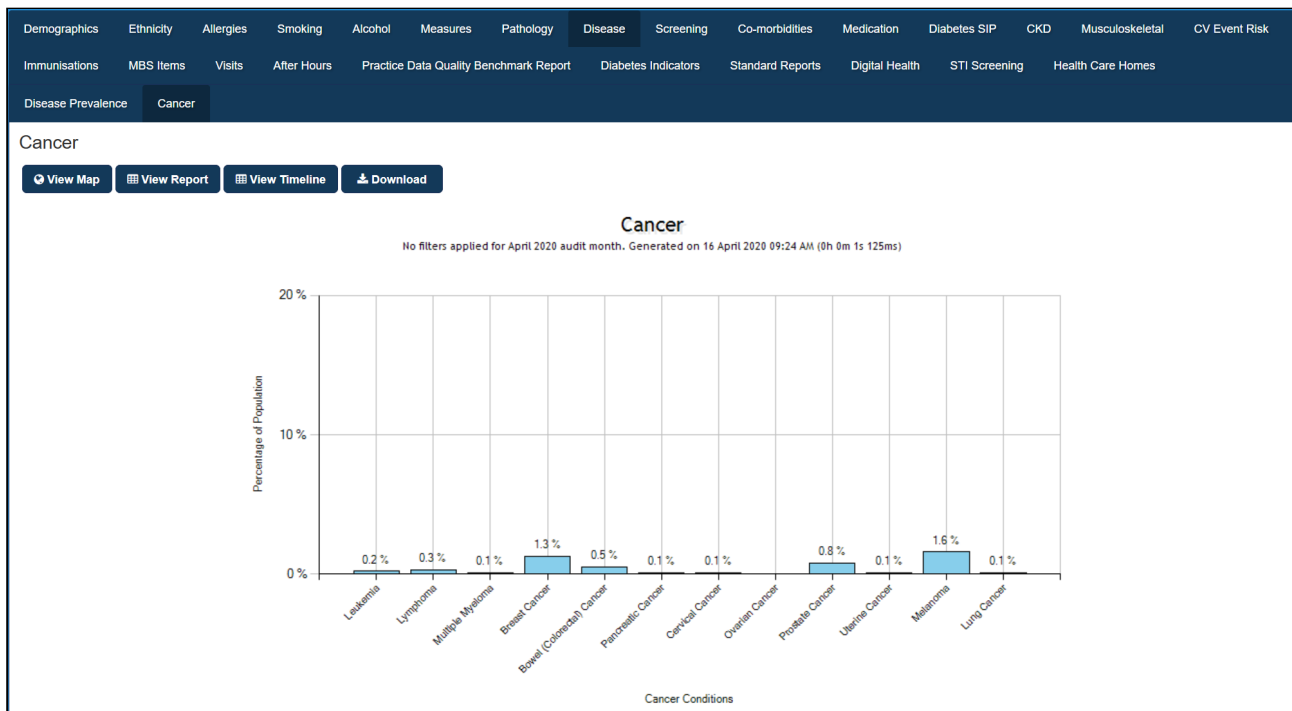
- Best Practice: [BP cancer diagnosis mapping](#)<sup>19</sup>
- MD3: [MD3 cancer diagnosis mapping](#)<sup>20</sup>
- Zedmed: [Zedmed cancer diagnosis mapping](#)<sup>21</sup>

<sup>19</sup> <http://help.pencs.com.au/display/ADM/Conditions+Data+Category+Mappings+BP#ConditionsDataCategoryMappingsBP-cancerBP>

<sup>20</sup> <http://help.pencs.com.au/display/ADM/Conditions+Data+Category+Mapping+MD3#ConditionsDataCategoryMappingMD3-cancerMD>

<sup>21</sup> <http://help.pencs.com.au/display/ADM/ICPC-2+PLUS+GROUPERS+ZEDMED#ICPC-2PLUSGROUPERSZEDMED-cancerZedmed>





## 9.2.10 Screening

The Screening tab contains reports on cancer screening, being Pap Smear, Mammogram and FOBT screening. Due to the format of these tests we are unable to report on the **result** of the test, but we can show the number/percentage of patients who had the test done. Please see the other pages in this chapter for the full details.

- [Pap Smear Reports](#)(see page 117)
- [Mammogram](#)(see page 118)
- [FOBT Report](#)(see page 122)
- [Cervical Screening](#)(see page 128)

### 9.2.10.1 Pap Smear Reports

The pap smear tab automatically filters out the male population. The population Figure displayed on this tab is the number patients in your filtered dataset with gender female or other.

Pap Smear displays your data as a breakdown of:

- Pap Smear Recorded: Pap Smear Recorded, No Pap Smear Recorded, Ineligible\*.
- Pap Smear Done Date (where Pap Smear Recorded): <1yr, 1-2yrs, 2-3yrs, 3-4yrs, >4yrs and in a report format:
- Pap Smear Summary Report Card – this is explained below. This report is always derived from your full dataset not you filtered dataset.

The data is displayed as a pie chart. Functions available are as described for Allergies at the beginning of this chapter.

\* The pap smear category of 'Ineligible' includes patients who are flagged in the clinical system as not requiring a pap smear or who have a coded condition recorded that excludes them (eg. hysterectomy). Check the pap smear mappings for your clinical system.

### Pap Smear Summary Report Card

The Pap Smear Summary Report Card is an initiative of the SA Cervix Screening Program (SACSP) to improve the management of clinical information related to cervical screening and support increased participation of women in screening.

It provides a report of eligible females aged 18-70, categorised by:

- Females with a last visit < 36 mths
- Active Females – Not pregnant, Pregnant and Total

Each category is broken down into subcategories by how long ago the last pap smear was recorded. The subcategories match the pie chart breakdowns provided allowing patients for follow up to be targeted.


- Not Recorded
- 4 years ago
- 3-4 years ago
- 2-3 years ago
- 1-2 years ago
- < 1 year ago

Within each subcategory there is a further breakdown by age range: 18-29, 30-39, 40-49, 50-59, 60-70.

- Total Count and Percentage is provided for each report line item.
- Percentage at the subcategory level is against the category total.
- Percentage at the age range level is against the subcategory total.

### 9.2.10.2 Mammogram

The target population are all patients who are not recorded as 'male' without any age or other filter criteria applied. To filter for a specific group of patients, please use the relevant [filter](#)<sup>22</sup> such as age or 'active patients'.

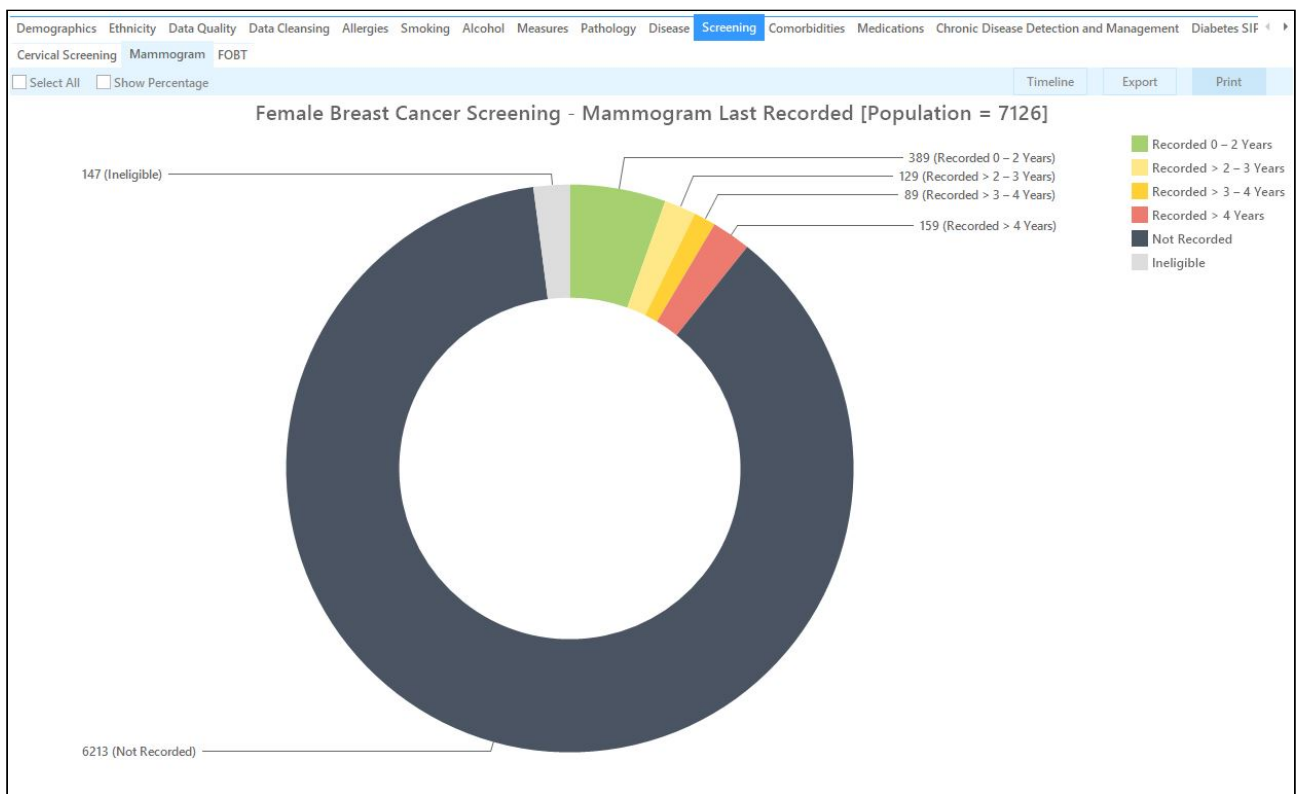
 Patients with 'other' or no gender entered, will be included in the report to ensure no patient at risk is missed. This report is not filtered for age - to see the relevant patients please apply the age filter first!

The Mammogram tab provides:

Mammogram Last Recorded

A pie chart displays the % of patients with a Mammogram Last Recorded in the following categories: 0-2 years, >2-3 years, >3-4 years, > 4 years, Not Recorded, Ineligible\*.

<sup>22</sup> <https://help.pencs.com.au/display/ds/General+Filter+Tab>



Mammograms for this graph are retrieved from electronic results or manual entry of the correct test name on the results/investigation screen of your clinical system.

Electronic results are sent to GPs who have patients screened at BreastScreen Victoria Clinics since October 2011 and it is hoped other States will follow with this functionality.

\* The Mammogram category of 'Ineligible' includes patients that are no longer required to have a Mammogram because they have a coded condition that implies exclusion.

### Mammogram Exclusions

<p>Adenocarcinoma - Breast</p> <p>Breast cancer</p> <p>Breast carcinoma</p> <p>Breast carcinosarcoma</p> <p>Breast removal</p> <p>Carcinoma - Breast</p> <p>Carcinosarcoma of the breast</p> <p>Mastectomy</p> <p>Mastectomy - partial &amp; node biopsy</p>	<p>Radical mastectomy</p> <p>Radical mastectomy</p> <p>Signet ring cell carcinoma of breast</p> <p>Simple mastectomy</p> <p>Surgery - Mastectomy</p> <p>Surgery - Radical mastectomy</p> <p>Surgery - Radical mastectomy</p> <p>Surgery - Simple mastectomy</p>
--	---

❗ If you are not receiving your results electronically, you will have to enter the test results manually using one of the names specified in the mapping guides. Please check the links below for details. Also please note that CAT4 can't pick up a mammogram test from your conditions or past history list - it has to be a test name!

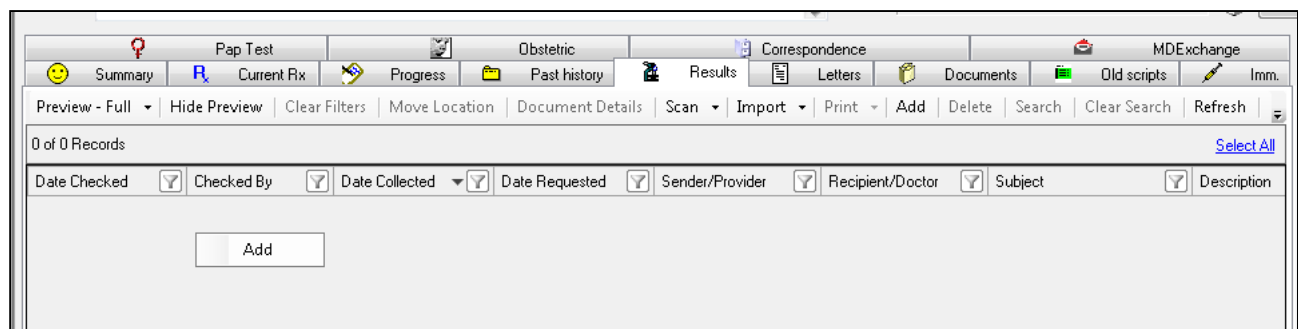
### Mammogram/FOBT for MD Users

Mammogram and FOBT results are not sent electronically in all states, but if test names are entered manually into the results tab CAT4

will pick up that the test has been done. The following test names are recognised:

Mammogram test names	FOBT test names
<ul style="list-style-type: none"> <li>Breast Mammogram Screening</li> <li>Bilateral Mammography</li> <li>Ultrasound Breast Bilateral</li> <li>Wesley Breast Clinic Consultation Report</li> <li>Mammogram</li> <li>Mammogram-normal</li> <li>Breast Mammography</li> <li>Mammography - Bilateral</li> <li>Mammogram Breastscreen NSW</li> <li>Screening Mammogram - BreastScreen Queensland</li> </ul>	<ul style="list-style-type: none"> <li>IFOBT</li> <li>FOBT</li> </ul> <p>many others as in the 'general data mapping' section of your CIS</p>

To add a test name manually to the Results tab in MD and right click in the results area to bring up the 'Add' option:



Then add one of the test names above and save the result (there has to be some text in the result field but CAT4 will only extract the test name from the 'Subject' field:

**Add Investigation Result**

Start Patient : Andrews,Sally  
21 Best St,Pill Land  
Birthdate : 12/05/98 Age: 19 yrs Sex: F  
Your Reference: 8

Subject: BREAST MAMMOGRAM SCREENING

Date Requested: Tuesday , 13 June 2017

Date Collected: Tuesday , 13 June 2017

Result:

Summary | Current Rx | Progress | Past history | Results | Letters | Documents | Old scripts

Preview - Full | Hide Preview | Clear Filters | Move Location | Document Details | Scan | Import | Print | Add | Delete | Search

1 of 1 Records [Select All](#)

Date Checked	Checked By	Date Collected	Date Requested	Sender/Provider	Recipient	Subject
13/06/17	DR. A. PRACTITIO...	13/06/17	13/06/17			BREAST MAMMOGRAM SCREENING

Start Patient : Andrews,Sally  
21 Best St,Pill Land  
Birthdate : 12/05/98 Age: 19 yrs Sex: F  
Your Reference: 8

BREAST MAMMOGRAM SCREENING

Lab. Reference:

Requested: 13/06/17 Complete:

Performed: 13/06/17

n/a

MD: [General Data Category Mappings MD](#)<sup>23</sup>

### Mammogram/FOBT for BP users

Mammogram and FOBT results are not sent electronically in all states, but if test names are entered manually into the results tab CAT4 will pick up that the test has been done. The following test names are recognised:

<sup>23</sup> <https://help.pencs.com.au/display/ADM/General+Data+Category+Mappings+MD3>

Mammogram test names	FOBT test names
<ul style="list-style-type: none"> <li>Breast Mammogram Screening</li> <li>Bilateral Mammography</li> <li>Ultrasound Breast Bilateral</li> <li>Wesley Breast Clinic Consultation Report</li> <li>Mammogram</li> <li>Mammogram-normal</li> <li>Breast Mammography</li> <li>Mammography - Bilateral</li> <li>Mammogram BreastScreen NSW</li> <li>Screening Mammogram - BreastScreen Queensland</li> </ul>	<ul style="list-style-type: none"> <li>IFOBT</li> <li>FOBT</li> </ul> <p>many others as in the 'general data mapping' section of your CIS</p>

To manually add a mammogram result click on the 'Add' button under the 'Investigation report' tab, then enter one of the test names from above and complete the other fields. CAT4 will only extract the test name and date but no outcome/result.

BP: [General Data Category Mappings BP](#)<sup>24</sup>

### 9.2.10.3 FOBT Report

The FOBT (Faecal occult blood test) tab provides three subtabs:

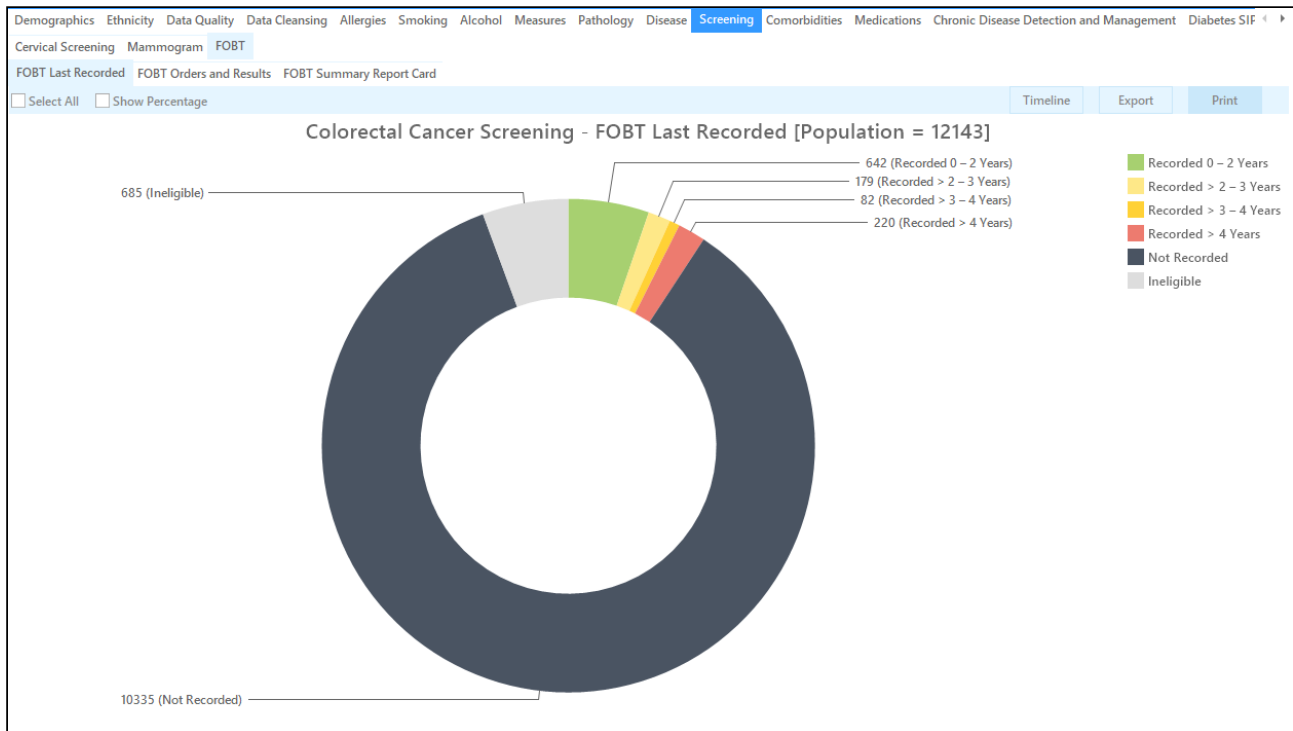
- FOBT Last Recorded

<sup>24</sup> <https://help.pencs.com.au/display/ADM/General+Data+Category+Mappings+BP>

A pie chart displays the % of patients with a FOBT Last Recorded in the following categories: 0-2 years, >2-3 years, >3-4 years, > 4 years, No FOBT Recorded, Ineligible\*.



This report needs filtering for the appropriate age group as by default it will show all patients!

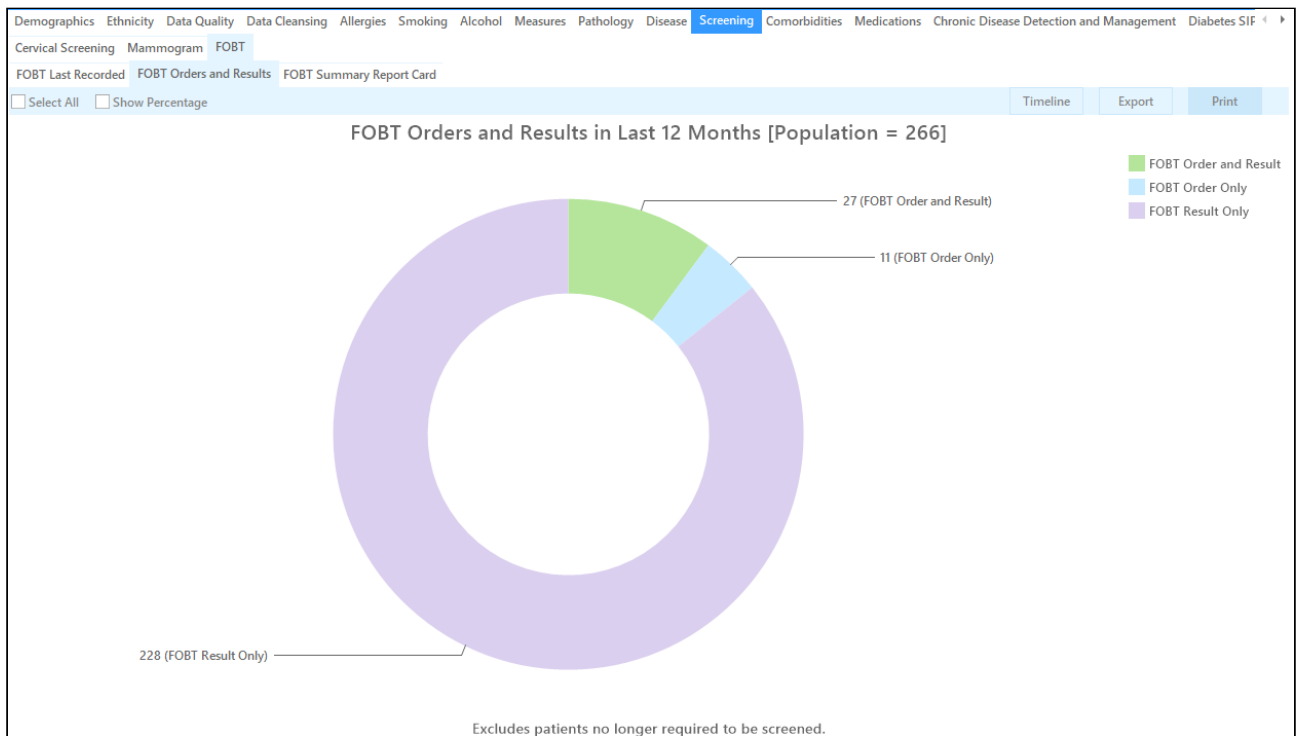


- FOBT Orders and results

A pie chart displays the % of patients who are required to have an FOBT test (i.e. are not ineligible) and have had an FOBT test order or result in the last 12 months in the following categories:

- FOBT Order and result - an FOBT test result has been received in the last 12 months with an order recorded within 6 months prior
- FOBT Order only - an FOBT order has been recorded but no result has been received
- FOBT Result only - an FOBT order has been received but no order is recorded

This graph allows the clinician to follow up patients who have had an order placed but where a result has not been received.



The third tab, FOBT Summary Report Card, shows a summary of the available data broken down by all patients and active patients by age groups and time of test done.



Demographics Ethnicity Data Quality Data Cleansing Allergies Smoking Alcohol Measures Pathology Disease Screening Comorbidities Medications Chronic Disease Detection and Management Diabetes SIF

Cervical Screening Mammogram FOBT

FOBT Last Recorded FOBT Orders and Results FOBT Summary Report Card

1 of 1 Find Next

Practice Name: Deidentified Practice

Report Date: 01/01/2021 4:12 AM

FOBT Summary Report Card

Measure	Total Population		Active Population	
	Count	%	Count	%
Demographics				
Total Patients	12143	100.00%	5733	100.00%
Total Patients >=50 years old	4827	39.75%	3097	54.02%
Number Ineligible * >=50 years old	627	5.16%	551	9.61%
Total Patients >=50 years old and <=75 years old	3666	30.19%	2239	39.05%
Number Ineligible * >=50 years old and <=75 years old	422	3.48%	369	6.44%
FOBT Last Recorded : Age >=50 years,excludes Ineligible	4200		2546	
0-2 years ago	627	14.93%	601	23.61%
>2-3 years ago	169	4.02%	153	6.01%
>3-4 years ago	80	1.90%	64	2.51%
>4 years ago	196	4.67%	150	5.89%
Number Recorded	1072	25.52%	968	38.02%
Number Not Recorded	3128	74.48%	1578	61.98%
FOBT Last Recorded : Age >=50 years and <=75 years,excludes Ineligible	3244		1870	
0-2 years ago	598	18.43%	572	30.59%
>2-3 years ago	136	4.19%	121	6.47%
>3-4 years ago	51	1.57%	37	1.98%
>4 years ago	125	3.85%	90	4.81%

## FOBT Mappings with clinical systems

The FOBT mappings are provided in the '[General Data Mappings](#)<sup>25</sup>' Appendices for each clinical application.

\*Patients with certain coded diagnosis are excluded from this report and listed under ineligible:

### Excluded from FOBT

Anal carcinoma  
 Cancer of the anus  
 Carcinoma of the anus  
 Squamous cell carcinoma of anus  
 Adenocarcinoma of the colon  
 Bowel cancer  
 Cancer of the colon  
 Carcinoma of the colon  
 Colon carcinoma  
 Colonic cancer  
 Colonic carcinoma  
 Cancer of the rectum  
 Carcinoma of the rectum  
 Rectal adenocarcinoma  
 Rectal cancer  
 Rectal carcinoma  
 Genetic tendency to Hereditary nonpolyposis colorectal cancer  
 Hereditary nonpolyposis colorectal carcinoma

<sup>25</sup> <https://help.pencs.com.au/display/ADM/Data+Mapping>

Lynch syndrome  
 Carcinosarcoma of the colon  
 Colon carcinosarcoma  
 Signet ring cell carcinoma of bowel  
 Signet ring cell carcinoma of rectum

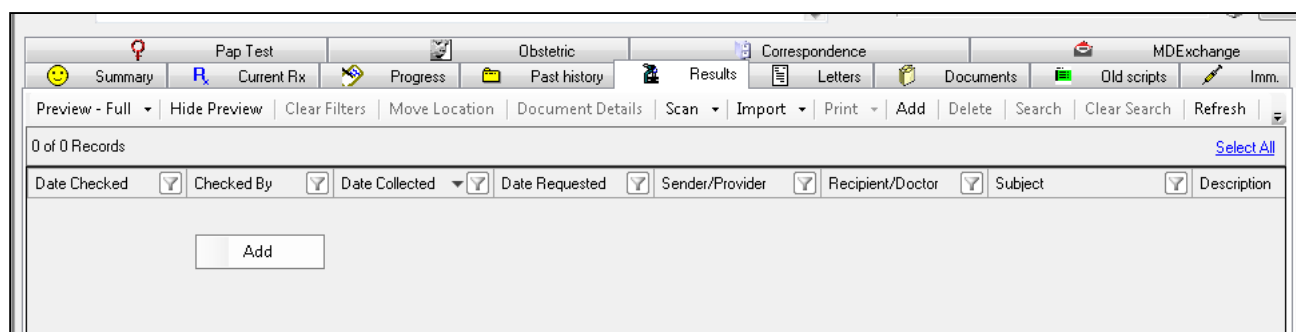
### Mammogram/FOBT for MD Users

Mammogram and FOBT results are not sent electronically in all states, but if test names are entered manually into the results tab CAT4

will pick up that the test has been done. The following test names are recognised:

Mammogram test names	FOBT test names
<ul style="list-style-type: none"> <li>Breast Mammogram Screening</li> <li>Bilateral Mammography</li> <li>Ultrasound Breast Bilateral</li> <li>Wesley Breast Clinic Consultation Report</li> <li>Mammogram</li> <li>Mammogram-normal</li> <li>Breast Mammography</li> <li>Mammography - Bilateral</li> <li>Mammogram Breastscreen NSW</li> <li>Screening Mammogram - BreastScreen Queensland</li> </ul>	<ul style="list-style-type: none"> <li>IFOBT</li> <li>FOBT</li> </ul> <p>many others as in the 'general data mapping' section of your CIS</p>

To add a test name manually to the Results tab in MD and right click in the results area to bring up the 'Add' option:



Then add one of the test names above and save the result (there has to be some text in the result field but CAT4 will only extract the test name from the 'Subject' field:

**Add Investigation Result**

Start Patient : Andrews,Sally  
21 Best St,Pill Land  
Birthdate : 12/05/98 Age: 19 yrs Sex: F  
Your Reference: 8

Subject: BREAST MAMMOGRAM SCREENING

Date Requested: Tuesday , 13 June 2017

Date Collected: Tuesday , 13 June 2017

Result:

Summary | Current Rx | Progress | Past history | Results | Letters | Documents | Old scripts

Preview - Full | Hide Preview | Clear Filters | Move Location | Document Details | Scan | Import | Print | Add | Delete | Search

1 of 1 Records [Select All](#)

Date Checked	Checked By	Date Collected	Date Requested	Sender/Provider	Recipient	Subject
13/06/17	DR. A. PRACTITIO...	13/06/17	13/06/17			BREAST MAMMOGRAM SCREENING

Start Patient : Andrews,Sally  
21 Best St,Pill Land  
Birthdate : 12/05/98 Age: 19 yrs Sex: F  
Your Reference: 8

BREAST MAMMOGRAM SCREENING

Lab. Reference:

Requested: 13/06/17 Complete:

Performed: 13/06/17

n/a

MD: [General Data Category Mappings MD](#)<sup>26</sup>

### Mammogram/FOBT for BP users

Mammogram and FOBT results are not sent electronically in all states, but if test names are entered manually into the results tab CAT4 will pick up that the test has been done. The following test names are recognised:

<sup>26</sup> <https://help.pencs.com.au/display/ADM/General+Data+Category+Mappings+MD3>

Mammogram test names	FOBT test names
<ul style="list-style-type: none"> <li>Breast Mammogram Screening</li> <li>Bilateral Mammography</li> <li>Ultrasound Breast Bilateral</li> <li>Wesley Breast Clinic Consultation Report</li> <li>Mammogram</li> <li>Mammogram-normal</li> <li>Breast Mammography</li> <li>Mammography - Bilateral</li> <li>Mammogram BreastScreen NSW</li> <li>Screening Mammogram - BreastScreen Queensland</li> </ul>	<ul style="list-style-type: none"> <li>IFOBT</li> <li>FOBT</li> </ul> <p>many others as in the 'general data mapping' section of your CIS</p>

To manually add a mammogram result click on the 'Add' button under the 'Investigation report' tab, then enter one of the test names from above and complete the other fields. CAT4 will only extract the test name and date but no outcome/result.

BP: [General Data Category Mappings BP](#)<sup>27</sup>

#### 9.2.10.4 Cervical Screening

Australia has established a new cervical screening process based on recommendations by Australia's independent Medical Services Advisory Committee (MSAC). This new test regime has commenced on the 1/12/2017.

<sup>27</sup> <https://help.pencs.com.au/display/ADM/General+Data+Category+Mappings+BP>

The new Cervical Screening Test has replaced the existing Pap test. MSAC recommended that the new screening test will be conducted every five years for people aged 25 to 74 years.

MSAC also advised that

- an HPV test with partial genotyping should be undertaken every five years
- cervical screening should commence at 25 years of age
- people should have an exit test between 70 and 74 years of age
- people with symptoms (including pain or bleeding) can have a cervical test at any age

For full information on the new test please check here: <http://www.health.gov.au/internet/screening/publishing.nsf/Content/healthcare-providers>

PEN CS has added a new report tab to cover the new screening test.

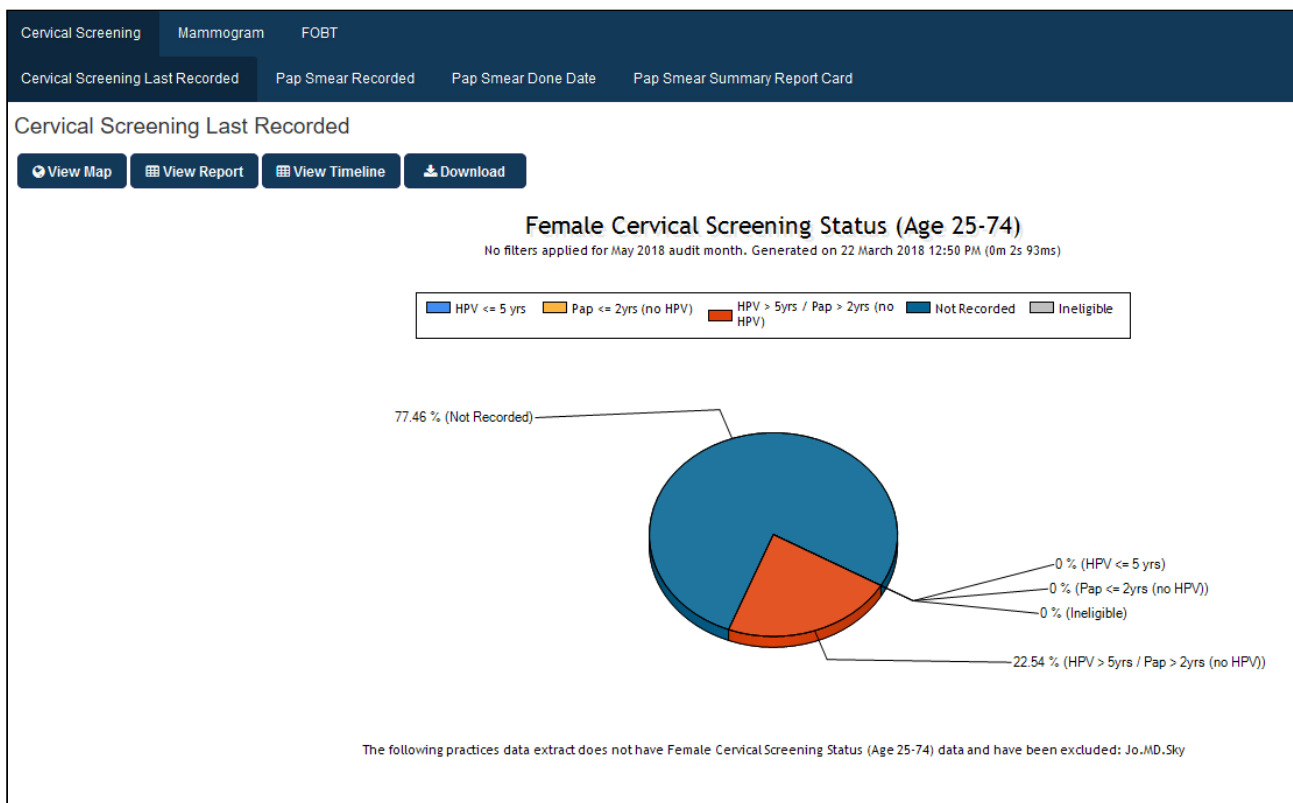
All women will be moved to HPV screening as their pap smear falls due. A woman with a current pap test is up to date.

There are 5 segments in the graph:

- 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
- Opted out/No longer requires screening (not available in all CIS)



Not recorded means there is no HPV or Pap test recorded for the patient! Patients with 'other' or no gender entered, will be included in the report to ensure no patient at risk is missed.



Please check for exclusion criteria and pathology test names used here:

[Diagnosis Codes Screening Tests](#)<sup>28</sup>

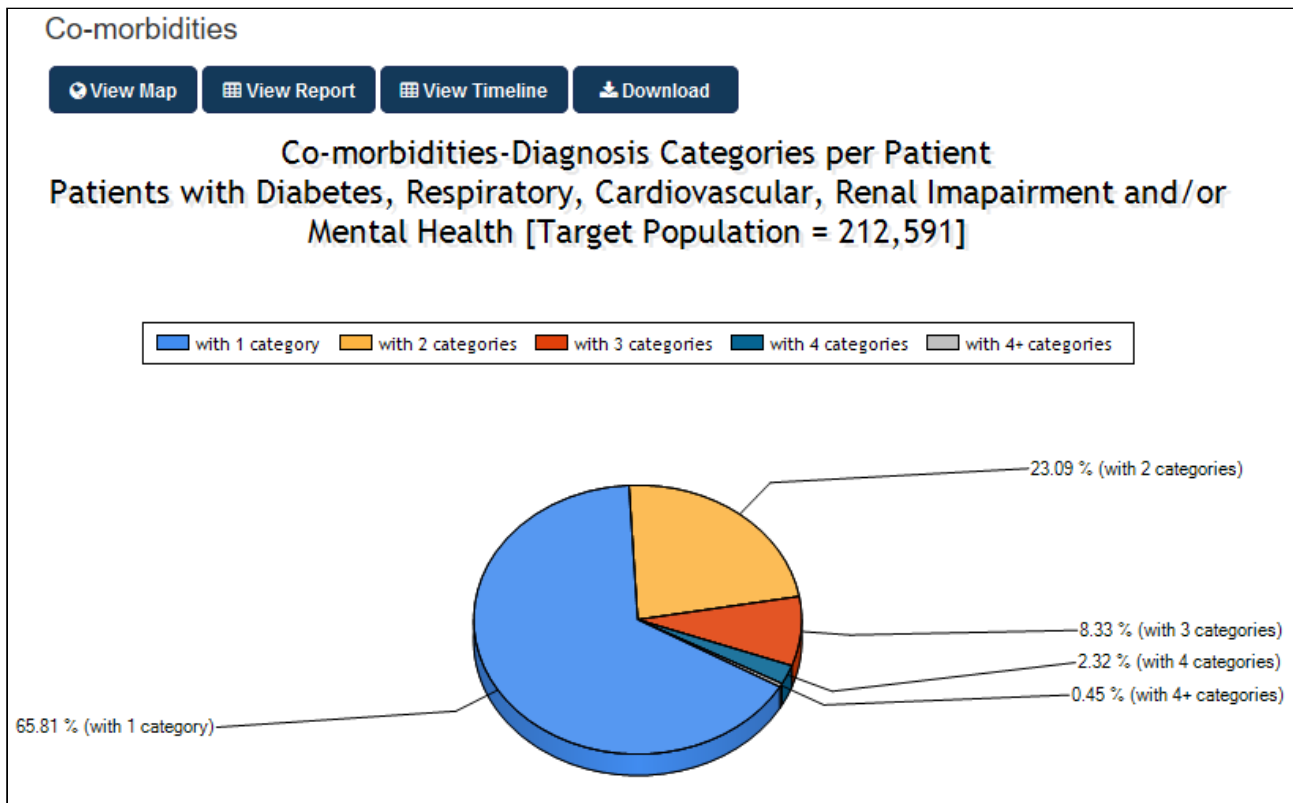
## 9.2.11 Co-Morbidities

This report shows patients with at least one of the following conditions:

- Diabetes
- Respiratory
- Cardiovascular
- Musculoskeletal
- Renal Impairment
- Mental Health

The data is displayed in a pie chart and lists patients with 1, 2, 3, 4 and more than 4 conditions. Please note that Mental Health is included in this report and patients with a mental health diagnosis and no other chronic condition will be counted in the report.

<sup>28</sup> <https://help.pencs.com.au/display/CG/Diagnosis+Codes+Screening+Tests>



### 9.2.12 Medication Prevalence and Per Patient

The tabs under the Medication tab show the prevalence of a select number of medications in % and the medication per patient tab.

#### Medication Prevalence

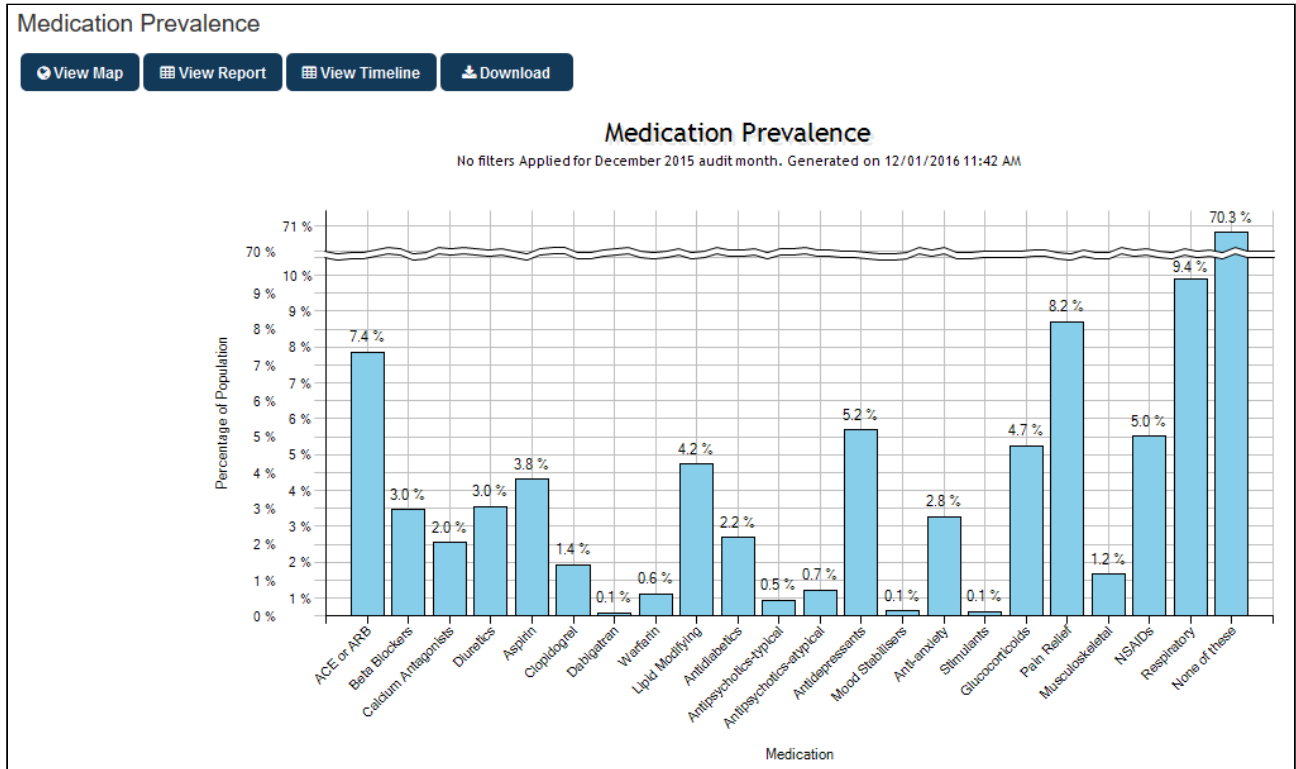
The Medication Prevalence is calculated by identifying the number of patients taking a specific medication category and expressing it as a percentage of the total population.

The medication categories are the same as the medication groups provided in the medications filter (except for some Mental Health Medications).

The data is displayed as:

- Prevalence per medication category as a percentage of this population in a bar chart

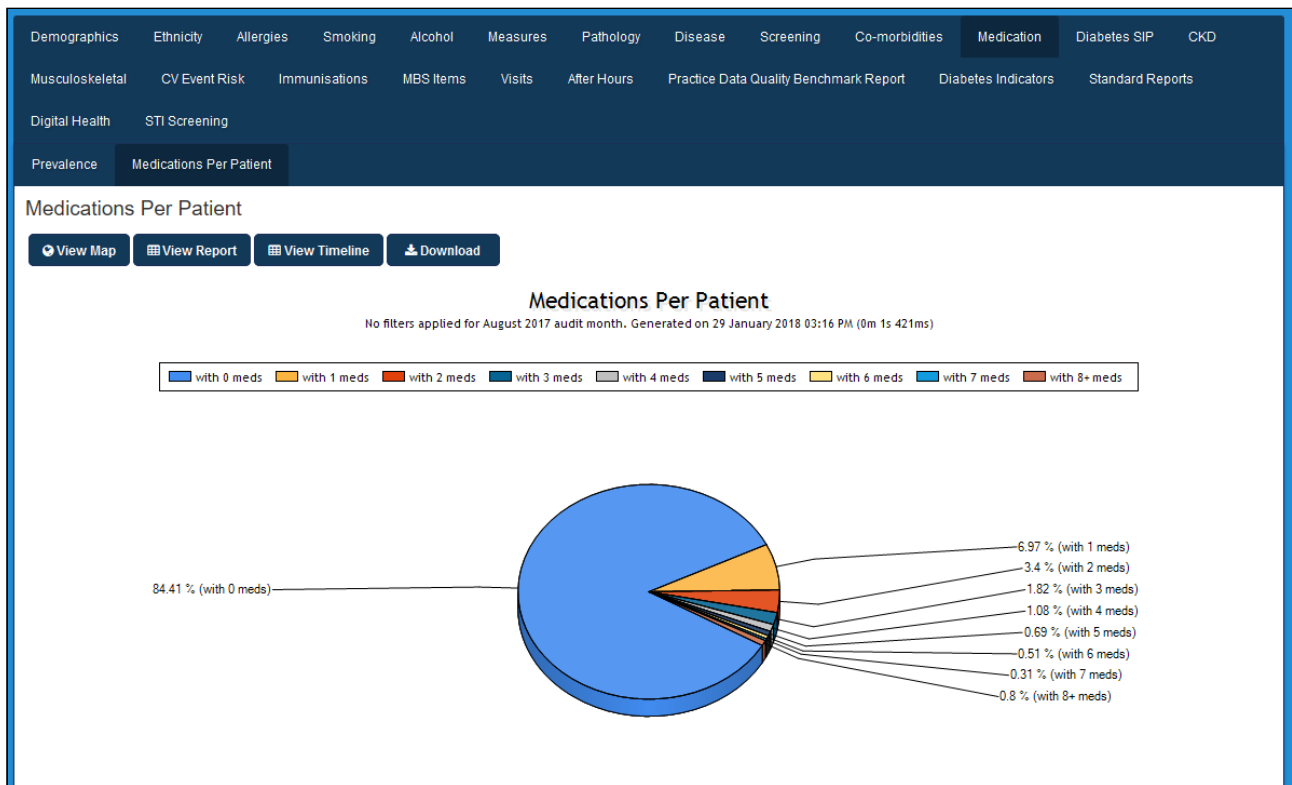
A bar is also provided on the chart for patients that have 'None of these' medications categories.



### Medication per Patient

This reports shows the percentage of patients with their current medications. The data is based on the information in the patient record as extracted by CAT4 - it's accuracy relies on the prescriber maintaining the current medication list. Only medications that have been removed from the current list are not shown in this report.





### 9.2.13 Diabetes SIP Items

The Diabetes SIP graph is not automatically filtered by the patients with Diabetes.

**To review your Diabetes SIP items you need to first filter on Condition = Diabetes.**

The filtering is not done automatically as some of the items may be of interest for the wider patient population eg. CHD patients who have not had a BP in the past 6 mths.

Diabetes SIP displays your data as a breakdown of diabetes care items:

- HbA1c,
- Eye Exam,
- BMI < 6mths, BMI 6-12 mths,
- P < 6mths, BP 6-12 mths,
- Foot Exam < 6mths, Foot Exam 6-12 mths,
- Cholesterol,
- Triglycerides,
- HDL,
- Microalbuminuria (Microalbumin and/or ACR)
- Smoking,
- eGFR

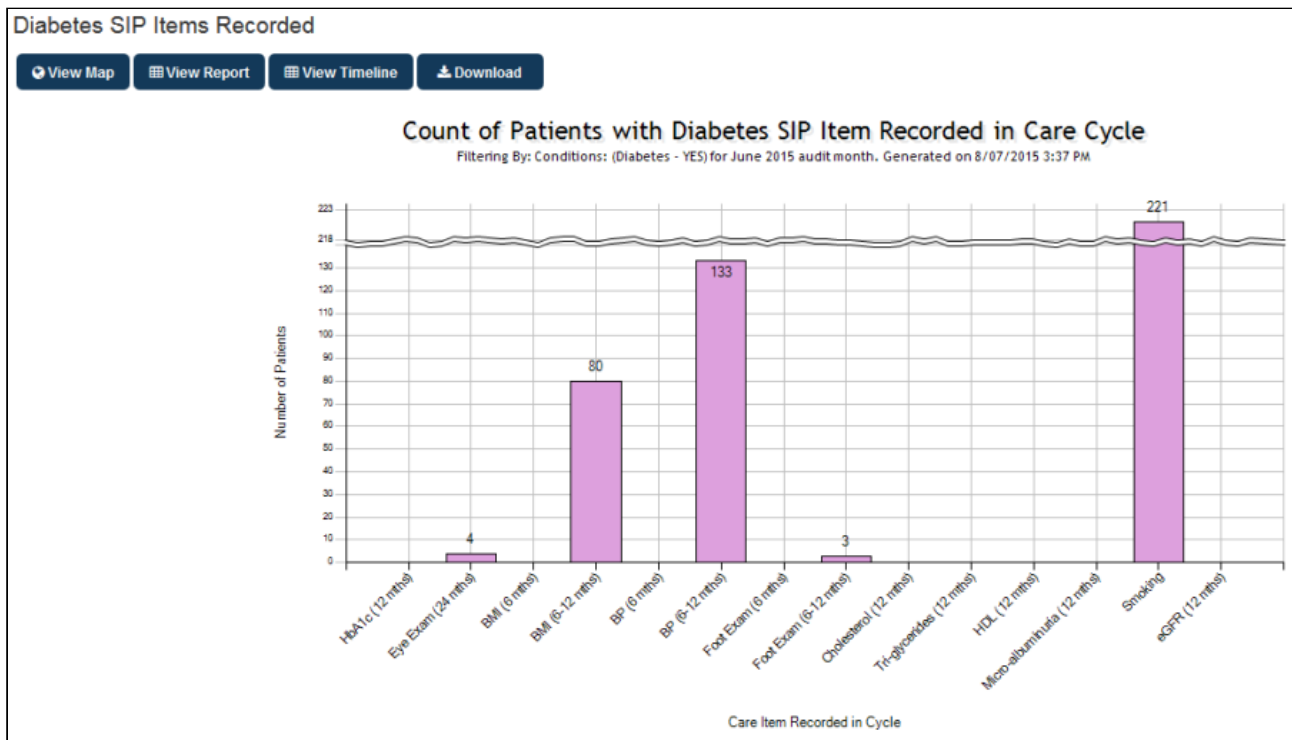


Figure 107: Diabetes SIP Item Chart

## 9.2.14 CKD

The Victorian Department of Health, the Victorian Renal Clinical Network, Kidney Health Australia and Western Health together with General Practice Victoria (GPV) have funded enhancements to support 1) the management of kidney disease patients and 2) early identification of 'at risk' kidney disease patients. The 'CKD' tab provides 2 graphs:

### CKD Management

This graph is designed to enable practices to manage their patients who have been diagnosed with CKD. It displays the status of the clinical items that need to be reviewed for these patients, allowing clinicians to follow up on items that are outstanding or not at target. The HbA1c status only applies to patients with a diagnosis of diabetes, regardless of diabetes type.

### CKD AT Risk

This graph is designed to enable practices to identify their patients who are at risk of CKD. It excludes patients who are already diagnosed with CKD. It displays the status of the CKD risk factors for patients who have one or more risk factors, allowing clinicians to recall patients with high risk levels or multiple risk factors.

More information about this graph is provided in the 'CKD Management and Risk Quick Reference Guide' available from [CAT CKD \(Chronic Kidney Disease\) Management and Risk Quick reference Guide](https://help.pencs.com.au/display/CG/CAT+CKD+%28Chronic+Kidney+Disease%29+Management+and+Risk+Quick+reference+Guide)<sup>29</sup>

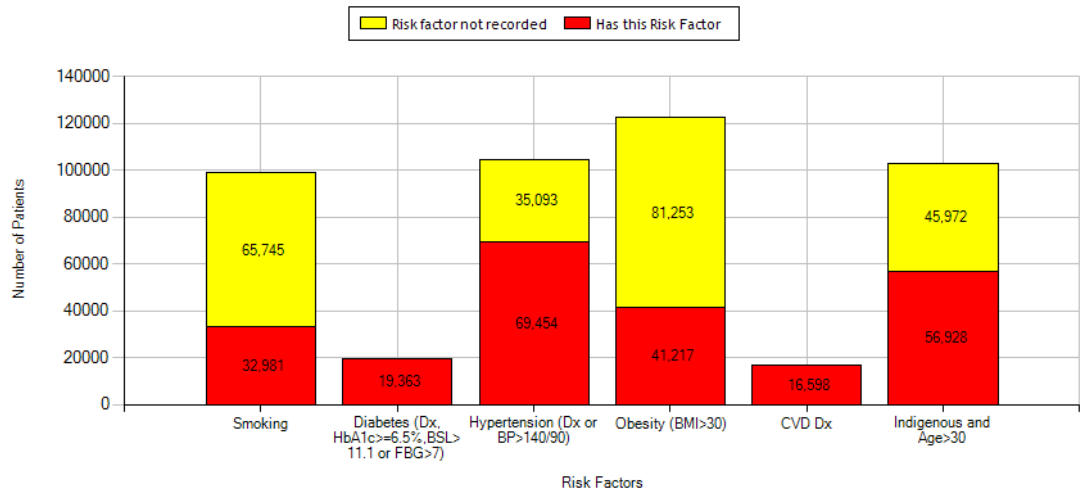
<sup>29</sup> <https://help.pencs.com.au/display/CG/CAT+CKD+%28Chronic+Kidney+Disease%29+Management+and+Risk+Quick+reference+Guide>

## CKD At Risk

View Map View Report View Timeline Download

### CKD At Risk [Target Population = 165,310]

No filters Applied for December 2015 audit month. Generated on 12/01/2016 11:44 AM



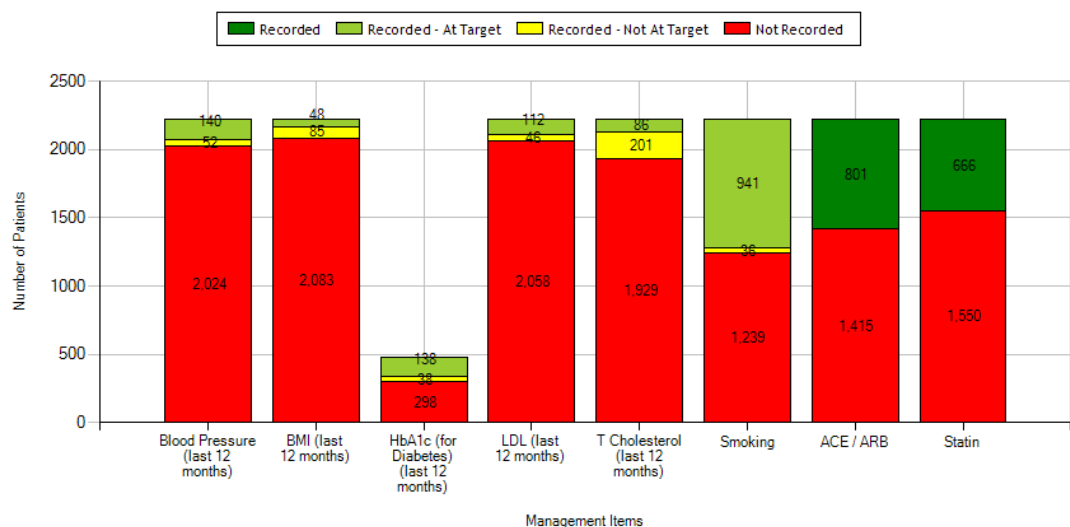
Target population is patients >= 15 years without a CKD diagnosis AND with one or more risk factors.  
Recommendations for early detection of CKD are available at <http://www.kidney.org.au>

## CKD Management

View Map View Report View Timeline Download

### CKD Management [Target Population = 2,216]

No filters Applied for December 2015 audit month. Generated on 12/01/2016 11:45 AM



Target population is patients >= 15 years with a CKD diagnosis and without a history of renal dialysis or kidney transplant

## 9.2.15 Musculoskeletal

The Musculoskeletal > Musculoskeletal Risk Factors graph provides a graph of 'Musculoskeletal Risk Factors'. These are:

Low BMI, Vitamin D deficiency, Smoking, High alcohol intake, Calcium deficiency, Fracture (minimal trauma), Chronic kidney disease, Multiple myeloma.

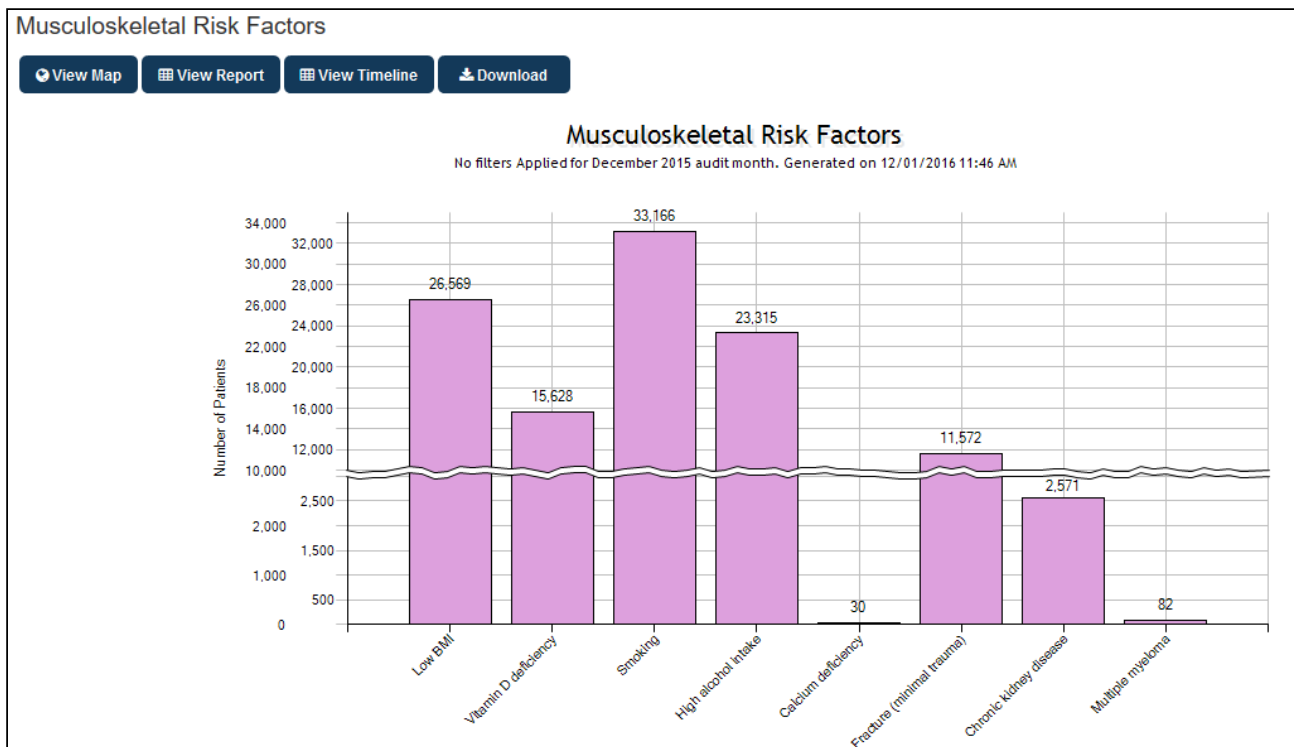


Figure 110: Musculoskeletal Risk Factors Chart

## 9.2.16 CV Event Risk

The CV Event Risk graph displays your data as the % risk of a Cardiovascular Event in 5 years time. It is a guide only based on population health statistics and is useful for clinicians to gain a high level view of patients who are at risk for surveillance.

It is derived from the publication "National Vascular Disease Prevention Alliance. Guidelines for the management of absolute cardiovascular disease risk. 2012" which is available from the websites of the members of the National Vascular Disease Prevention Alliance (Heart Foundation, National Stroke Foundation, Diabetes Australia and Kidney Health Australia).

### The Framingham Risk Equation (FRE)

The FRE predicts the risk of a cardiovascular event over the next 5 years. The calculation can be found in the Absolute CVD Risk Resources provided at the [www.cvdcheck.org.au](http://www.cvdcheck.org.au)<sup>30</sup> website.

The calculation excludes patients who have:

<sup>30</sup> <http://www.cvdcheck.org.au>

- Age: Non ATSI <45 or >74\*, ATSI <30 or >74\*
- Condition: CVD

\* Risk for patients who have age>74 is calculated using age=74.

The data items used in the calculation are:

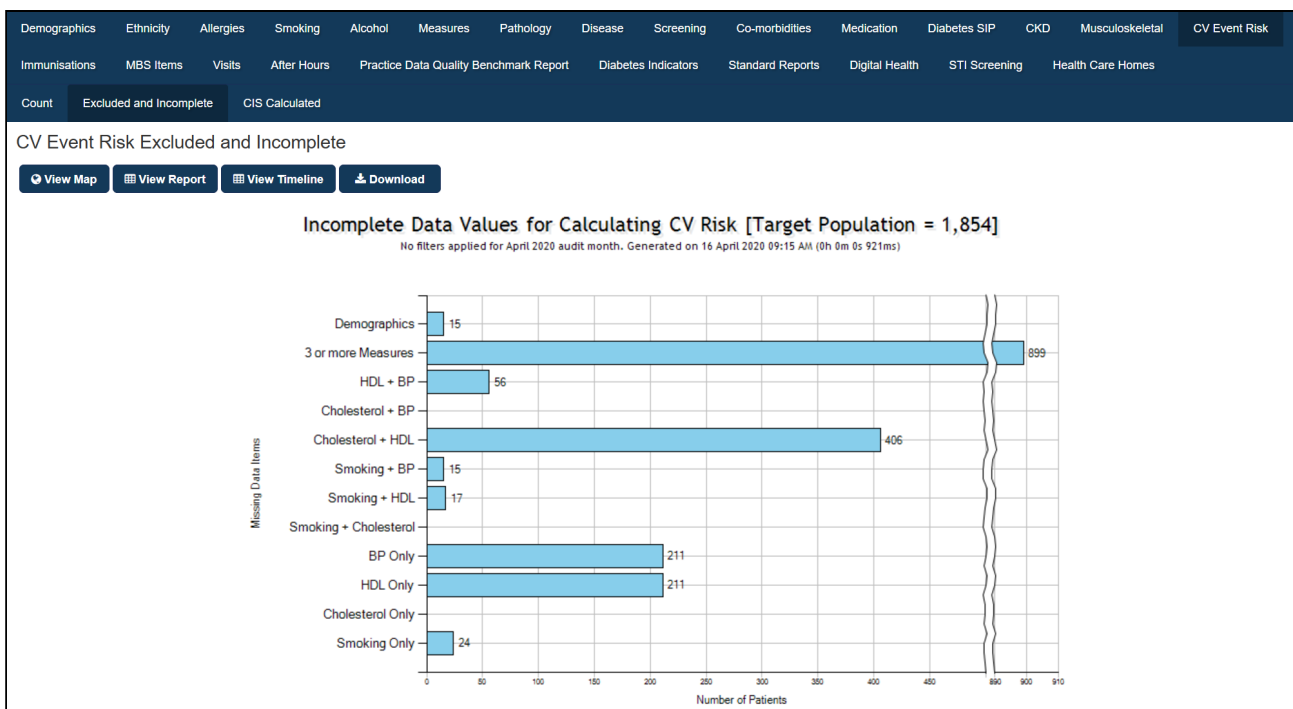
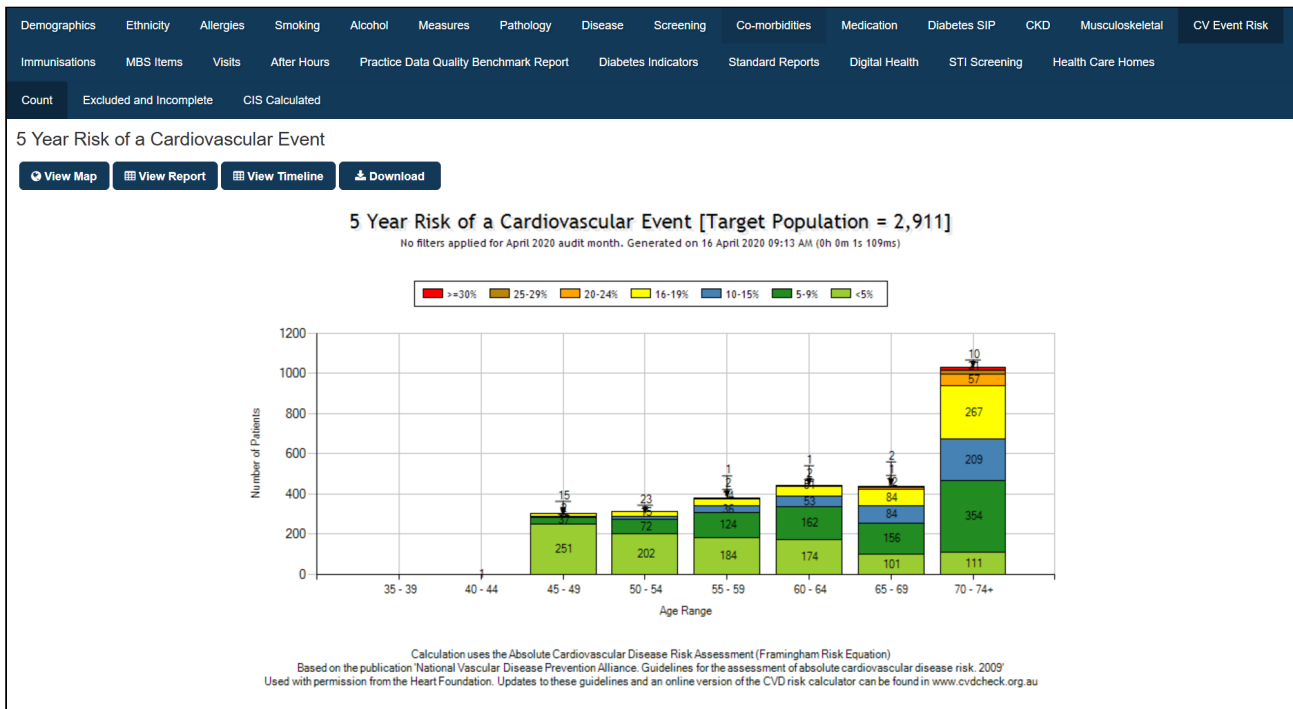
- Age
- Gender
- Systolic BP (mm Hg)
- Total Cholesterol (Mg/dL)
- HDL (Mg/dL)
- Smoking Status (Smoker/Non-smoker)
- Diabetes
- ECG-LVH (always set to 0) ECG-LVH: ECG (Electrocardiogram) is a test and LVH (Left Ventricular Hypertrophy) is a condition that is detected by this test. If LVH is detected as definite this value in the FRE is set to 1, otherwise it is set to 0. Currently the outcome of this test is not recorded as a coded value in the clinical software packages and therefore cannot be extracted. Hence, this value is always set to 0.

CV Event Risk displays your data as a breakdown of the % 5 Year Risk of a Cardiovascular Event: >=30%, 25-29%, 20-24%, 16-19%, 10-15%, 5-9% and <5%.

The data is displayed as count per age range in a bar chart. Chart functions available are as described for Demographics (Bar Chart).

The graph provides a total population number (the filtered population) and an eligible population number. The eligible population is the number of patients in your filtered dataset that can be assessed for risk ie. patients that do not fall into one of the excluded groups.

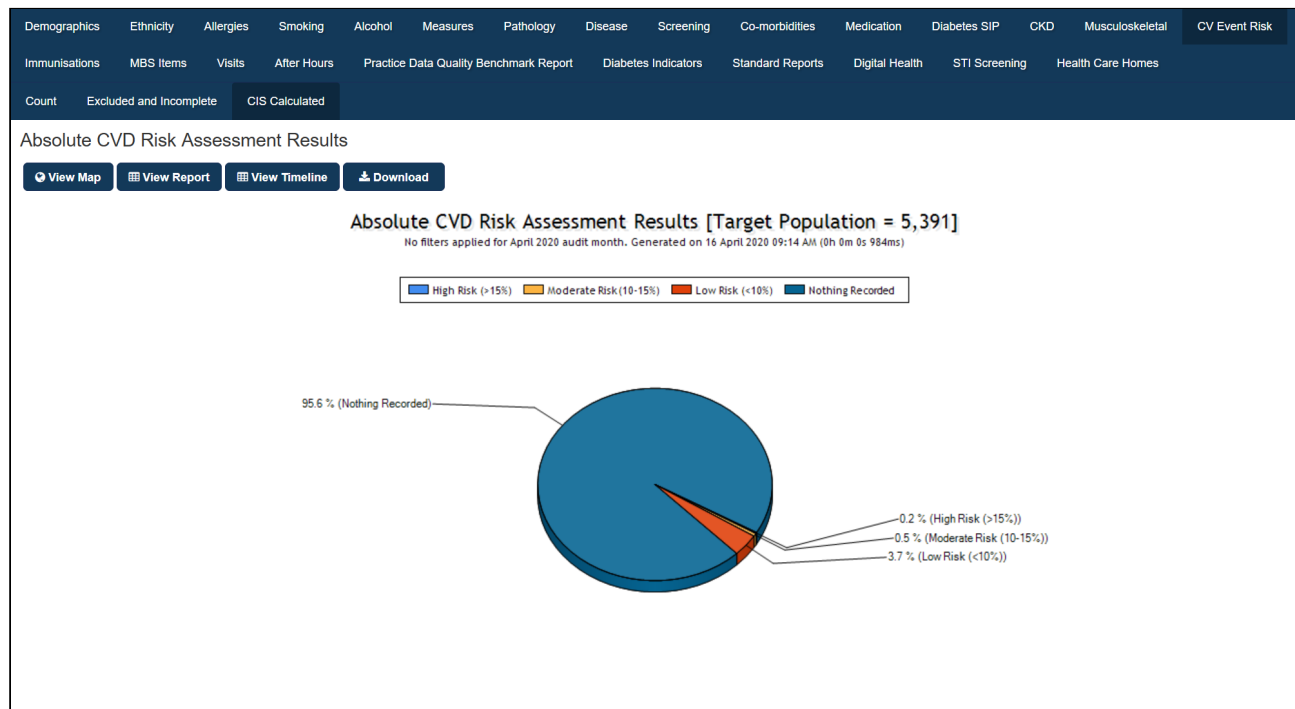
The 'Count' on the Count graph will show you the total of the patients graphed – this is the total number of patients where CV Event Risk has been able to be calculated. The eligible population – graph count = patients with incomplete data where no risk can be calculated. These patients are displayed on the second tab.



### 9.2.16.1 CIS Calculated CV Event Risk

This report shows the CV event risk calculated by the built in calculator in Medical Director Clinical and Best Practice Software. The report shows patients aged 35-74 with no diagnosis of cardiovascular disease as (details of conditions included are provided in [CAT4 Data Mapping](#)<sup>31</sup> on the condition mapping for each clinical system).

The report will show low, moderate and high risk as well as 'not recorded' and can be filtered for date range or any other filter.

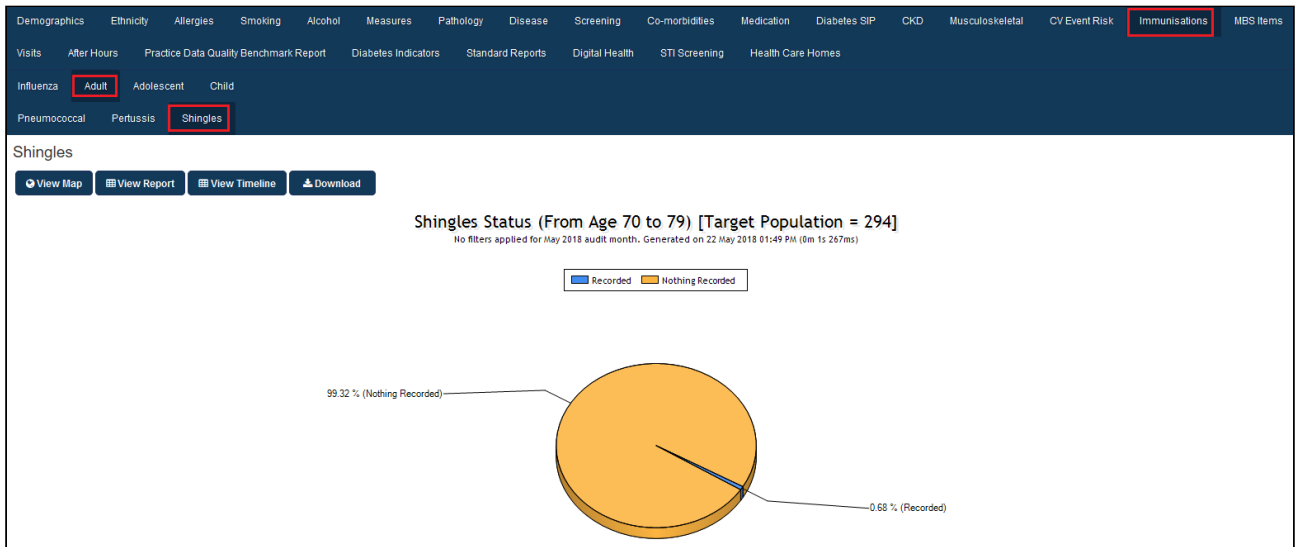


### 9.2.17 Immunisations

The Immunisations tab contains sub-tabs for Influenza, Pneumococcal at Risk, Adult immunisations (Pertussis and Shingles), Adolescent (HPV, DTP and VZV), Childhood Immunisations and COVID-19 vaccinations (general and at risk population). All charts are pie charts. For more information on immunisation reports please refer to the relevant CAT4 user guides, in particular the guide on Childhood Immunisation available at [CAT4 Immunisation Report Details](#)<sup>32</sup>

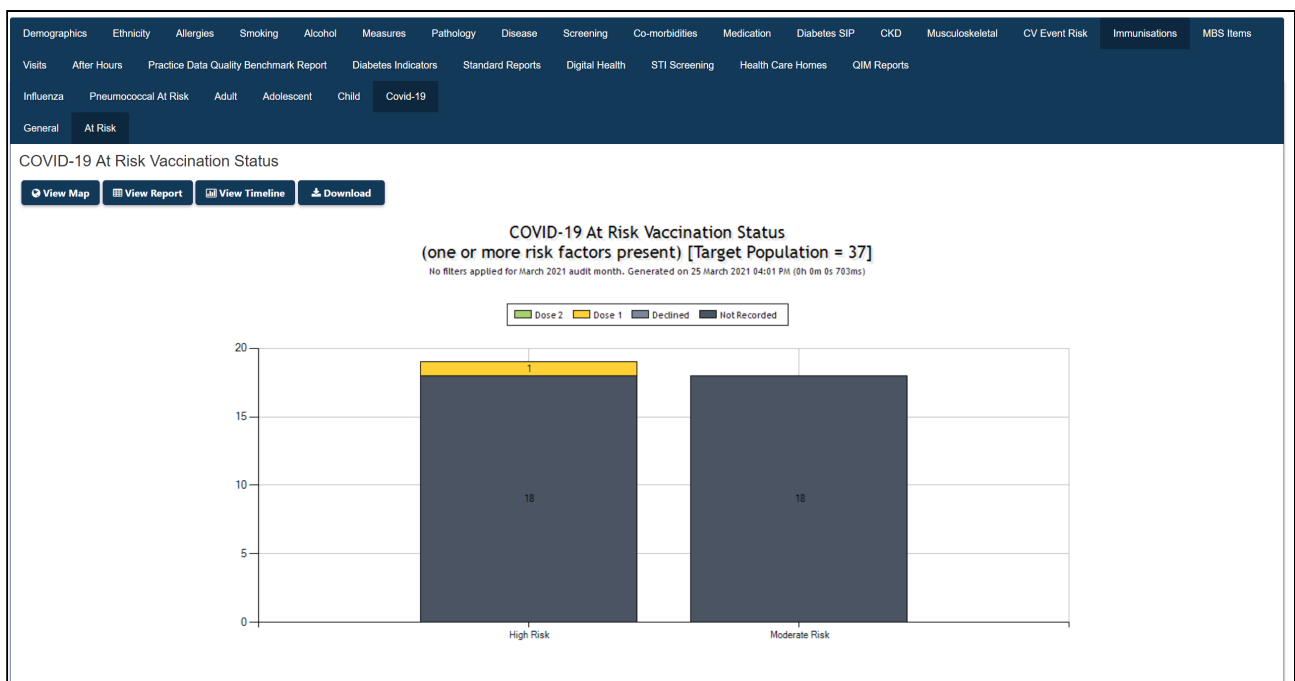
<sup>31</sup> <https://help.pencs.com.au/display/ADM>

<sup>32</sup> <https://help.pencs.com.au/display/CG/Immunisations>



All immunisation reports show the most recent date the vaccine was given or that none was given/recorded.

The most recent report added is showing COVID-19 vaccination for the general population (all patients) and at risk patients. For more details please see the related CAT4 report here: [COVID-19](https://help.pencs.com.au/display/CG/COVID-19)<sup>33</sup>



<sup>33</sup> <https://help.pencs.com.au/display/CG/COVID-19>



### 9.2.17.1 COVID-19 Vaccinations

The COVID-19 vaccination report has two tabs, one showing the general population and the other the at risk population at your practice.



With the latest update to the recommendations for the Astra Zeneca vaccine our report will need to be filtered to exclude anyone younger than 60 years, regardless of their underlying medical conditions. Please use the [general filter](#) (see page 141) to filter for patients aged 60 and older:

The screenshot shows the 'General' filter tab in the PATCAT interface. The 'Age' section is highlighted with a red box, indicating the filter for patients aged 60 and older. The 'Start Age' is set to 60 and the 'End Age' is also set to 60. Other filter options include Gender (Male, Female, Other), DVA (DVA, Non DVA), Health Cover (Medicare No., No), Last/First Visit (Any, None, <6 mths, <12 mths, <15 mths, <24 mths, <30 mths), Activity (Active (3x in 2yrs), Not Active), and Date Range (31 to 31). A 'Clear General' button is located at the bottom right.

#### General Tab

Currently we don't have any vaccination data in the report, so the only category is the 'not recorded'

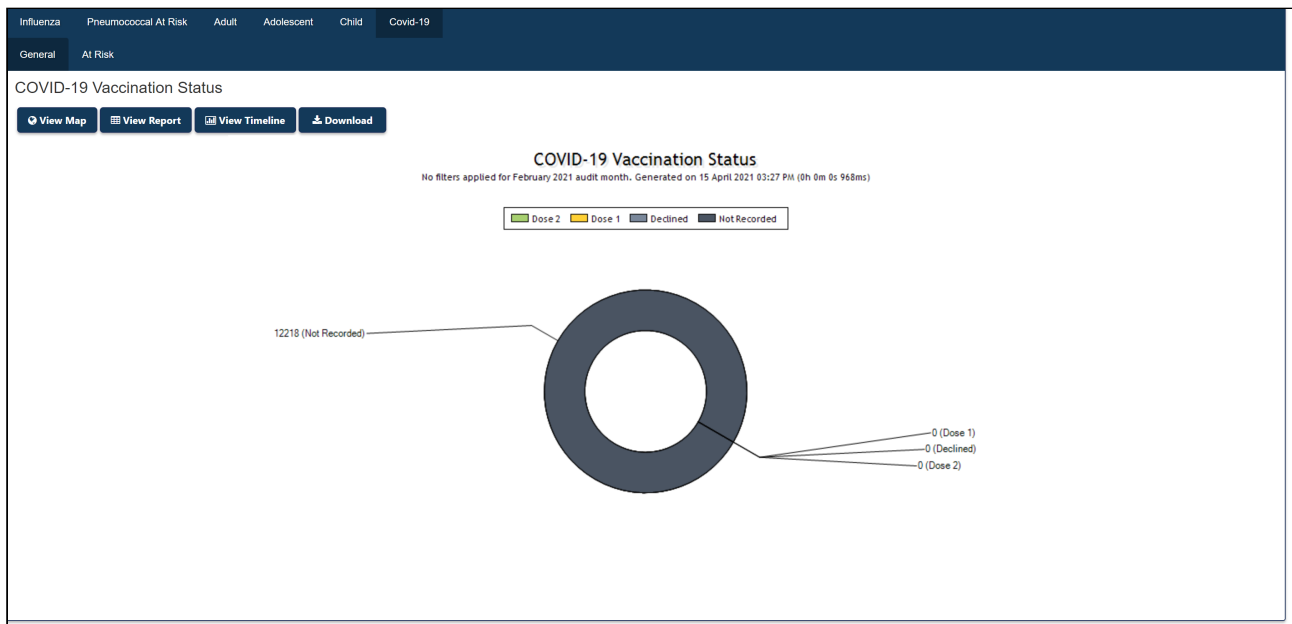
In the 'General' tab all patients are shown in a doughnut chart with the following disaggregation:

Dose 2 received - second dose received

Dose 1 received - first dose received

Declined - currently only available in Medical Director

Not Recorded - no vaccination recorded



### At Risk Tab

The 'At Risk' tab shows a bar chart with high risk and moderate risk patients. The risk is based on the following criteria as defined by the Department of Health:



While we have mapped a very large number of conditions to identify all at risk patients, due to time constraints and inconsistencies between the different clinical systems, some conditions were not included. These are:

- Some chronic inflammatory conditions and treatments (no specifications given by the DoH)
- poorly controlled blood pressure (due to CAT only extracting the most recent BP measurement and a lack of clarity in the available hypertension related diagnoses this was not mapped)

Please exercise your discretion as clinicians to ensure that all patients who are at risk are included in the vaccine allocation, as Pen CS can only provide a report that shows potentially at risk patients to the best of our ability.

Also note that the high/moderate risk criteria are not aligned with the roll-out schedule, as indigenous patients over 55 are not listed as high or moderate risk. To identify those patients for the 1b phase of the roll-out please use this recipe: [COVID-19 Vaccine 1b: Identify Indigenous patients over 55](https://help.pencs.com.au/display/CR/COVID-19+Vaccine+1b%3A+Identify+Indigenous+patients+over+55)<sup>34</sup>

Once in phase 2a, these recipes will enable you to find remaining indigenous and other patients for that phase of the rollout:

[COVID-19 Vaccine 2a: Identify Indigenous patients 18-54](https://help.pencs.com.au/display/CR/COVID-19+Vaccine+2a%3A+Identify+Indigenous+patients+18-54)<sup>35</sup>

[COVID-19 Vaccine 2a: Identify patients aged 50-69 years](https://help.pencs.com.au/display/CR/COVID-19+Vaccine+2a%3A+Identify+patients+aged+50-69+years)<sup>36</sup>

### Who is at high risk of severe illness

- are 70 years of age or over
- have had an organ transplant and are on immune suppressive therapy
- have had a bone marrow transplant in the last 24 months

<sup>34</sup> <https://help.pencs.com.au/display/CR/COVID-19+Vaccine+1b%3A+Identify+Indigenous+patients+over+55>

<sup>35</sup> <https://help.pencs.com.au/display/CR/COVID-19+Vaccine+2a%3A+Identify+Indigenous+patients+18-54>

<sup>36</sup> <https://help.pencs.com.au/display/CR/COVID-19+Vaccine+2a%3A+Identify+patients+aged+50-69+years>

- are on immune suppressive therapy for graft versus host disease
- have blood cancer eg leukaemia, lymphoma or myelodysplastic syndrome (diagnosed within the last 5 years)
- are having chemotherapy or radiotherapy.

### Who is at moderate risk of severe illness

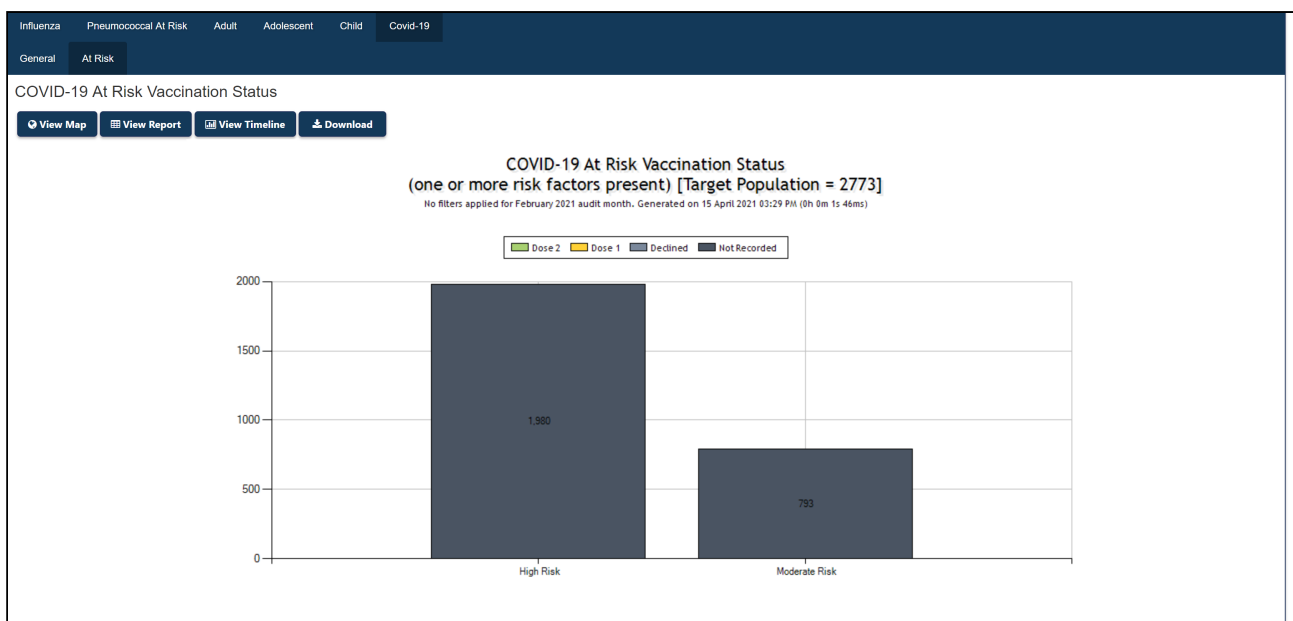
- chronic renal (kidney) failure
- heart disease (coronary heart disease or failure)
- chronic lung disease (excludes mild or moderate asthma)
- a non-haematological cancer (diagnosed in the last 12 months)
- diabetes
- severe obesity with a BMI  $\geq 40$  kg/m<sup>2</sup>
- chronic liver disease
- some neurological conditions (stroke, dementia, other) (speak to your doctor about your risk)
- other primary or acquired immunodeficiency (speak to your doctor about your risk)

In the 'At Risk' tab all patients are shown in a bar chart with the following disaggregation:

- High Risk
- Moderate Risk

Each bar has further information about the patients showing:

- Dose 2 received - second dose received
- Dose 1 received - first dose received
- Declined - currently only available in Medical Director
- Not Recorded - no vaccination recorded

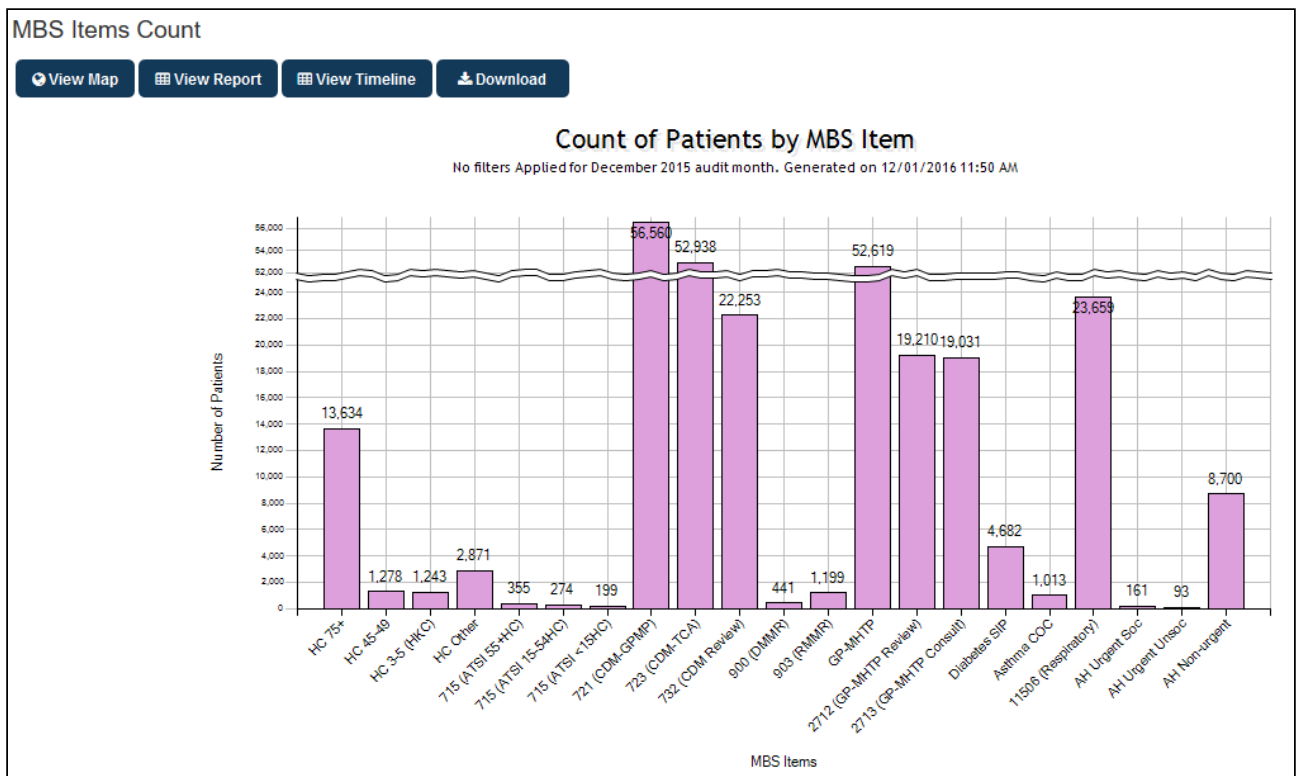


## 9.2.18 MBS Items

The graph provides information on a number of MBS items claimed by the practices. The data is displayed as a bar graph of:

- Count of MBS items recorded
- Count of MBS items not recorded

**NOTE:** You have to use the Results filter to find MBS items that have been billed in a specific time period.



### MBS Items

MBS Items currently collected are:

Old item numbers still collected

Health Assessment 75+ where Health Assessment includes item numbers: 701, 703, 705, 707, 224, 225, 226, 227	700 – 75+ Health Assessment 702 – 75+ Health Assessment (home)
Health Assessment 45-49 where Health Assessment includes item numbers: 701, 703, 705, 707, 224, 225, 226, 227	717 – 45-49 Health Assessment
Health Assessment Other where Health Assessment includes item numbers: 701, 703, 705, 707, 224, 225, 226, 227  This can cover a number of case where health assessments are performed for any of the following patient groups: <ul style="list-style-type: none"> <li>• a type 2 diabetes risk evaluation for people aged 40-49 years with a high risk of developing type 2 diabetes as determined by the Australian Type 2 Diabetes Risk Assessment Tool</li> <li>• a comprehensive medical assessment for permanent residents of residential aged care facilities</li> <li>• a health assessment for people with an intellectual disability</li> <li>• a health assessment for refugees and other humanitarian entrants</li> </ul>	
715, 228, 92004, 92016, 92011, 92023 (55+ Indigenous Health Assessment)	704/706 – 55+ AHC
715, 228, 92004, 92016, 92011, 92023 (15-54 Indigenous Health Assessment)	710 – 15-54 AHC
715, 228, 92004, 92016, 92011, 92023 (<15 Indigenous Health Assessment)	708 – CHC
721, 229, 92024, 92068, 92055, 92099 – CDM - GP Management Plan	
723, 230, 92025, 92069, 92056, 92100 – CDM - Team Care Arrangement	
732, 233, 92028, 92072, 92059, 92103 – CDM Review	725 – GP Management Plan Review 727 – Team Care Arrangement Review
10987 - PN/AHP review for indigenous patients	
10997 - PN/AHP review for patients with a chronic condition	

900, 245 – DMMR	
903, 249 – RMMR	
GP MH Care Plan – includes item numbers: 2700, 2701, 2715, 2717, 92112, 92124, 92113, 92125, 92116, 92128, 92117, 92129 272, 276, 277, 92118, 92130, 92119, 92131, 92120, 92132	2702 – GP MH Care Plan 2710 – GP MH Care Plan
2712, 92114, 92126 – GP MH Care Plan Review	
2713, 92115, 92127 – GP MH Care Consultation	
Diabetes SIP – includes item numbers: 2517, 2518, 2521, 2522, 2525, 2526, 2620, 2622, 2624, 2631, 2633, 2635, 259, 260, 261, 262, 263, 264	
Asthma COC – includes item numbers: 2546, 2547, 2552, 2553, 2558, 2559, 2664, 2666, 2668, 2673, 2675, 2677, 265, 266, 268, 269, 270, 271	
11506, 11503, 11505, 11507, 11508, 11512 - Respiratory	
AH Urgent Soc – includes items 597, 598	
AH Urgent Unsoc – includes items 599, 600	
AH Non-Urgent – includes items 5000, 5020, 5040, 5060, 5200, 5203, 5207, 5208 5003, 5010, 5023, 5028, 5043, 5049, 5063, 5067, 5220, 5223, 5227, 5228, 5260, 5263, 5265, 5267	
MP Telehealth at consulting room - includes items 2100, (attendance), 2126 (attendance < 20mins), 2143 (attendance > 20 mins), 2195 (attendance > 40 mins), 812, 829, 867, 873, 885, 892	

MP Telehealth not at consulting room - includes items 2122 (attendance), 2137 (attendance < 20mins), 2147 (attendance > 20 mins), 2199 (attendance > 40 mins), 827, 868, 869, 881, 891	
PN or AHW - includes items 10983 (attendance)	
PN or AHW at RACF - includes items 10984 (attendance)	
NP Telehealth - includes items 82221 (attendance > 20 mins), 82222 (attendance > 40 mins)	
NP Telehealth at RACF - includes items 82223 (attendance < 20mins), 82224 (attendance > 20 mins), 82225 (attendance > 40 mins)	
NP Consult - includes items 82200 (attendance), 82205 (attendance < 20mins), 82210 (attendance > 20 mins), 82215 (attendance > 40 mins) 91192, 91193, 91178, 91189, 91179, 91190, 91180, 91191	
Heart Health Check - includes item 699 or 177	
Covid-19 GP Telehealth items include 91790, 91800, 91801, 91802	
Covid-19 GP Telephone items include 91795, 91809, 91810, 91811	
Covid-19 Other Provider Telehealth items include 91792, 91803, 91804, 91805, 91806, 91807, 91808, 91794	
Covid-19 Other Provider Telephone items include 91797, 91812, 91813, 91814, 91815, 91816, 91817, 91799	
Covid-19 Other Provider Nurse Practitioners telehealth items include 91192, 91178, 91179, 91180, 91193, 91189, 91190, 91191	
Covid-19 Testing include 69485, 69494, 69495, 69496	

## Covid-19 Medication Assessment 93716, 93717

Some item numbers have a follow up item number attached. For example, patients who have had a 2710 (Mental Health Plan) should have a follow up 2712 (Review of Mental Health Plan). You are able to identify patients that have not had the follow up item number by using selecting item 2710 from the recorded tab and item 2712 from the not recorded tab and using the 'Report' button to do a cross-tabulation.

### 9.2.18.1 COVID-19 Vaccinations MBS Items

This report shows the COVID-19 vaccination suitability assessment MBS items and displays the information by dose (1 and 2) as well as vaccination status (vaccinated/not vaccinated). As the items can be claimed multiple times this report does not show patient numbers, but the number of items claimed as well as the total income generated from all items claimed.

The items mapped are:

- MBS items 93624, 93625, 93626, 93627, 93634, 93635, 93636, 93637, 10660 and 10661 are available to assess patients' suitability for the first dose of a COVID-19 vaccine dose
- MBS items 93644, 93645, 93646, 93647, 93653, 93654, 93655 and 93656 are available to assess patients' suitability for the second dose of a COVID-19 vaccine dose.

When the 'export' button is used to see patient details, the report will show only one row per patient with their complete MBS item list and vaccines (if applicable).

This is a new style of reports in CAT4 focusing on income generated for the practice and we hope that this information will be useful for your practice.



This report is not available to all PHNs as it requires consent of your clinics to share MBS items.





## 9.2.19 Visits

There are two reports under this tab – the Last Visit and the Contacts by OSR Worker Type.

The **Last Visits** tab shows a pie chart with the number of visits grouped by <6 months, 6 - <12 months, 12 - <15 months, 15 - <24 months, 24 - <30 months, 30 - <36 months, >= 36 months and Nothing Recorded.

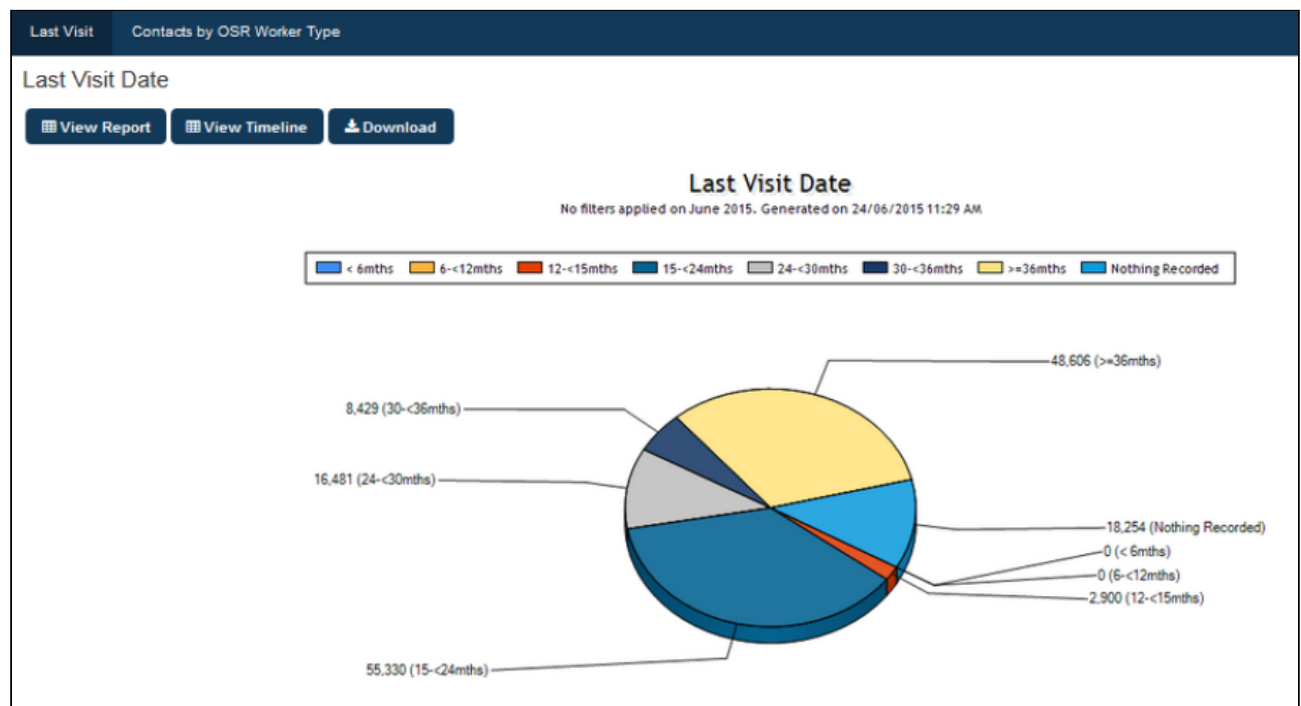


Figure 115: Last Visit Date Chart

The **Contacts by OSR Worker Type** shows the number of contacts (a contact is defined as a contact with a service provider and during a visit to a clinic multiple contacts are possible, e.g. a client is seen by a nurse and a doctor during a visit).

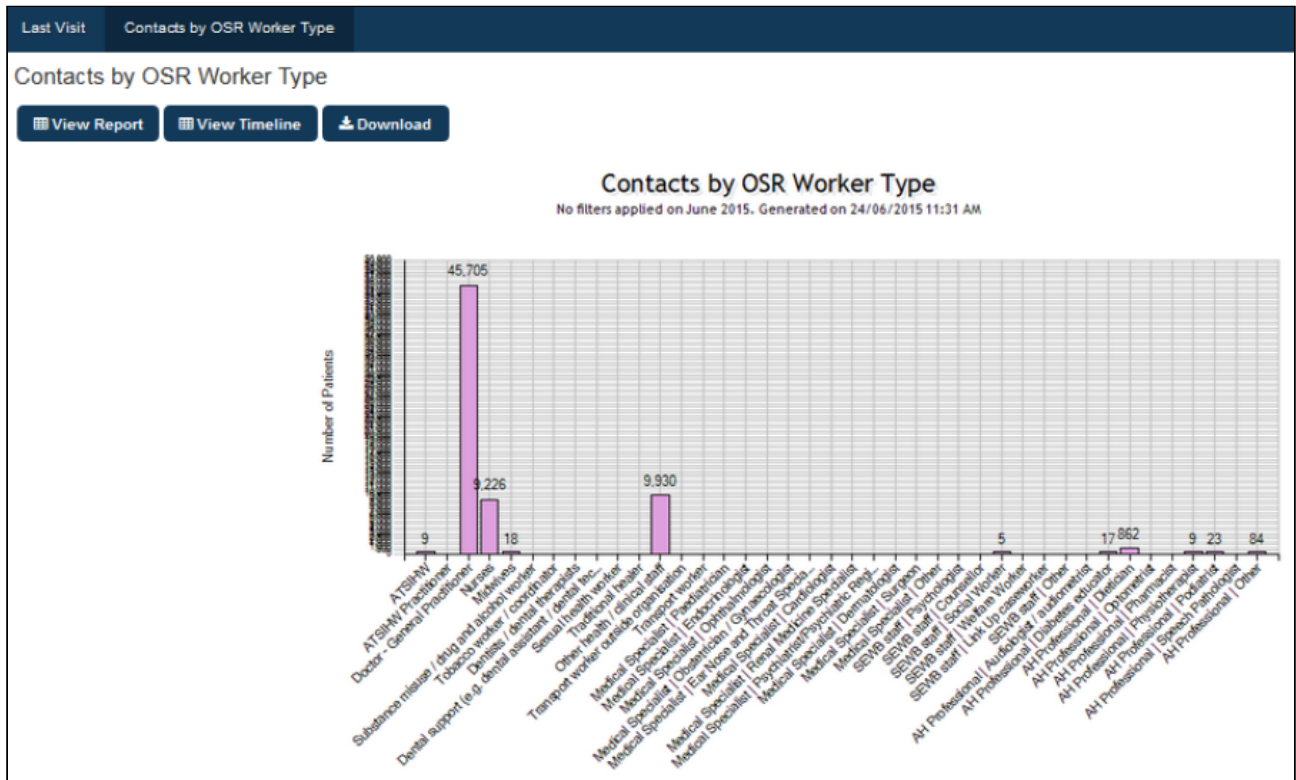


Figure 116: Contacts by OSR Worker Type

### 9.2.20 After Hours

After Hours Reporting provides a set of reports including age, gender, indigenous status, MBS items and reason for visit in a table. This report can be filtered using the results filter and the time used in the filter is displayed in the report as From and To Date. The graph shows after hour by MBS items claimed

***This report is not identical to the After Hours report module in CAT4 and is not designed to be reconciled with CAT4 After Hours reporting.***

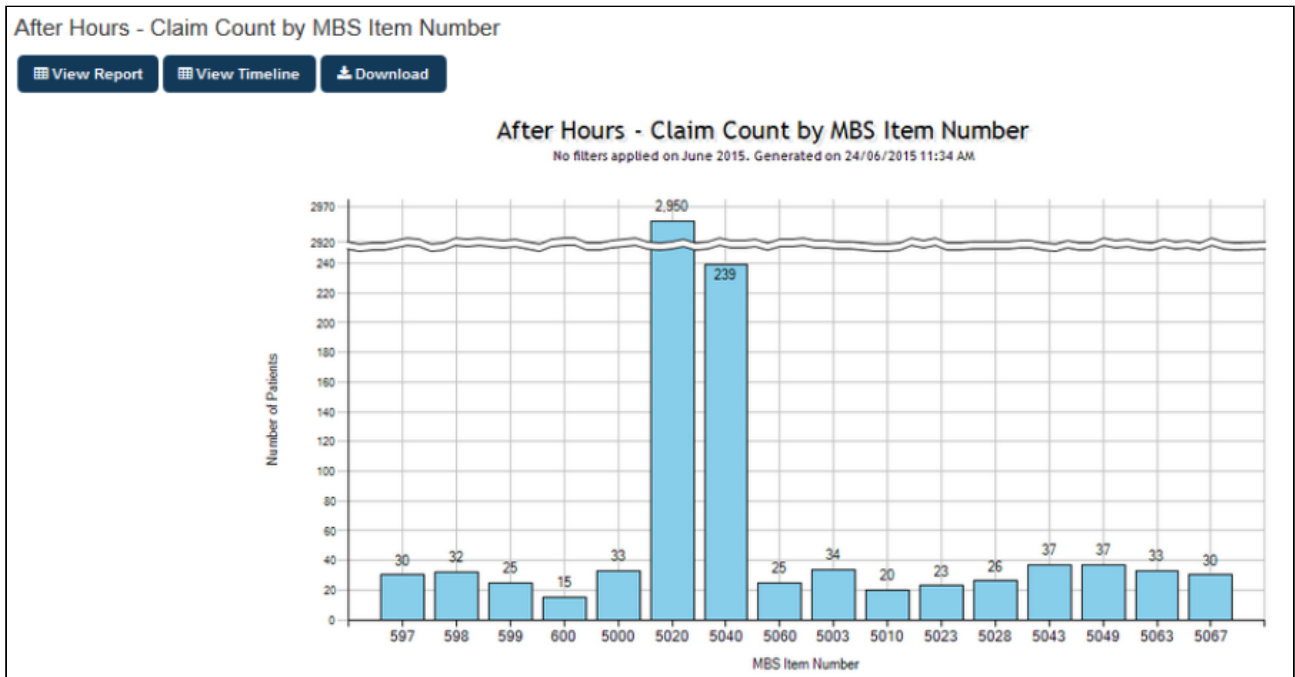


Figure 117: After Hours Report

Clicking on **View Report** will show data specific to After Hours Reporting with a break-down of the data by ethnicity, age, and other indicators:

After Hours - Claim Count by MBS Item Number											
▲ Show / Hide Columns											
No filters applied on June 2015. Generated on 24/06/2015 11:35 AM											
Measure	PENCS	PENCS %	Adjusted	Adjusted %	TGR	TGR %	GTCMC	GTCMC %	VGP	VGP %	GTCMC
Total Population	150,000		150,000		100,000		50,000		50,000		50,000
MBS Item 597	30	0.00 %	30	0.00 %	19	0.00 %	9	0.00 %	10	0.00 %	9
Male	30	100.00 %	30	100.00 %	19	100.00 %	9	100.00 %	10	100.00 %	9
Female	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
Aboriginal and Torres Strait Islander	16	53.33 %	16	53.33 %	10	52.63 %	5	55.56 %	5	50.00 %	5
Aboriginal	14	46.67 %	14	46.67 %	9	47.37 %	4	44.44 %	5	50.00 %	4
Torres Strait Islander	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
Non Indigenous	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
0-14	16	53.33 %	16	53.33 %	10	52.63 %	5	55.56 %	5	50.00 %	5
15-24	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
25-34	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
35-44	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
45-54	14	46.67 %	14	46.67 %	9	47.37 %	4	44.44 %	5	50.00 %	4
55-64	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
65+	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
MBS Item 598	32	0.00 %	32	0.00 %	23	0.00 %	12	0.00 %	11	0.00 %	12
Male	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
Female	32	100.00 %	32	100.00 %	23	100.00 %	12	100.00 %	11	100.00 %	12
Aboriginal and Torres Strait Islander	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0
Aboriginal	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %	0

Figure 118: After Hours Report View Data

### 9.2.21 Pap Smear Summary Report

This report card shows results for pap smears for the uploaded data. It automatically filters for female patients only and shows the data stratified by age group and visit frequency. There are four main built-in report headings:

- Total Female Population (Last Visit < 36 months)
- Not Pregnant - Active Female Population (3x visits in last 2 years)
- Pregnant - Active Female Population (3x visits in last 2 years)
- Total (Pregnant/Not Pregnant) - Active Female Population (3x visits in last 2 years)

Each of these show the age group of the patients, the time passed since the last recorded Pap smear and the number of patients without a recorded pap smear. This report can be further refined by using the PAT CAT filters.

### 9.2.22 Practice Data Quality Benchmark

This report shows information about patient population and data quality. The indicators in the report are listed below and are shown in numbers and percent. Below is an example of the complete report – please note the individual headers showing the different areas of reporting.

All information displayed in this report is extracted from the clinical system and some indicators are aggregated/processed after the upload to PAT CAT.

The 'Pensioner' count is based on the patient record in the clinical system and is not reported in CAT4, only in PAT CAT. This count is based on any patient with any of the following cards recorded in the clinical system:

- Pensioner Concession Card
- Health Care Card
- Commonwealth seniors Health Card

This report responds to filters, but the filters will affect indicators differently. Here is a full list of filters and what they do to this report:

The filters below remove patients from the report - if patient doesn't meet filter criteria, they are dropped:

General

Practice (extract wide)

Ethnicity

Conditions

Medications

*Patient Status \*(from version 3.3)*

The **Results** filter moves patients to a different category, such as 'not recorded' if the patient's results is outside the specified date range.

Since the Practice data quality report is a mix of categories, only some categories are affected by the Results filter.

The following categories are affected by the Results filter:

BMI Recorded

Waist Measurement Recorded

Eligible Females age 18-70 (status not marked as Ineligible)

No Pap Recorded

Pap Test Recorded

Ineligible

Number of patients with Diabetes - HbA1c Recorded

Number of patients with Diabetes - Cholesterol Recorded

Number of patients with Diabetes - Blood Pressure Recorded

Number of patients with Diabetes - Waist Recorded

Number of patients with CHD - Blood Pressure Recorded

Number of patients with CHD – Cholesterol Recorded

**Measure**

**PENCS**

**PENCS %**

**Adjusted**

**Adjusted %**

**GTCMC**

**GTCMC %**

Total Population

150,000

150,000

50,000

Active

53,178

35.45 %

53,178

35.45 %

17,645

35.29 %

Inactive

96,822

64.55 %

96,822

64.55 %

32,355

64.71 %

Pensioners

23,371

15.58 %

23,371

15.58 %

7,792

15.58 %

DVA Patients

999

0.67 %

999

0.67 %

334

0.67 %

Allergy Status Recorded

90,276

60.18 %

90,276

60.18 %

30,058

60.12 %

Smoking Status Recorded

69,573

46.38 %

69,573

46.38 %

23,133

46.27 %

Patients >= 18 years with Alcohol consumption recorded

24,826

16.55 %

24,826

16.55 %

8,249

16.50 %

BMI Recorded

30,654

20.44 %

30,654

20.44 %

10,181

20.36 %

Waist Measurement Recorded

3,980

2.65 %

3,980

2.65 %

1,315

2.63 %

CV Risk

14,235

9.49 %

14,235

9.49 %

4,696

9.39 %

Total Female Population

82,462

54.97 %

82,462

54.97 %

27,435

54.87 %

Eligible Female age 18-70 (status not marked as Ineligible)

60,953

73.92 %

60,953

73.92 %

20,273

73.89 %

No Pap Test Recorded

63,484

76.99 %

63,484

76.99 %

21,134

77.03 %

Pap Test Recorded

19,813



24.03 %
19,813
24.03 %
6,585
24.00 %
Ineligible
3,420
4.15 %
3,420
4.15 %
1,133
4.13 %
Diagnosis Count
535,940
100.00 %
535,940
100.00 %
178,169
100.00 %
Number of diagnosis that are coded
433,266
80.84 %
433,266
80.84 %
144,069
80.86 %
Number of diagnosis that are uncoded
102,674
19.16 %
102,674
19.16 %
34,100
19.14 %
Number of patients with Diabetes
4,026

2.68 %

4,026

2.68 %

1,351

2.70 %

HbA1c Recorded

2,832

70.34 %

2,832

70.34 %

951

70.39 %

Cholesterol Recorded

2,544

63.19 %

2,544

63.19 %

854

63.21 %

Blood Pressure Recorded

3,167

78.66 %

3,167

78.66 %

1,065

78.83 %

Waist Recorded

988

24.54 %

988

24.54 %

325

24.06 %

Smoking Status Recorded

2,937

72.95 %

2,937

72.95 %

987

73.06 %

Number of patients with CHD

3,692

2.46 %

3,692

2.46 %

1,240

2.48 %

Blood Pressure Recorded

2,053

55.61 %

2,053

55.61 %

687

55.40 %

Cholesterol Recorded

1,903

51.54 %

1,903

51.54 %

638

51.45 %

Smoking Status Recorded

2,060

55.80 %

2,060

55.80 %

687

55.40 %

Patients on 5 or more medications

15,127

10.08 %

15,127

10.08 %

5,028

10.06 %

Patients with a Mental Health diagnosis (excluding Degenerative and Development conditions)

9,191

6.13 %

9,191

6.13 %

3,070

6.14 %

Patients in age range of 75+ years

8,284

5.52 %

8,284

5.52 %

2,767

5.53 %

Patients in age range of 45 to 49 years

11,407

7.60 %

11,407

7.60 %

3,814

7.63 %

Patients in age range of 42 to 60 months

3,382

2.25 %

3,382

2.25 %

1,127

2.25 %

### 9.2.23 Diabetes Indicators

This reports summarises a large number of indicators related to reporting on diabetes and other chronic conditions. The report shows pathology results, MBS items, co-morbidities, ethnicity, visit counts and other measurements for **patients with diabetes** only. This report can be used for key indicators reporting and other purposes.

### 9.2.24 Standard Reports

This report shows a number of aggregated reports; the National Key Performance Indicator (NKPI) report, the QAIHC report and the Online Service Reporting (OSR) report. These are mainly used by community controlled health services for their reporting, but can be used by any PAT CAT user. Please refer to the QRGs for each report for full details – available at [help.pencs.com.au/cat.htm](http://help.pencs.com.au/cat.htm)<sup>37</sup>

Standard reports in PAT CAT can be filtered. This is not always required but for the NKPI report archived patients should be included and deceased patients (as of 2018) should be excluded. Use the [Patient status](#)(see page 94) filter to only look at the patients of interest.

### 9.2.25 Digital Health

The Digital Health tab provides a number of graphs showing information about My Health Record and Shared Health Summaries. All information displayed in CAT4 is based on the data stored in the clinical systems. MD3, BP and Zedmed can display the documents that were sent to the My Health Record under the PCEHR menu and/or the Letters tab. In a patient's record the IHI and My Health Record status is listed under the patient details.

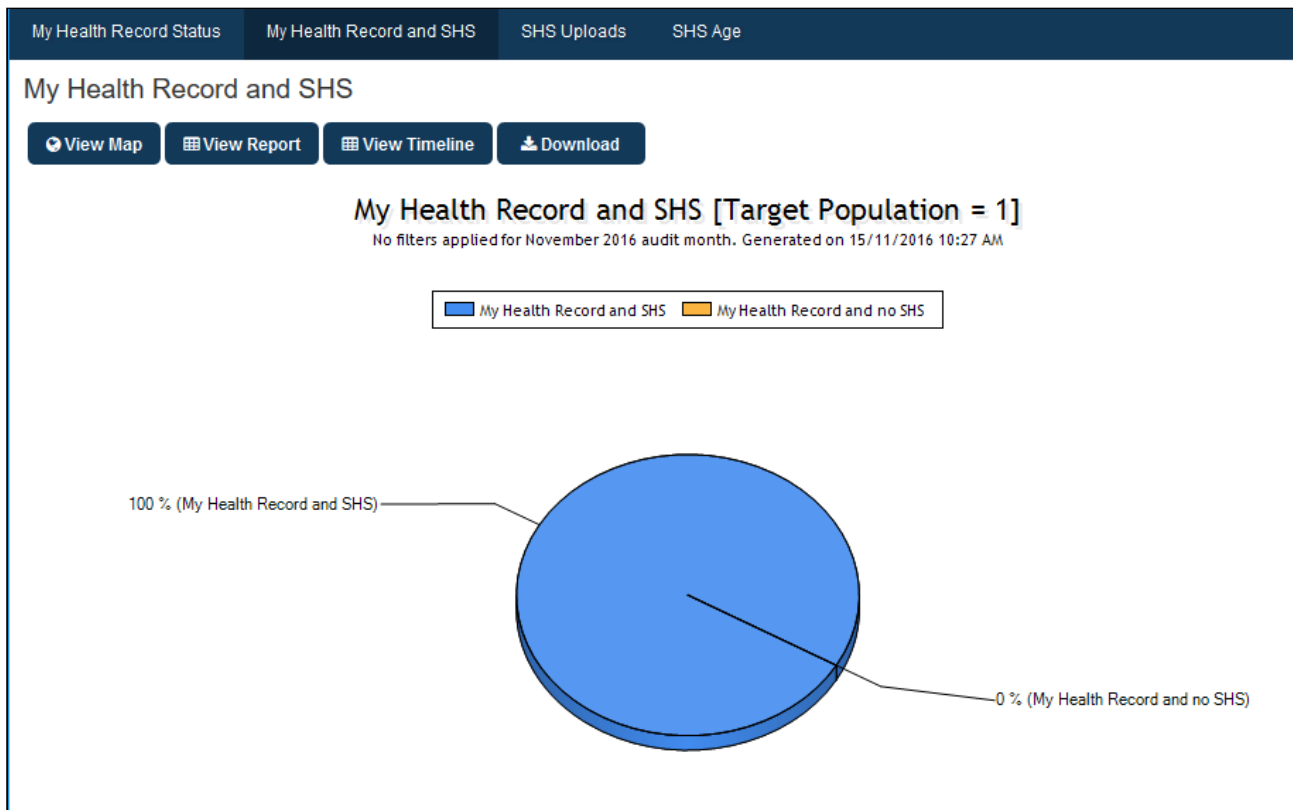
- [My Health Record and SHS](#)(see page 161)
- [My Health Record Status](#)(see page 162)
- [SHS Uploads](#)(see page 163)
- [SHS Age](#)(see page 164)

#### 9.2.25.1 My Health Record and SHS

This graph will show patients that have a My Health Record (the number will match that on the My Health Record Status graph) and, of that group, patients that have a Shared Health Summary (SHS). The Date Range (Results) filter can be used to find SHS's that have been last uploaded in a timeframe.

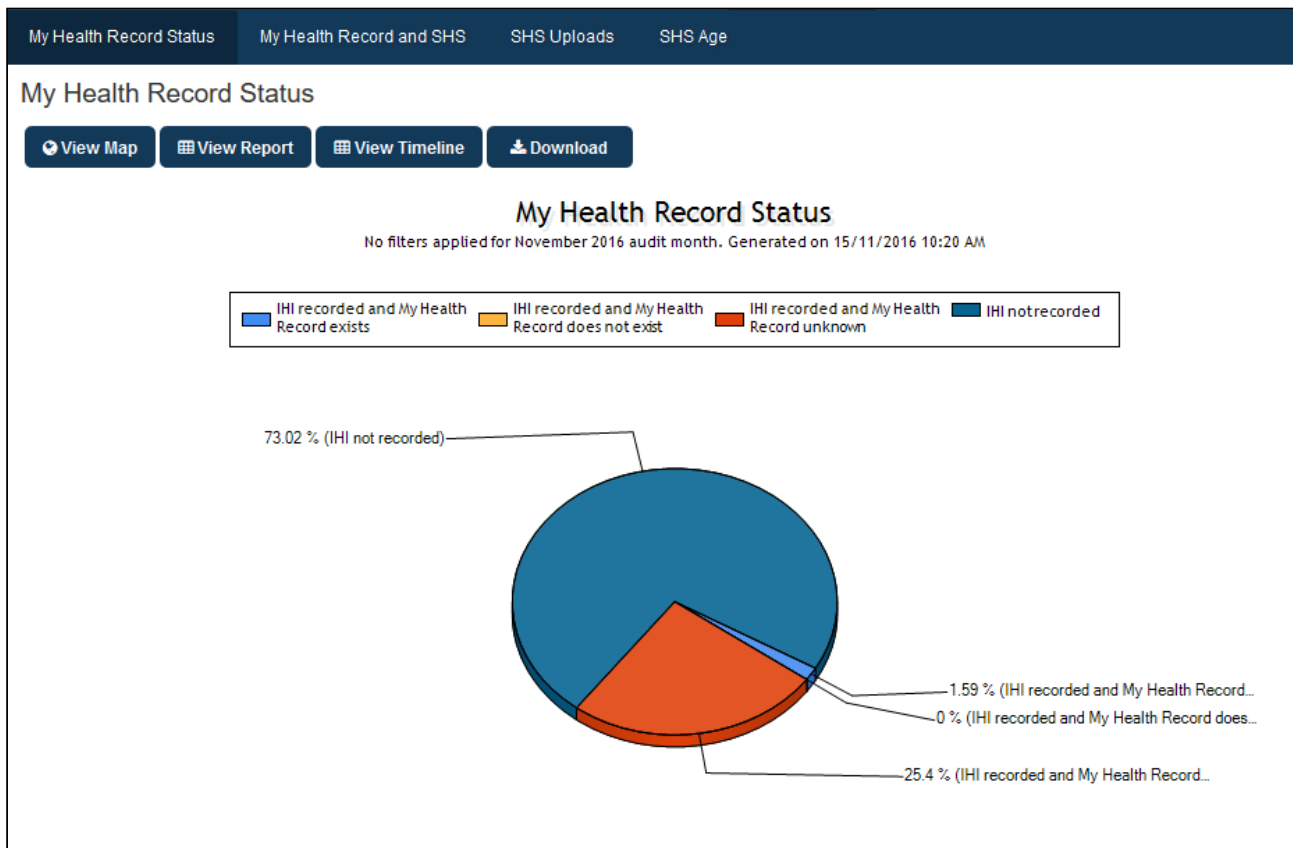
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<sup>37</sup> <http://help.pencs.com.au/cat.htm>



#### 9.2.25.2 My Health Record Status

This graph will show patients that have an IHI recorded and, of that group, patients that the clinical system has detected have a My Health Record.



IHI not recorded = no IHI has been recorded for this patient

IHI recorded and My Health Record exists = Patient has an IHI and a My Health Record has been set up either by or for the patient

IHI recorded and My Health Record does not exist = Patient has an IHI but no My Health Record has been setup

IHI recorded and My Health Record unknown = Patient has an IHI but the clinical system has not been able to establish if the My Health Record exists. This applies in particular to BP, as BP does NOT update the status automatically when the record is opened, instead it requires the user to manually check for the MHR status. This explains the high number of patients with IHS but unknown MHR status for BP users.

### 9.2.25.3 SHS Uploads

This graph will show patients that have a SHS (the number will match that on the My Health Record and SHS graph) and, of that group, the number of times the SHS has been uploaded.

The Date Range (Results) filter can be used to find SHS's that have been last uploaded in a timeframe and will display the number of times in that timeframe.

Patients will only appear in the 'no SHS upload' category if their last upload date is outside the date range selected. If there is no date range filter applied this category will be empty.

#### 9.2.25.4 SHS Age

This graph will show patients that have a SHS (the number will match that on the My Health Record and SHS graph) and, of that group, the age of the SHS. The age is calculated using the last upload date. The graph breaks down the data by the following criteria:

- < 1 month
- 1 - < 2 months
- 2 - < 3 months
- 2 - < 6 months
- >= 6 months

#### 9.2.26 STI Screening PAT CAT

The Sexual Health module is an initiative of the National Aboriginal Community Controlled Health Organisation (NACCHO). Its aim is to measure the amount of STI screening and re-screening that is done by health services. The module reports on STI screening for all patients as well as screening during pregnancy. To show the target population of interest you can apply the appropriate filters, for example age or gender filters, but any other filter can be used in addition if required.

The reports show the age group of the patients in a bar chart with predefined age groups.

It is based on guidelines from the "National Guide to a Preventative Health Assessment for Aboriginal and Torres Strait Islander People" produced by the Royal Australian College of General Practitioners and NACCHO.

##### Screening

The module provides graphs to display the amount of screening for the following STI/BBV's:

<ul style="list-style-type: none"> <li>• Chlamydia</li> <li>• Gonorrhoea</li> <li>• Trichomoniasis</li> <li>• Syphilis</li> </ul>	<ul style="list-style-type: none"> <li>• Hepatitis B</li> <li>• Hepatitis C</li> <li>• HIV</li> </ul>
---	---

##### 9.2.26.1 Pathology Results

Screening for STI/BBV's is through pathology testing. The pathology labs send back a variety of test names and some test names cover more than one test.

**A list of the pathology test names used by CAT4 to identify a test for each STI/BBV is provided here:** [Appendix Pathology Result Names](#)<sup>38</sup>.

##### Notes:

Some labs send back Gonorrhoea and Trichomoniasis results under test names that have the main label of "Chlamydia" (in various forms). The effect of this mislabelling by the pathology company is that the graphs will show an under reporting of Gonorrhoea and Trichomoniasis screening.

<sup>38</sup> <http://help.pencs.com.au/display/CG/Appendix+Pathology+Result+Names>



### 9.2.26.2 STI Screening Graphs PAT CAT

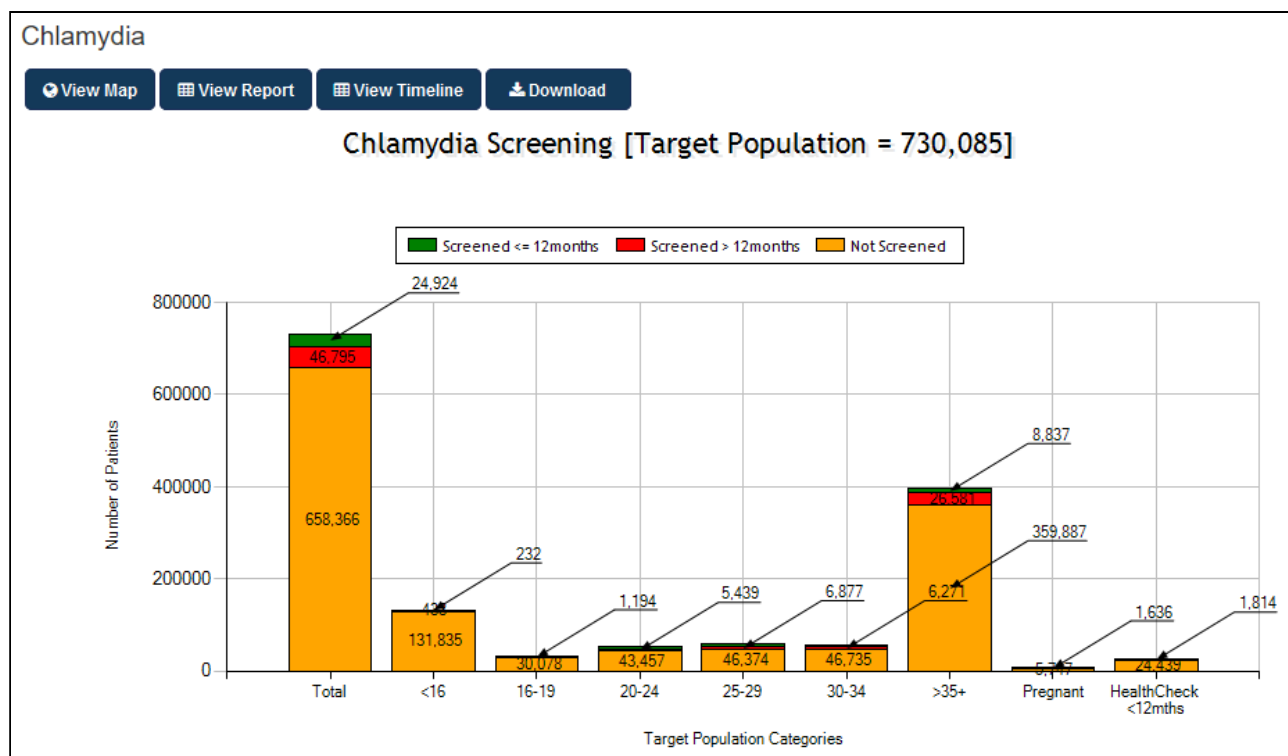
Chlamydia, Gonorrhoea, Trichomoniasis

The Screening graphs for Chlamydia, Gonorrhoea and Trichomoniasis display the % patients screened. It can be filtered using the standard filters in CAT4 to display the target population of interest and will show a breakdown by age groups. Practices without relevant data are listed below the graph and are excluded from the report.

Each graph provides a breakdown by

- Age ranges
- Screened in the last 12 months
- Screened more than 12 months ago
- Pregnant
- Patients with a Health Check in the last 12 months

Example graph for Chlamydia below:



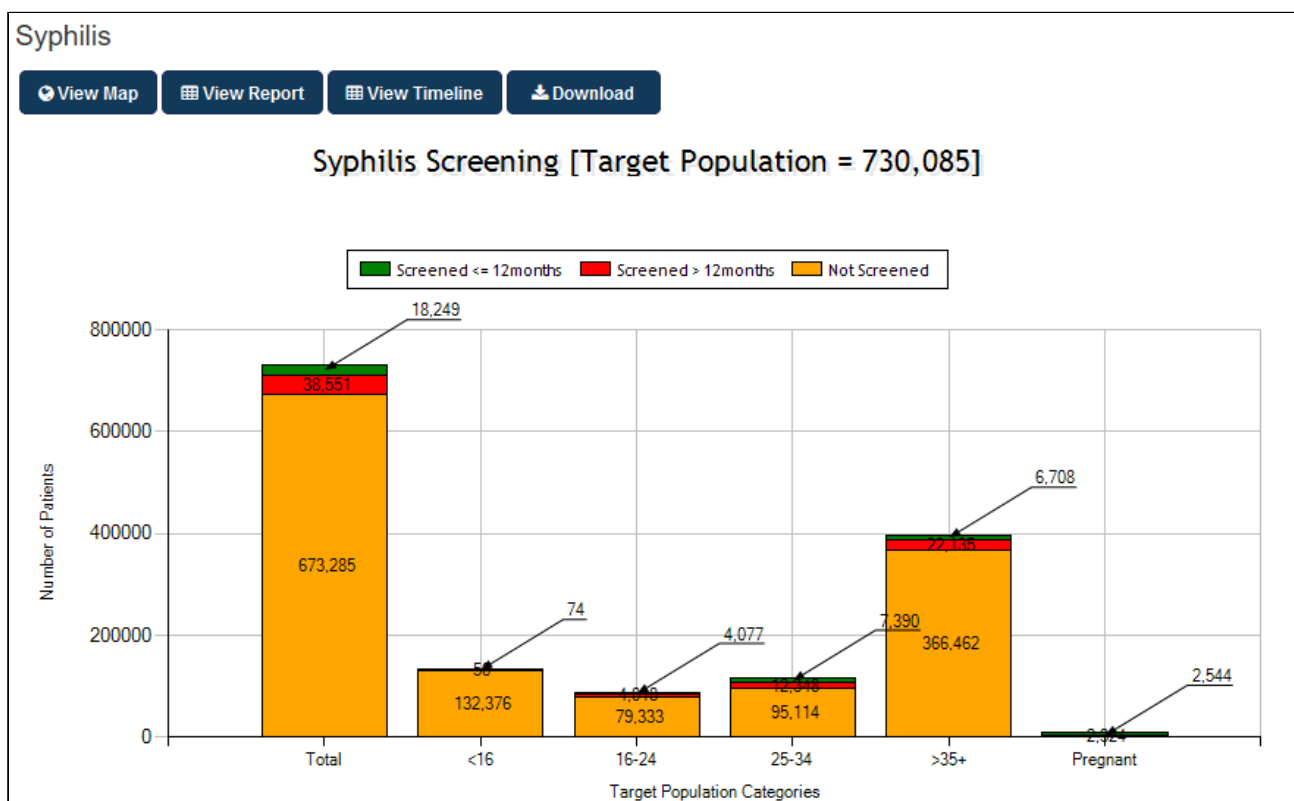
Syphilis, HepB, HepC and HIV

The Screening graphs for Syphilis, HepB, HepC and HIV display the % patients screened. It can be filtered using the standard filters in CAT4 to display the target population of interest and will show a breakdown by age groups.

Each graph provides a breakdown by

- Age ranges
- Screened in the last 12 months
- Screened more than 12 months ago
- Positive STI screening > [this BBV/STI only] follow up
  - where there is a positive test for chlamydia/gonorrhoea/trich, the number of patients then screened for this BBV/STI
- Pregnant

Example graph for Syphilis below:



## 9.2.27 QIM Reports

This reports shows the Quality Improvement Measures as defined in the context of PIP QI 2020. The report show the data in the format specified by the AIHW and **is available only for PHNs who don't hold a PIP QI Essential or Professional licence**. If your PHN has one of these PIP QI licences, you will have to switch to the PIP QI view to see the AIHW report as detailed here: [AIHW Report in PAT CAT](#)<sup>39</sup>

The reports cover the following QIMs:

1. QIM01 Diabetes: Proportion of patients with diabetes with a current HbA1c result
2. QIM02a Smoking: Proportion of patients whose smoking status has been recorded
3. QIM02b Smoking: Proportion of patients with a smoking status result
4. QIM03a Proportion of patients with a weight classification recorded

<sup>39</sup> <https://help.pencs.com.au/display/ds/AIHW+Report+in+PAT+CAT>

5. QIM03b BMI: Proportion of patients with a weight classification
6. QIM04 Influenza 65years: Proportion of patients aged 65 and over who were immunised against influenza
7. QIM05 Influenza Diabetes: Proportion of patients with diabetes who were immunised against influenza in the previous 15 months
8. QIM06 Influenza COPD: Proportion of patients with COPD who were immunised against influenza in the previous 15 months
9. QIM07 Alcohol: Proportion of patients with an alcohol consumption status
10. QIM08 CVD: Proportion of patients with the necessary risk factors assessed to enable CVD assessment
11. QIM09 Cervical: Proportion of female patients with an up-to-date cervical screening
12. QIM10 Diabetes BP: Proportion of patients with diabetes with a blood pressure result in the previous 6 months



Each report shows the data for all practices (to show only PIP QI enrolled practices, you will have to use the [Practices filter](#)(see page 87) - we recommend to use the [grouping](#) (see page 29)in that filter to make it easy).

Here is an example of the report format:

Demographics	Ethnicity	Allergies	Smoking	Alcohol	Measures	Pathology	Disease	Screening	Co-morbidities	Medication	Diabetes SIP	CKD	Musculoskeletal	CV Event Risk
Immunisations	MBS Items	Visits	After Hours	Practice Data Quality Benchmark Report	Diabetes Indicators	Standard Reports	Digital Health	STI Screening	Health Care Homes	QIM Reports				
QIM01 Diabetes	QIM02a Smoking	QIM02b Smoking	QIM03a BMI	QIM03b BMI	QIM04 Influenza 65years	QIM05 Influenza Diabetes	QIM06 Influenza COPD	QIM07 Alcohol	QIM08 CVD	QIM09 Cervical				
QIM10 Diabetes BP														
QIM01 Diabetes: Proportion of patients with diabetes with a current HbA1c result														
<a href="#">Download</a>														
No filters applied for September 2020 audit month. Generated on 30 September 2020 09:38 AM														
MALE			0-4YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
MALE			5-14YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
MALE			15-24YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
MALE			25-34YR	NON-INDIGENOUS	T2DM	RECORDED	0	2	0.00 %	0				
MALE			35-44YR	NON-INDIGENOUS	T2DM	RECORDED	5	6	83.33 %	0				
MALE			45-54YR	NON-INDIGENOUS	T2DM	RECORDED	18	26	69.23 %	0				
MALE			55-64YR	NON-INDIGENOUS	T2DM	RECORDED	28	38	73.68 %	0				
MALE			65ANDOVER	NON-INDIGENOUS	T2DM	RECORDED	101	135	74.81 %	0				
FEMALE			0-4YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
FEMALE			5-14YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
FEMALE			15-24YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
FEMALE			25-34YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
FEMALE			35-44YR	NON-INDIGENOUS	T2DM	RECORDED	4	8	50.00 %	0				
FEMALE			45-54YR	NON-INDIGENOUS	T2DM	RECORDED	9	18	50.00 %	0				
FEMALE			55-64YR	NON-INDIGENOUS	T2DM	RECORDED	25	38	65.79 %	0				
FEMALE			65ANDOVER	NON-INDIGENOUS	T2DM	RECORDED	118	148	79.73 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			0-4YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			5-14YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			15-24YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			25-34YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			35-44YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			45-54YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			55-64YR	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				
INDETERMINATE/INTERSEX/UNSPECIFIED/NOT STATED/INADEQUATELY DESCRIBED			65ANDOVER	NON-INDIGENOUS	T2DM	RECORDED	0	0	0.00 %	0				

## 10 CLEANSING PAT

Cleansing PAT provides reports based on the algorithms used in the Cleansing View in CAT4 and shows the information in an aggregated way to allow reporting on data completeness and coding for all clinics providing their de-identified data.

Similar to CAT4 the PAT CAT Reports and Cleansing PAT icons can be used to switch between the different views. The light blue colour indicates which view is currently active.

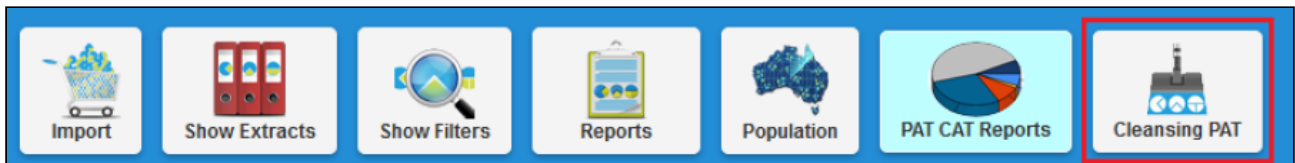
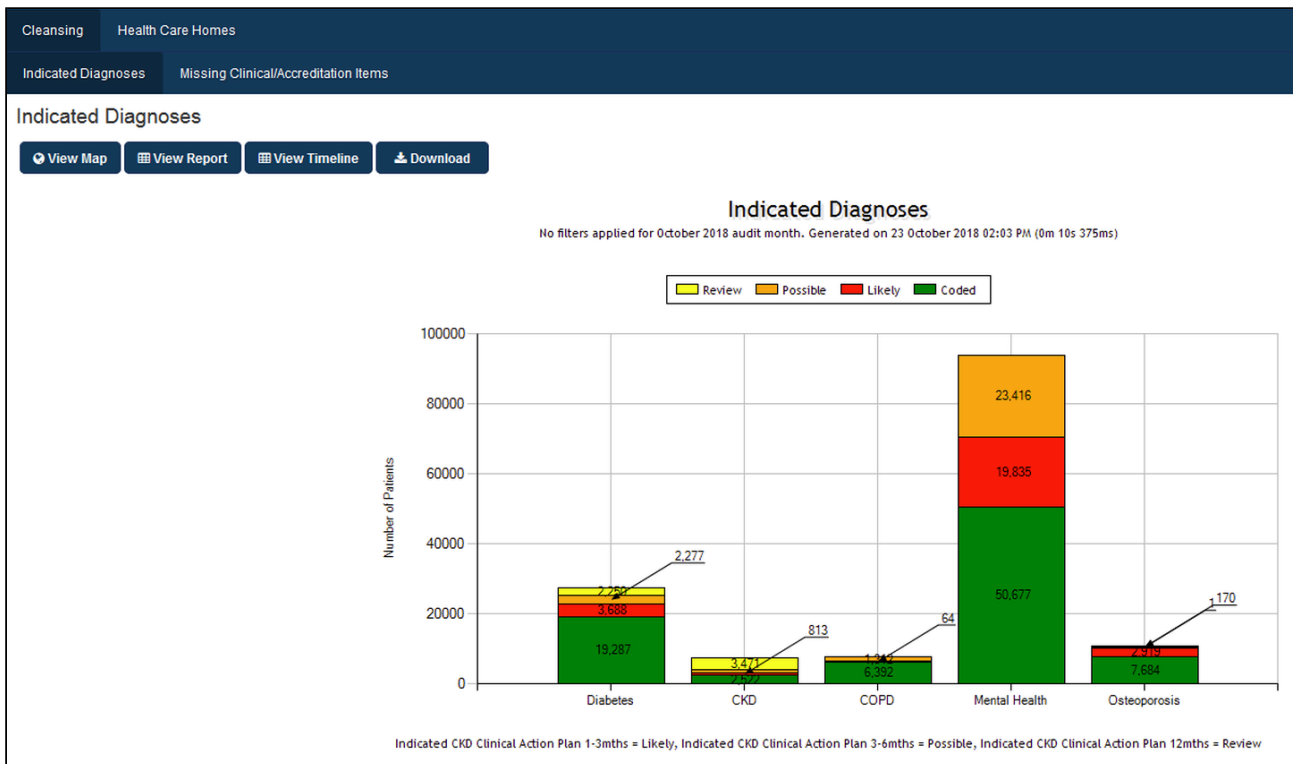


Figure 119: Cleansing CAT Icon

Currently there are two reports available in Cleansing PAT – Indicated Diagnoses and Missing Clinical/Accreditation Items.

### 10.1 Indicated Diagnoses Report

This report shows the aggregated figures for the numbers of coded versus indicated chronic conditions diabetes, chronic kidney disease (CKD), COPD and Mental Health. The data displayed is based on the CAT4 Cleansing View reports – for full details please refer to the CAT4 Cleansing guide available at [Indicated Conditions Report Details](https://help.pencs.com.au/display/CG/Indicated+Conditions+Report+Details)<sup>40</sup>



<sup>40</sup> <https://help.pencs.com.au/display/CG/Indicated+Conditions+Report+Details>

This report allows a quick view of the number of patients with one or more of the indicated chronic conditions without a coded diagnosis. As in all PAT CAT reports the 'View Report' button will display the detailed numbers and percentages for the aggregated total and for each individual clinic.

⚠ Please note that for compatibility reasons PAT CAT currently is only using Tiotropium as medication indication for COPD - this will be updated to match the expanded medication list used in CAT4 soon.

Indicated Diagnoses								
▲ Show / Hide Columns								
No filters applied for June 2015 audit month. Generated on 9/07/2015 8:43 AM								
Measure	PENCS	PENCS %	Adjusted	Adjusted %	GTCMC	GTCMC %	VGP	VGP %
Total Population	10,296		10,296		5,734		59	
Coded Diabetes	304	2.95 %	304	2.95 %	154	2.69 %	25	42.37 %
Type 1	35	0.34 %	35	0.34 %	19	0.33 %	2	3.39 %
Type 2	215	2.09 %	215	2.09 %	106	1.85 %	24	40.68 %
Undefined	61	0.59 %	61	0.59 %	32	0.56 %	0	0.00 %
Indicated Diabetes with no diagnosis	129	1.25 %	129	1.25 %	61	1.06 %	4	6.78 %
Likely	59	45.74 %	59	45.74 %	25	40.98 %	4	100.00 %
Possible	48	37.21 %	48	37.21 %	23	37.70 %	0	0.00 %
Review	22	17.05 %	22	17.05 %	13	21.31 %	0	0.00 %
Coded CKD	32	0.31 %	32	0.31 %	19	0.33 %	1	1.69 %
Stage 1	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %
Stage 2	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %
Stage 3a	0	0.00 %	0	0.00 %	0	0.00 %	0	0.00 %
Stage 3b	4	12.50 %	4	12.50 %	2	10.53 %	0	0.00 %

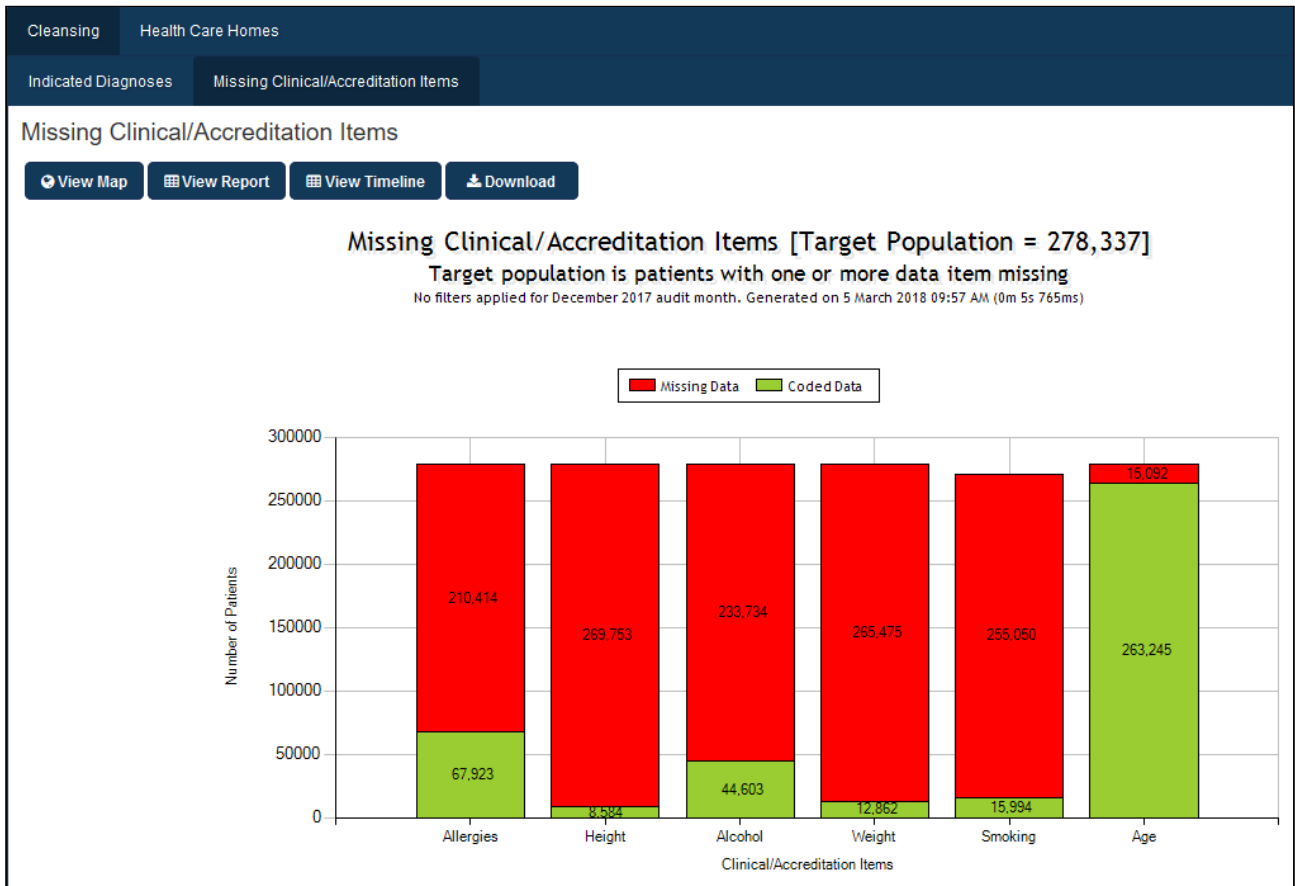
## 10.2 Missing Clinical and Accreditation Items Report

This report checks the following items in line with the Cleansing View reports in CAT4:

- Allergies
- Height
- Weight
- Smoking
- Alcohol

As the data in PAT CAT is de-identified no reports on missing address, contact details or other personal information is available. The 'View Report' button will display the detailed numbers and percentages for each indicator and clinic.

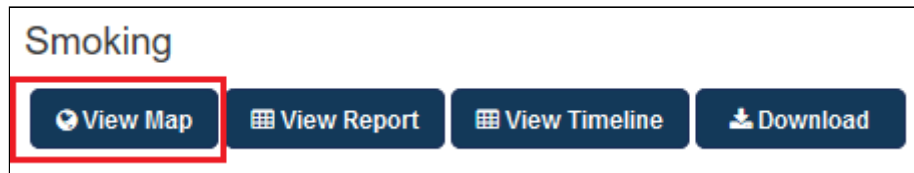
⚠ Please note that the target population is defined as any patient with at least one of the items reported on missing from their record.



## 11 VIEW MAP FUNCTION

View Map is a feature that allows the user to overlay PAT CAT aggregated data on a geographical map using a variety of pre-set geographical boundaries. This module will open in a new window which can be resized by using your mouse.

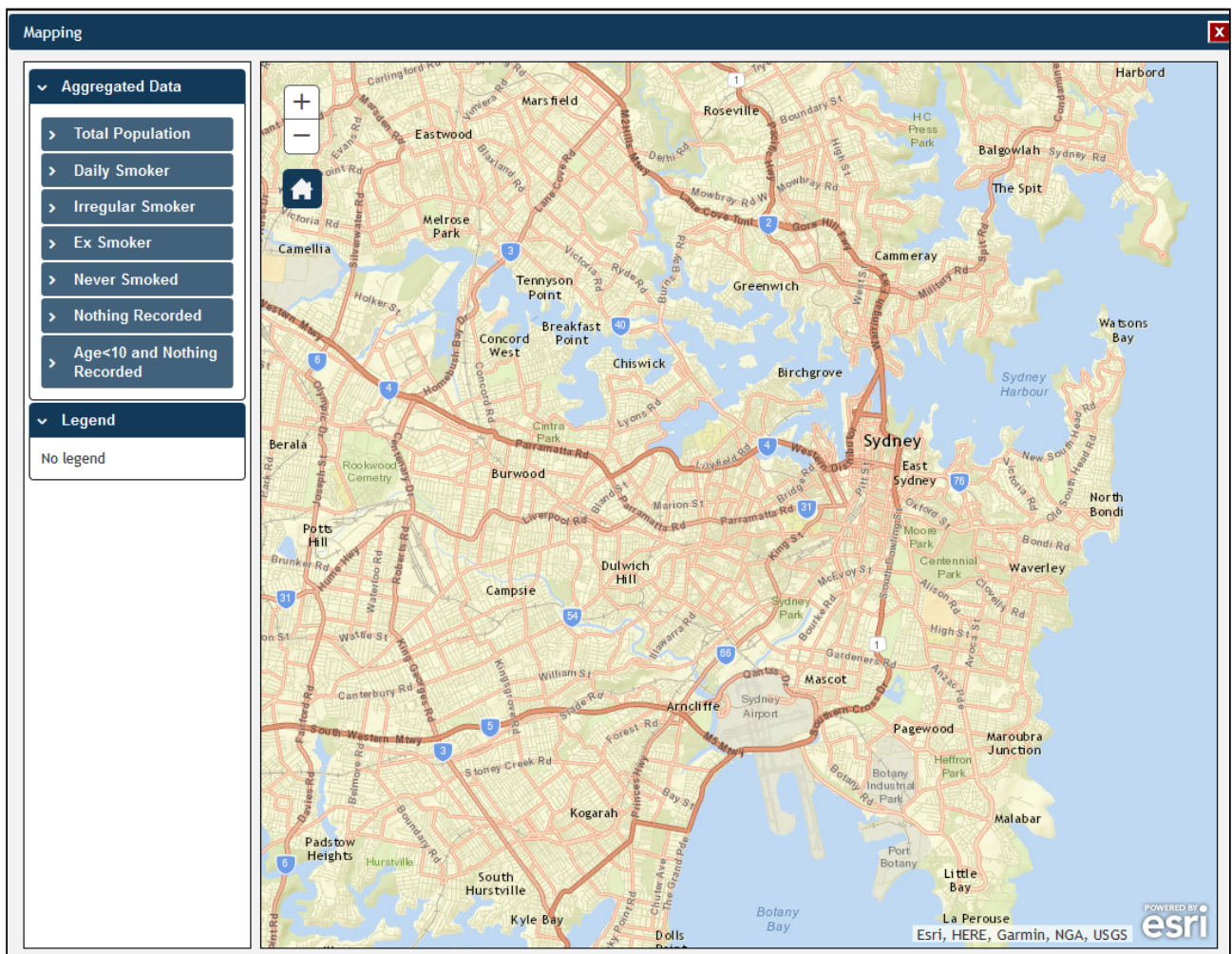
The left section of the View Map window contains a number of drop down boxes allowing you to select the Aggregated Data.



⚠ Loading map data is done 'on the fly' as you open the map window - this is due to the privacy measures in place in PAT CAT which prevent location data to be stored in the same place as clinical data. Please be patient as with large patient populations it can take up to 5 minutes to load all data for a report.

The 'View Map' button is available on all report tabs and when clicked initially shows a map of your area without any overlayed information. You can add selected aggregated data by using the indicators of interest by using the tick boxes.





The next chapters explain how to select data to be displayed on the map and how to use the aggregated data.

⚠ Please note that the Australian Bureau of Statistics has updated their SA2 ([full definition here](#)<sup>41</sup>) areas after the 2016 census. PAT CAT mapping will be updated to the new mapping as detailed [here](#)<sup>42</sup> - currently planned over the 2017 Christmas period.

- [Aggregated Data](#)(see page 173)

<sup>41</sup>[http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%252520Subject%2525201270.0.55.001~July%2525202016~Main%252520Features~Statistical%252520Area%252520Level%2525202%252520\(SA2\)~10014](http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%252520Subject%2525201270.0.55.001~July%2525202016~Main%252520Features~Statistical%252520Area%252520Level%2525202%252520(SA2)~10014)

<sup>42</sup><http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/1270.0.55.001Appendix7July%25202016?opendocument&tabname=Notes&prodno=1270.0.55.001&issue=July%25202016&num=&view>



- [Privacy restrictions on the display of Aggregated Data](#)(see page 176)

## 11.1 Aggregated Data

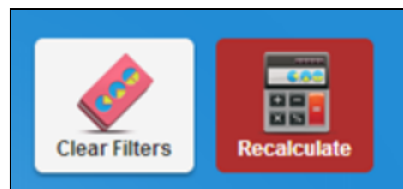
The Aggregated Data drop down allows the user to select which information from the data extract to display on the map. This is based on the report screen used to click on the 'View Map' button.

The example shown below overlays information related to Smokers with chronic conditions (in this instance Respiratory for the entire PHN or other organisation) from the extract data, and ABS data in relation to socio-economic disadvantage.

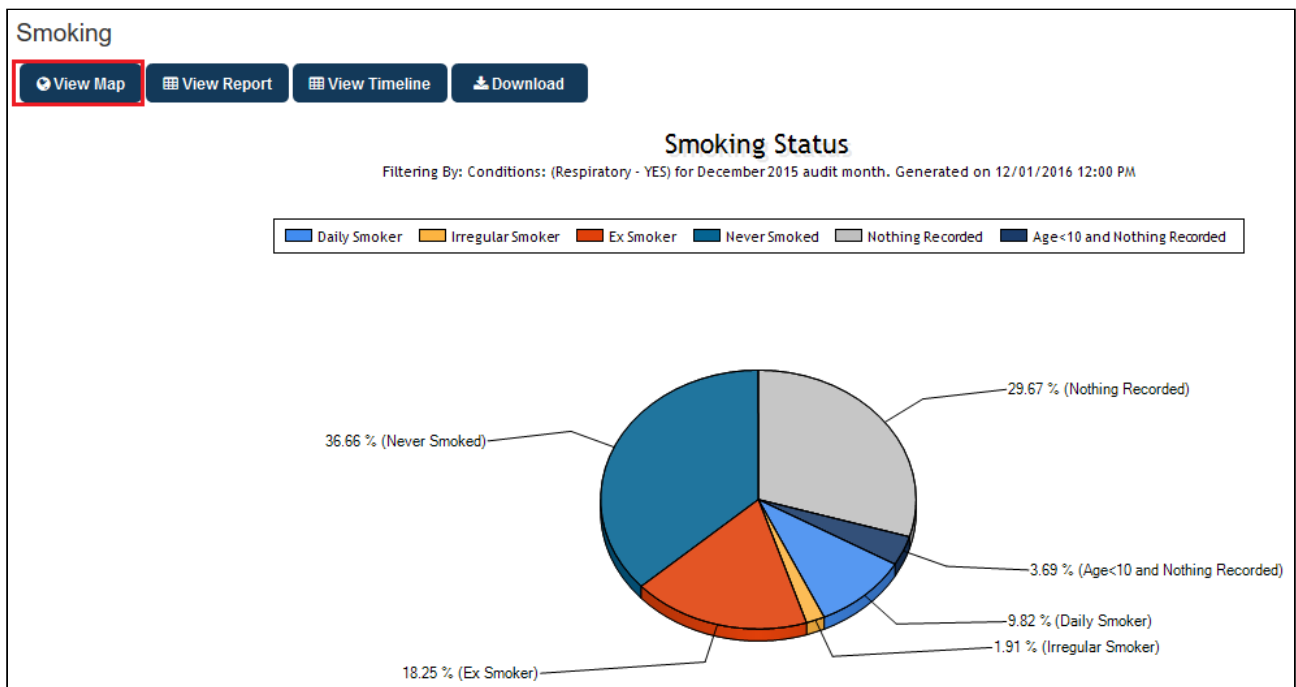
1. Set the filters to **Conditions > Chronic > Respiratory**

The screenshot shows the PATCAT 'Conditions' filter interface. The 'Conditions' tab is selected, and the 'Respiratory' sub-tab is active. The 'Respiratory' section has the 'Yes' checkbox checked. Other sections include Diabetes, Cardiovascular, Musculoskeletal, and Renal Impairment, each with 'Yes' and 'No' checkboxes. A 'Clear Conditions' button is at the bottom right.

1. Click **Recalculate**



1. Go to the Smoking tab in the Reports pane.



**NOTE:** The filter applied for this graph is Conditions: (Respiratory = YES)

Click the **View Map** Button.

1. In the View Map window the **Aggregated Data** will display all available indicators. They can be expanded by clicking on the > next to the name of the indicator, as in the screenshot below for the 'Daily Smoker' indicator:

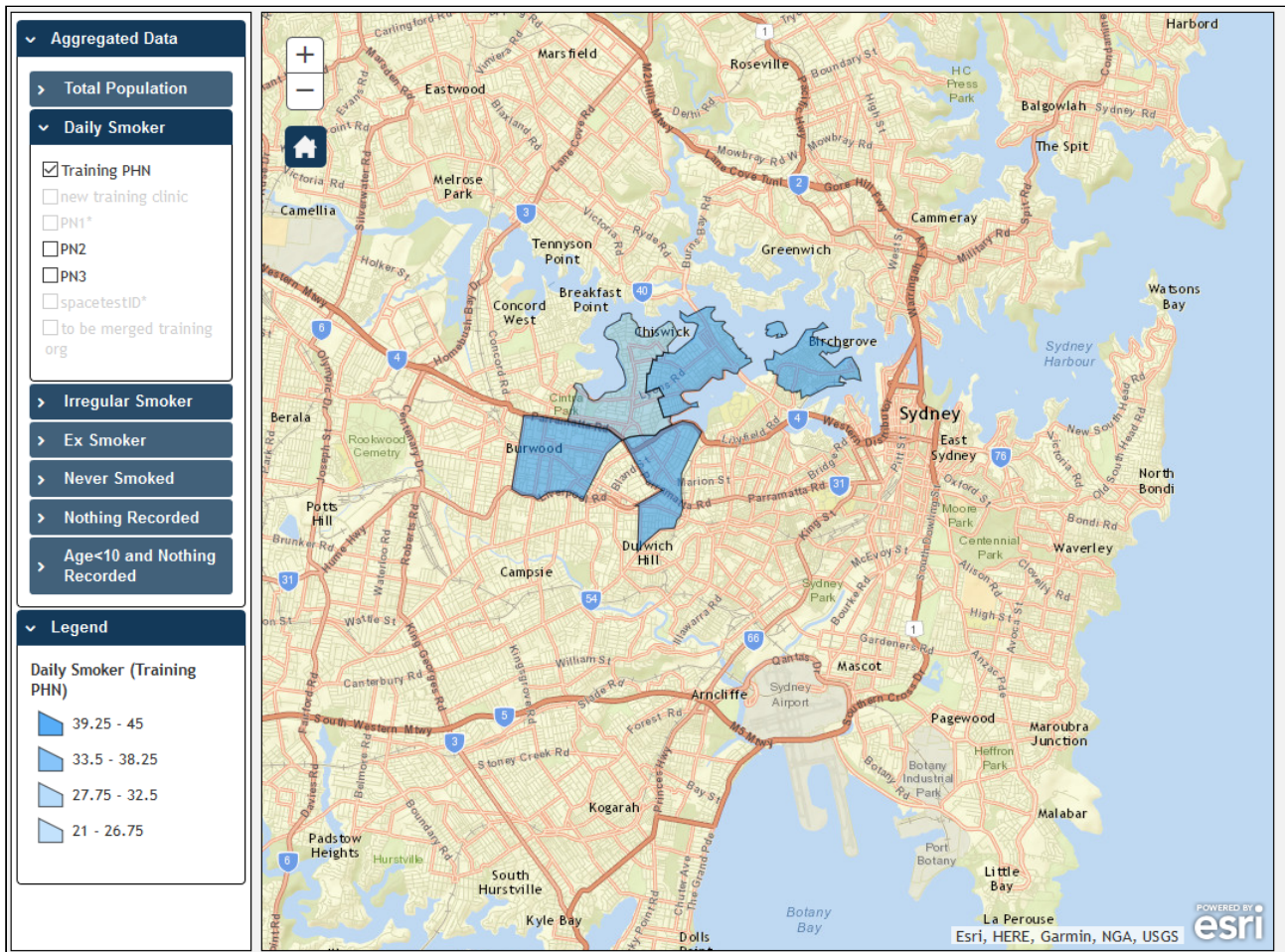
<b>Aggregated Data</b>
> Total Population
<b>Daily Smoker</b>
<input type="checkbox"/> Training PHN* <input type="checkbox"/> new training clinic <input type="checkbox"/> PN1* <input type="checkbox"/> PN2* <input type="checkbox"/> PN3* <input type="checkbox"/> spacetestID* <input type="checkbox"/> to be merged training org
> Irregular Smoker
> Ex Smoker
> Never Smoked
> Nothing Recorded
> Age<10 and Nothing Recorded
<b>Legend</b>
No legend

You can select the total aggregated data for the PHN or other organisation (indicated by your organisation's name) or the individual practice (indicated by the Practice ID).

**NOTE:** If you are logged on as a practice, you will only see drop downs relating to the entire PHN or other organisation and the practice which you have logged on as.

In the example below we have selected the daily smokers from our Training PHN location - this will display all available data on the map.

The aggregated data information will now be displayed on the map and the legend is updated (located in the bottom left portion of the window).



The map legend (displayed in the bottom left) is dynamic and determined by the selections made from the drop down menus, in this instance Daily Smokers in the Training PHN area.

Observe that the darker coloured sections of the map indicate a greater number of smokers with respiratory conditions in that region. Remember that all filters applied prior to using the map will affect the population mapped on the report.

You can interact with the map; clicking and dragging to move the map, clicking on + and – to zoom in and out, and

clicking on the **Home** symbol  to show your organisations catchment.

## 11.2 Privacy restrictions on the display of Aggregated Data

To ensure the privacy of patients, a universal rule is applied whereby if there are fewer than 5 patients able to be displayed in a map segment for a given data selection, no data will be displayed on the map.

When such restrictions are required to be applied, the selection in the Aggregated Data drop down box will have a asterisk symbol '\*' shown next to the practices/organisation name indicating that the result set has been limited. If

there is no data to be shown for the organisation/practice, then the item will be greyed out and not available for selection.

Aggregated Data

- > Total Population
- ▼ Daily Smoker
  - ☒ Demo PHN
  - ☐ Practice1\*
  - ☐ Practice10\*
  - ☐ Practice2\*
  - ☐ Practice3\*
  - ☐ Practice4\*
  - ☐ Practice5\*
  - ☐ Practice6\*
- > Irregular Smoker
- > Ex Smoker
- > Never Smoked
- > Nothing Recorded
- > Age<10 and Nothing Recorded

**NOTE:** The asterisk symbol '\*' indicates that not all data is able to be shown due the application of privacy restrictions.

In the example above the aggregate data for the organisation (PENCS) is available, but for the individual clinics there are either less than 5 patients for the selected indicator available.

## 12 TIMELINE REPORTING

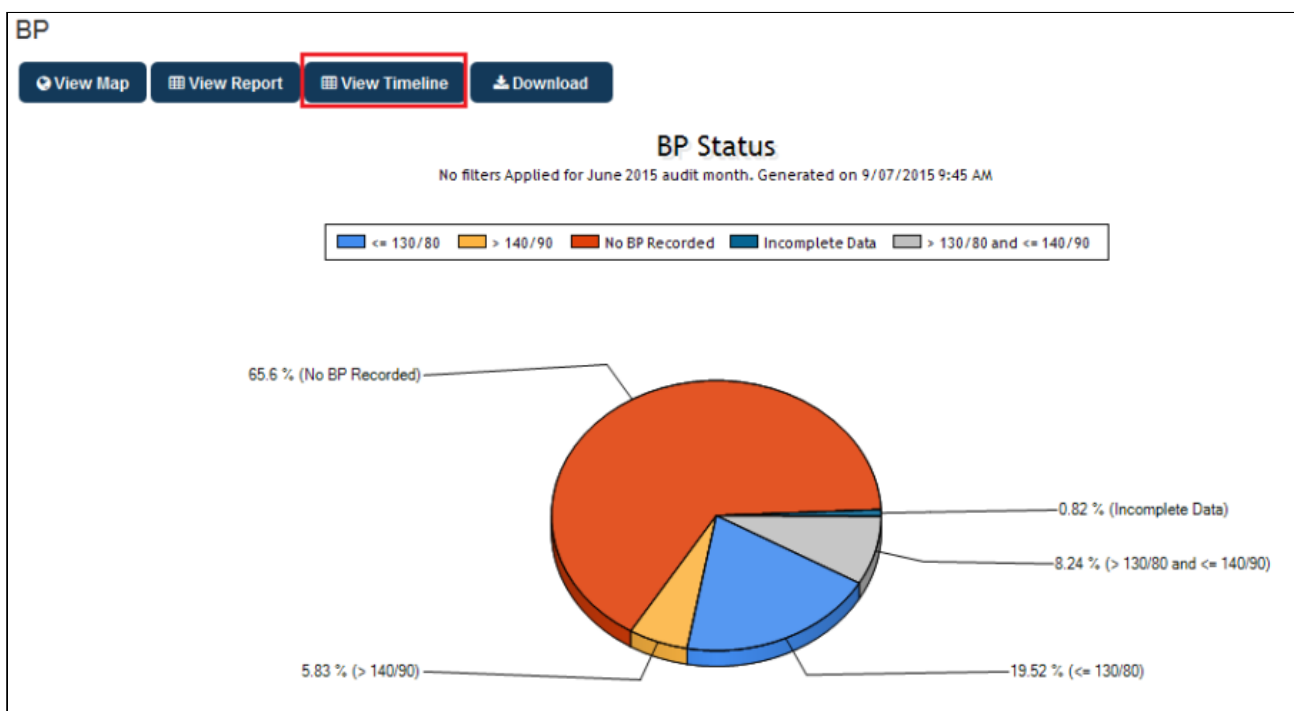
PAT CAT offers timeline reports which show how a particular data item has changed over time. To display any timeline, at least 2 datasets from different months have to be available in PAT CAT, if more datasets are available the timeline will include these, too.

Timeline reporting can be accessed from each individual report and will display all available indicators from the respective report, or it can be accessed through the 'Report' icon on top of the screen which allows for custom timeline views. This chapter will explain both ways of accessing the timeline reporting. These reports are available for PAT CAT Organisation (eg PHN or other organisation) and practice users and will show aggregated data only for Organisation users and aggregated data and practice level data for practice users.

- [Individual Reports Timelines](#)(see page 178)
- [Custom Timeline Reports](#)(see page 180)

### 12.1 Individual Reports Timelines

Each report has an option to view the Timeline – accessed through the button on the left:



*Figure 149: View Timeline Button*

Clicking on this button will open a timeline report for the report currently open, in our example the blood pressure report. The data responds to all applied filters, so it is possible to filter for patients with particular conditions, visit dates or any other available filter option before viewing the timeline. The range of the timeline can be adjusted to reporting requirements using the dropdown boxes on top of the graph.

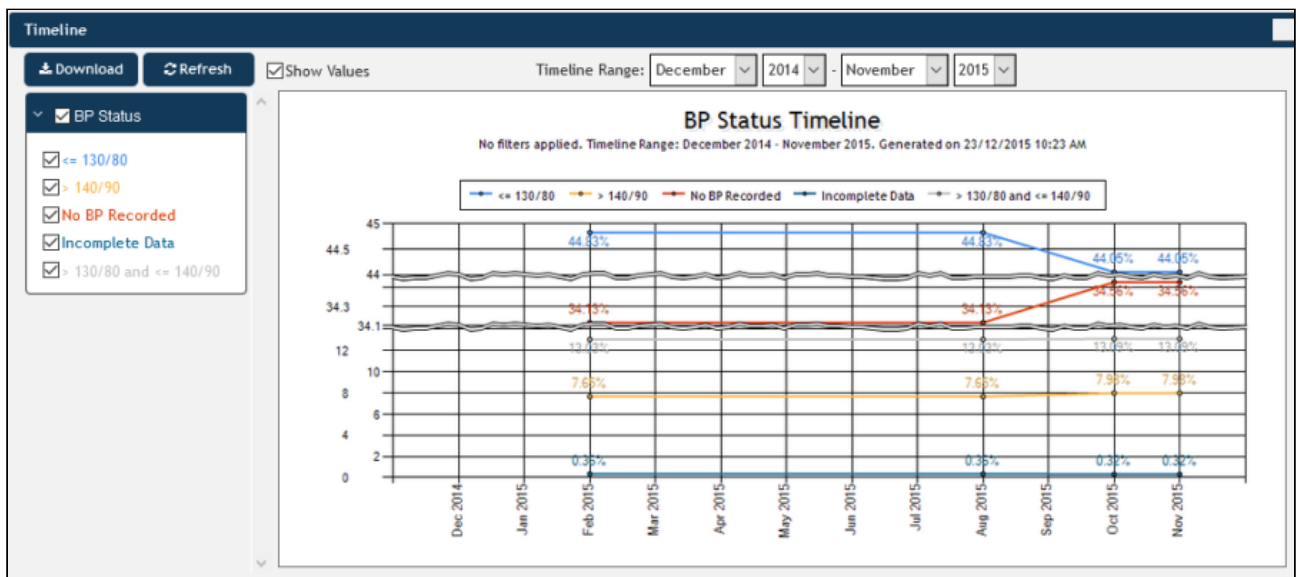


Figure 150: BP Timeline Report

The graph can be saved by using the "Download" button, this will create an image file of the graph which can be used in presentations or documents. It will be saved through your browser's download function.

Please note that our demo data does not provide a 'normal' timeline due to the different sizes of data for each month. Real data will be much more consistent but still dependent on the number of patients for each data point. To create meaningful timeline reports it might be required to apply a practice filter to remove a practice that has not uploaded data consistently.

For practice users the same reports are available but will present both the PHN aggregated data and the practice data in two graphs. The "Download" button provides a choice of saving either the PHN or the practice data.

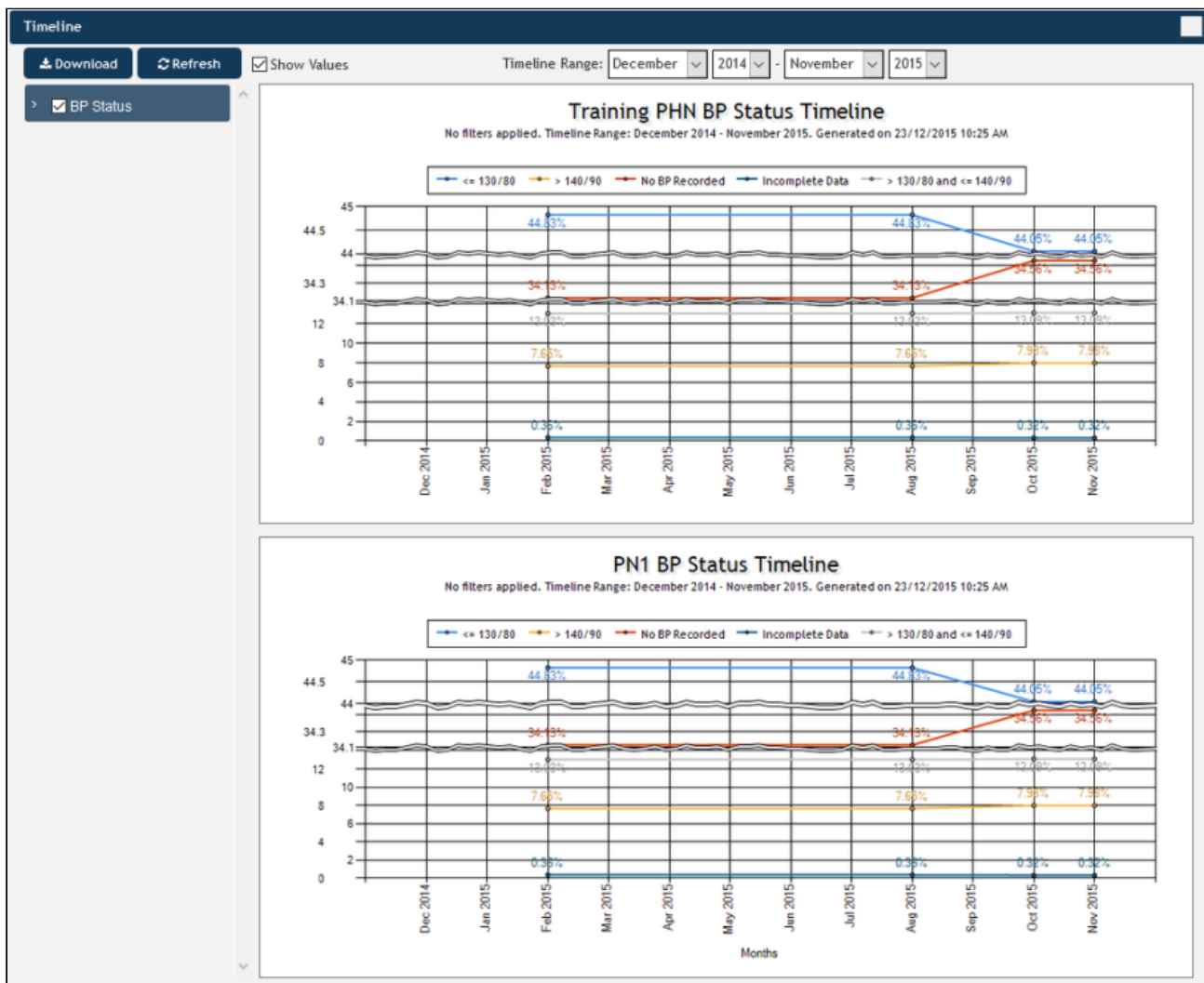


Figure 151: Practice User Timeline

## 12.2 Custom Timeline Reports

Custom timeline reports allow to combine data from multiple reports in a timeline. This can be useful to see how a project targeting one particular risk factor (i.e. Smoking) has affected a health indicator (i.e. blood pressure) over time. An organisation running projects focussing on any number of health indicators or risks will be able to see the outcomes for selected patient groups and/or practices over time and so will be able to see how effective the project has been.

To access the custom timeline reports, please click on the Reports icon on the top of your screen and choose the 'Custom Timeline' option:



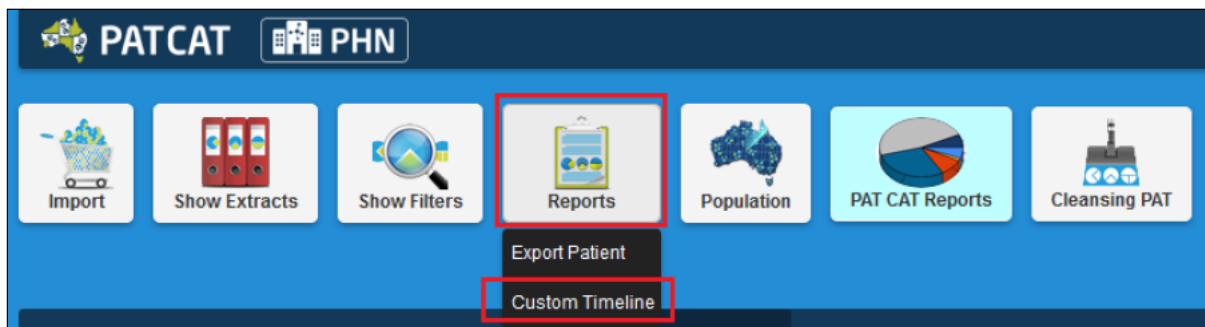


Figure 152: Access Custom Timeline

This will open a new window providing access to all indicators in your data and you can pick which indicator(s) to view in the timeline by clicking the tick-boxes. Ticking the top level box will select all indicators for the selected report and by clicking on the > you can expand the report title to select individual results only. In the example below only high BP and high Cholesterol is selected.

**NOTE:** The timeline will be affected by any filter that has been applied to your data.

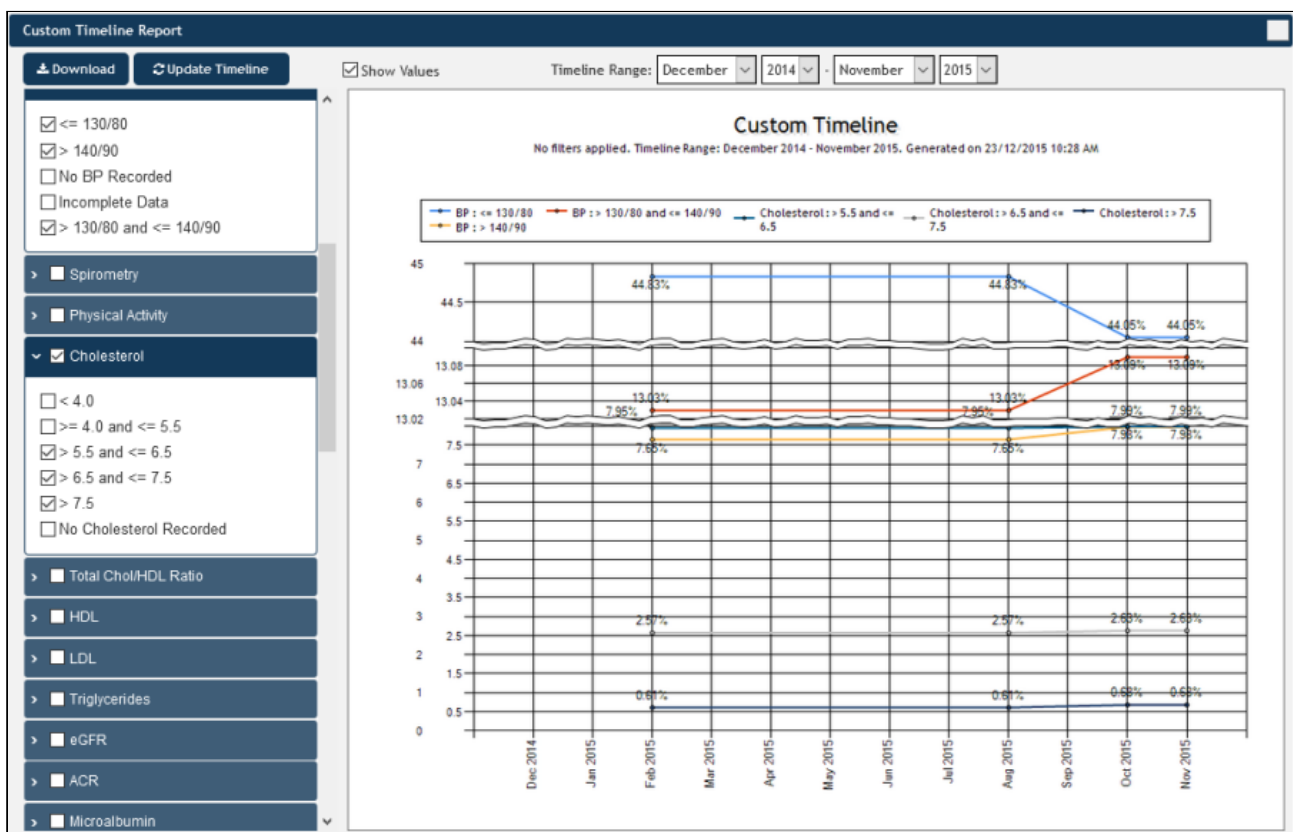


Figure 153: Custom Timeline BP and Cholesterol

The "Download" button provides the same functionality as in the standard timeline – it will save an image of the graph for use in other documents. The 'Show Values' tick box allows to show each data point on the graph as pictured. To apply this you will need to click the 'Refresh' button after selecting to show the values.

## 13 CUSTOM DATA IMPORT AND USAGE

PAT CAT allows users to import their own data to display in the Timeline reports described in the next chapter. This can be used to display national benchmarks as a comparison, use data from other sources than the de-identified CAT data and allows users to customise their timeline reporting. Hospital data such as admissions and diagnosis reports is another example – this is a very flexible tool for your reporting needs, feel free to explore the options. Using custom data has a number of rules and restrictions that are important to understand to use it correctly:

- Data has to be in comma delimited format (csv)
- There has to be at least one column with measures (values) and at least one column with a date
- Values have to be numerical only
- Multiple value columns can be selected but only one date column can be used
- Data will be aggregated if more than one value/month is available, which may cause strange results, so make sure you have edited your source file accordingly. Example if you looking at blood pressures and have multiple results for one month (in different rows) the individual results will be added for the month which wouldn't make sense. To use data like this you will need to average the data over the month.
- Once imported, the custom data will be available for display on the individual and custom time line graphs, by default the custom data is shown at the bottom of the indicators to be graphed.

For this example we are using a custom data file containing mock diabetes prevalence rates – these are not accurate and are only used to illustrate the usage of the custom data file

national diabetes rate total	national diabetes rate Type II	national diabetes rate Type I	month
5.2	5.14	0.06	1/02/2015
5.3	5.24	0.06	1/07/2015
5.1	5.04	0.06	1/08/2015
5.2	5.14	0.06	1/09/2015
5.1	5.04	0.06	1/10/2015
5.2	5.14	0.06	1/11/2015
5.3	5.24	0.06	1/12/2015

Figure 137: CSV Custom Data File

### 13.1 Preparing and Importing Custom Data

As stated above, the data needs to be available in comma delimited format (csv) which can be created from MS Excel (use the 'save as' option). Once the data is in the right format you can import the custom data by clicking on the 'Custom Data' link in the PAT CAT menu bar.



Figure 138: Custom Data Link

The custom data screen allows you to review existing files and to add new ones. In the example below no data has been uploaded yet.

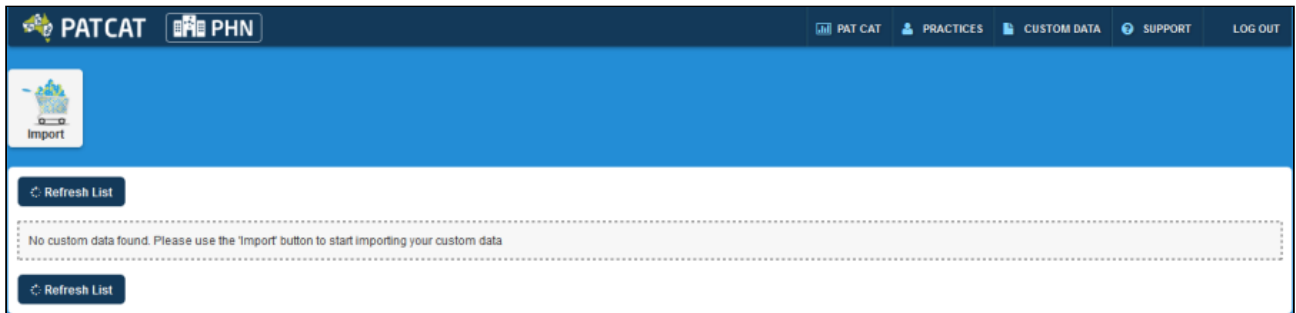


Figure 139: Manage Custom Data

To add a new data file, click on the 'Import' icon in the top left corner.

Source Information

Select File

Browse...

No file selected.

Filename

No data uploaded

Status

Active

Name\*

Description

Date Columns

No data uploaded

Clear Selection

Value Columns

No data uploaded

Select All Clear Selections

Preview

No data uploaded

Cancel

Figure 140: Import Custom Data

The first step is to browse to the file you want to upload by clicking on the 'Browse' button. Find the file you want to upload, click on it and click 'Open'

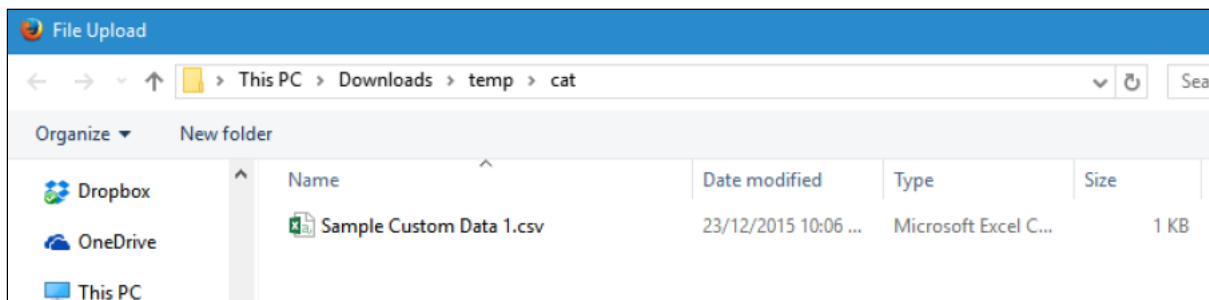


Figure 141: Find Custom Data File for Import

Now that you have selected your file, click the 'Upload' button. Depending on the size of the file and your internet connection this can take a little while.

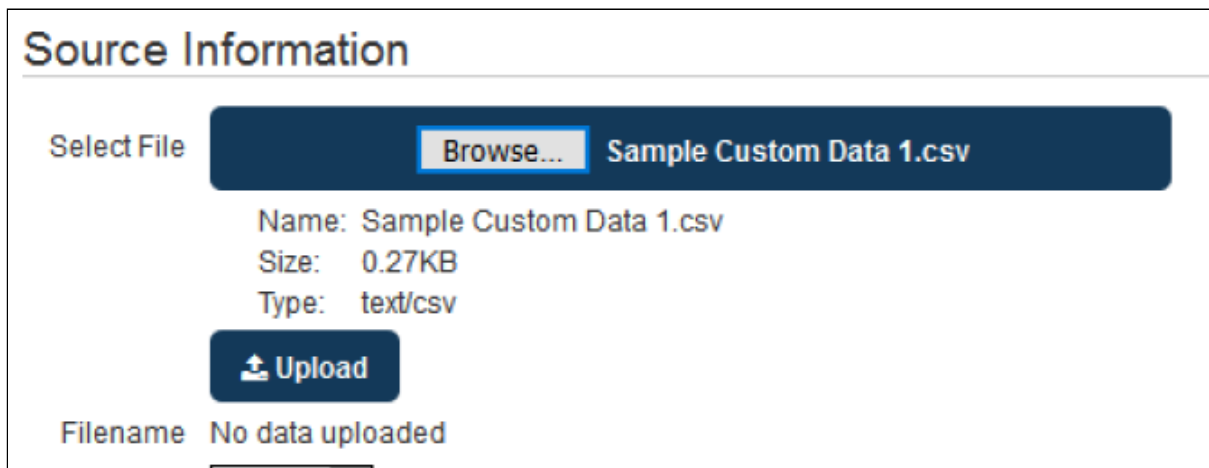


Figure 142: Upload Custom Data File

Once the file is uploaded, you will be shown the available date and value columns. In the example below I have selected all value columns. If you have more than one date column, you will need to choose which date to display, as PAT CAT can only use one date column in this file.

The Preview shows how PAT CAT will display the data, if this is not how you expected the data to look in your time line reports you can click 'Cancel' and edit your source file to meet your requirements, then upload it again until you are satisfied with the result.

**Source Information**

Select File  No file selected.

Filename: Sample Custom Data 1.csv

Status: Active

Name\* **National DM Rates**

Description

**Date Columns**  [Clear Selection](#)

Source Column Name	Column ID *	Name	Description	Select
month	month	month		<input checked="" type="checkbox"/>

**Value Columns**  [Select All](#) [Clear Selections](#)

Source Column Name	Column ID *	Name	Description	Select
national diabetes rate total	national diabetes rate total	national diabetes rate total		<input checked="" type="checkbox"/>
national diabetes rate Type II	national diabetes rate Type II	national diabetes rate Type II		<input checked="" type="checkbox"/>
national diabetes rate Type I	national diabetes rate Type I	national diabetes rate Type I		<input checked="" type="checkbox"/>

**Preview**

☐ = Invalid Data


month	national diabetes rate total	national diabetes rate Type II	national diabetes rate Type I
1/02/2015	5.20	5.14	0.06
1/07/2015	5.30	5.24	0.06
1/08/2015	5.10	5.04	0.06
1/09/2015	5.20	5.14	0.06
1/10/2015	5.10	5.04	0.06
1/11/2015	5.20	5.14	0.06
1/12/2015	5.30	5.24	0.06

Figure 143: Custom Data File Source Details

If everything is how you need it to be, click on 'Save' to add this custom data to your timeline reports. You can now see the uploaded file in the Custom Data screen, including details about upload date and status (active/inactive).

## 13.2 Editing and Removing Custom Data Files

Data files can be made inactive or can be deleted. Changing the status to 'inactive' will remove the data from the timeline reports but the data will remain in PAT CAT. Deleting a custom data set will remove the data. Both can be done from the screen above which, for already imported data, is accessed by clicking on the file name in the Custom Data screen.



Import

Refresh List

Filename	Data Source Name	Description	Number of Columns	Date Imported	Status
Sample Custom Data 1.csv	National DM Rates		4	22 December 2015	Active

Refresh List

Figure 144: Edit Custom Data

From the next screen you can change the file status or delete the file by using the respective options.

Source Information

Filename: Sample Custom Data 1.csv

Status: Active

Name: National DM Rates

Description:

Date Columns Clear Selection

Source Column Name	Column ID *	Name	Description	Select
month	month	month		<input checked="" type="checkbox"/>

Value Columns Select All Clear Selections

Source Column Name	Column ID *	Name	Description	Select
national diabetes rate total	national diabetes rate total	national diabetes rate total		<input checked="" type="checkbox"/>
national diabetes rate Type II	national diabetes rate Type II	national diabetes rate Type II		<input checked="" type="checkbox"/>
national diabetes rate Type I	national diabetes rate Type I	national diabetes rate Type I		<input checked="" type="checkbox"/>

Preview

Refresh Preview View Preview Timeline

Invalid Data = Invalid Data

Please click "Refresh Preview" to view the data

Save Delete Cancel

Figure 145: Custom Data File Status and Deletion

### 13.3 Using Custom Data in Timeline Reports

The imported custom data is now available in the individual timeline reports as well as in the custom timeline reports. For full details on timeline reporting please see the next chapter(see page 189).

As we have imported a file with national diabetes prevalence rates, we will have a look at the 'Disease' report and add our custom data to the timeline. To see the timeline report, click on the 'Disease' report tab, then on the 'View Timeline' button.

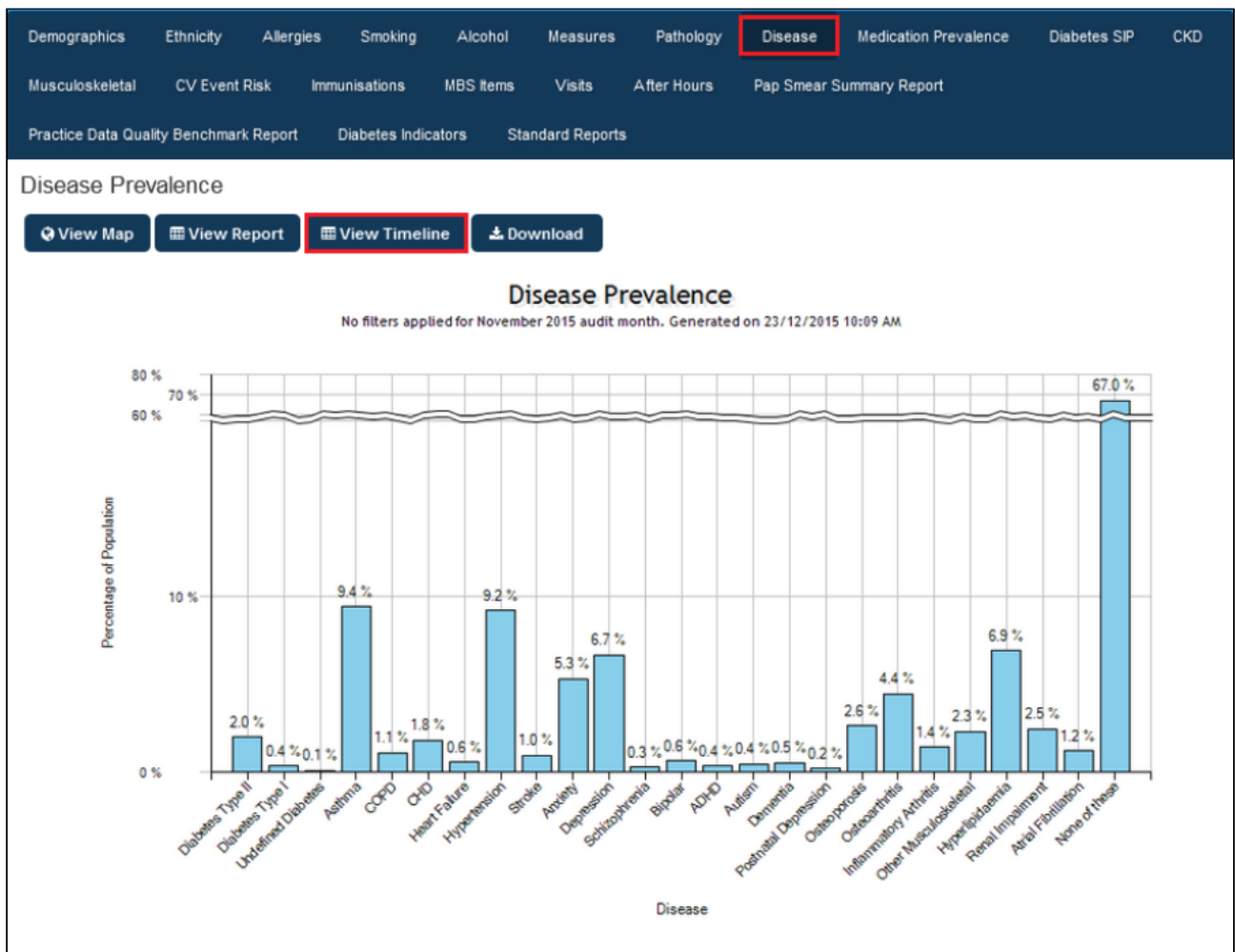


Figure 146: Disease Prevalence Report

The timeline report window has the timeline for the selected report as well as the custom data – in the example below I have removed all but the type II diabetes figures to make the graph less crowded.

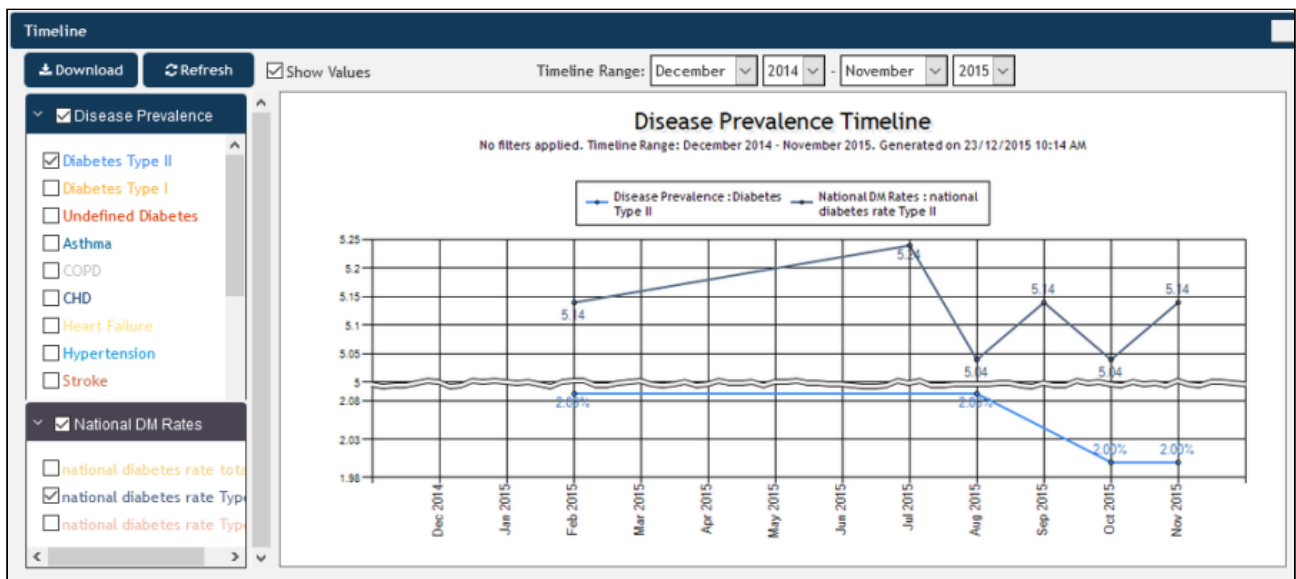


Figure 147: Custom Data Timeline

To use the custom data in the custom timeline just add it to the graph by selecting one or more indicators from the very end of the custom timeline report window.

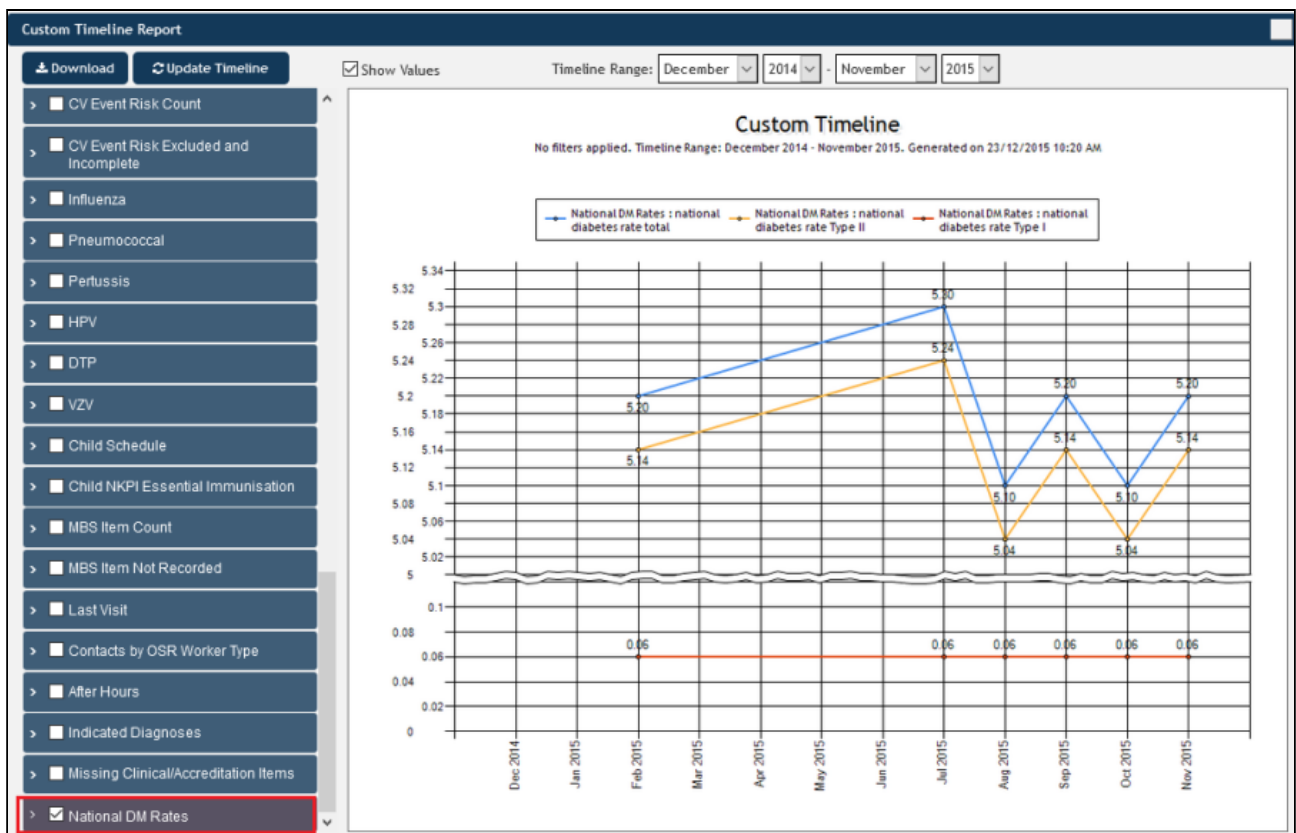
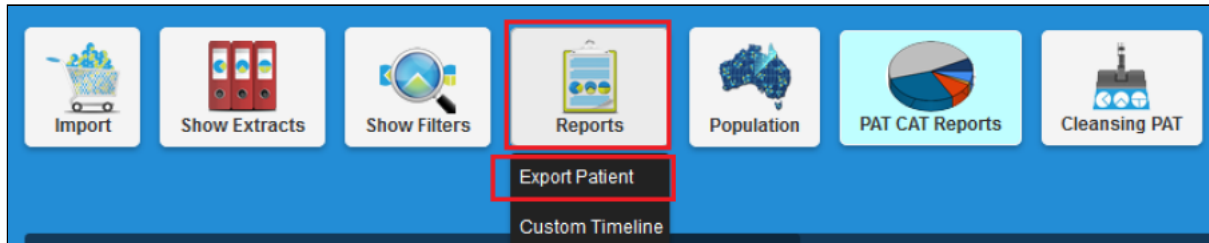


Figure 148: Custom Data in Custom Timeline Report



## 14 Export Patient Functionality

PAT CAT allows PHN or other organisation (and other organisations) but not practice users to save data in csv format (comma delimited) to be used in Excel or for further analysis in other software. To export data click on the 'Report' icon:



You will see two options, one for exporting patients as described below, and the other for custom timeline which is described in chapter 10 above.

Clicking on the 'Export Patients' line will open a new window with options to tick the details of the data to be exported to the csv file:

**Export Patient**

☒ Select All   ☐ Clear Selection   Save CSV

- > Demographics
- > Ethnicity
- > Allergies
- > Smoking
- > Alcohol
- > BMI Count
- > BMI Average
- > BMI Incomplete
- > Waist CVD Risk
- > Waist Diabetes Risk
- > BP
- > Spirometry
- > Physical Activity
- > Cholesterol
- > Total Chol/HDL Ratio
- > HDL
- > LDL

Each heading in the window above can be expanded by clicking on the > symbol and will display the details of each result that can be included or excluded. If all results need to be in the report you can click the 'Select All' button on the top left – this will give you a file with every result from every report in PAT CAT and the SLA2 mapping information. Use the 'Clear Selection' to remove all selections made.

The output can be opened in MS Excel and then be further processed or filtered as needed.

***Depending on the size/number of practices this can take a while to create the export file – please be patient!***

## 15 CAT PLUS PROMPTS IN PAT CAT

Pen CS has created the CAT Plus suite of software for primary health care which consists of Topbar, CAT4 and PAT CAT. These tools are already working together and CAT Prompts is the next level of integration. CAT Prompts provides the team in general practice with an easy way of communicating across the CAT Plus suite. CAT4 and PAT CAT can identify patients of interest through the large range of reports and filters, and the prompt based on the criteria used in CAT4/PAT CAT can be send to Topbar to notify the clinicians if their patient matches the chosen conditions. This can be used to improve data quality, identify patients at risk and highlight business opportunities for the practice.

The main advantage is the ease of communicating findings on a practice population level to the consult room where the individual patient is present. Rather than having to rely on printed lists or verbal communication, Topbar together with CAT4 will be able to improve team work and improve quality of care through communication.

CAT Prompts are not dependent on the patients in CAT4 OR PAT CAT as only the filters and selections used are applied when a patient is opened in the clinical system. This means if you create a new prompt today, even patients that are added to your clinical system in the future will be identified if they match the criteria.

For information on how to use the prompts in each of the individual parts of the CAT Plus suite click on the links below.

- [CAT4](#)<sup>43</sup>
- [PAT CAT](#)<sup>44</sup>
- [Topbar](#)<sup>45</sup>

This part of the guide shows how to create and manage CAT Prompts in PAT CAT. For details on how to create and manage CAT Prompts in CAT4 please check the [relevant guide](#)<sup>46</sup>

### 15.1 Setting up CAT Prompts in PAT CAT

#### 15.1.1 Requirements

To use CAT Prompts you have to have the latest version of Topbar, CAT4 and PAT CAT installed. Please contact your PHN to enquire about how to get access to the CAT Plus suite. Only PHN or other organisation level users can access the prompts functionality in PAT CAT, practice level users won't have the icon when logged on.

### 15.2 Creating a Prompt in PAT CAT

To access the prompts module in PAT CAT click on the Prompts icon which shows the same design as Topbar.

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<sup>43</sup> <https://help.pencs.com.au/display/CP/CAT4>

<sup>44</sup> <https://help.pencs.com.au/display/CP/PAT+CAT>

<sup>45</sup> <https://help.pencs.com.au/display/CP/Topbar>

<sup>46</sup> <https://help.pencs.com.au/display/CG/CAT+PLUS+PROMPTS+IN+CAT4>



The Prompts window will be displayed, showing existing prompts with details such as name, summary, date created and a count of how many prompts were dismissed and deferred. The status column shows if the prompt is currently active or inactive. From this screen existing prompts can be edited or deleted, please find the details in the [Viewing and Removing Prompts in PAT CAT](#) (see page 196) page.

⚠ Before you create your prompt you need to consider if you need to apply a filter to your PAT CAT population using the available filters. For more details on filters in PAT CAT please see the [relevant chapter](#) (see page 81) in the PAT CAT user guide.

Chronic	Mental Health	Cancer	Other	
<b>Diabetes</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Type II <input type="checkbox"/> No <input type="checkbox"/> Type I <input type="checkbox"/> No <input type="checkbox"/> Undefined Diabetic <input type="checkbox"/> No <input type="checkbox"/> Type I or II <input type="checkbox"/> Gestational <input type="checkbox"/> No	<b>Respiratory</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Asthma <input type="checkbox"/> No <input type="checkbox"/> COPD <input type="checkbox"/> No	<b>Cardiovascular</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Hypertension <input type="checkbox"/> No <input type="checkbox"/> Cardiovascular Disease (CVD): <input type="checkbox"/> Heart Failure <input type="checkbox"/> No <input type="checkbox"/> CHD <input type="checkbox"/> No <input type="checkbox"/> PVD <input type="checkbox"/> No <input type="checkbox"/> Stroke <input type="checkbox"/> No <input type="checkbox"/> Carotid Stenosis <input type="checkbox"/> No <input type="checkbox"/> MI <input type="checkbox"/> No <input type="checkbox"/> Renal Artery Stenosis <input type="checkbox"/> No	<b>Musculoskeletal</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inflammatory <input type="checkbox"/> No <input type="checkbox"/> Musculoskeletal <input type="checkbox"/> No <input type="checkbox"/> Bone Disease <input type="checkbox"/> No <input type="checkbox"/> Osteoporosis <input type="checkbox"/> No <input type="checkbox"/> Osteoarthritis <input type="checkbox"/> No	<b>Renal Impairment</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Chronic Renal Failure <input type="checkbox"/> No <input type="checkbox"/> Acute Renal Failure <input type="checkbox"/> No

[Clear Conditions](#)

One consideration for the filter, besides from clinical criteria, would be which practices should receive the prompts. This can be selected in the 'Practices' filter tab. For this example I have filtered for one practice only and have added the condition 'Asthma' to the filter.

Once you have applied the relevant filter(s) and recalculated, you are ready to create a new prompt.

Click on the '+Create Prompt' button on the top left of the window to start the process.

Prompts						
+ Create Prompt						
<div> 1 2 3 4 5 6 7 8 9 10 ... Last </div>						
Name	Summary	Reason	Date Created	Dismissed	Deferred	Status
Creating male smoker prompt	Trying to create the male smoker prompt	Review the data	17/02/2016 11:57 AM	0	0	Active
Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	8/02/2016 10:54 AM	0	0	Active
Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	8/02/2016 10:02 AM	0	0	Active
Medications: (Narcotics/Opioids - YES)	Medications: (Narcotics/Opioids - YES)	Medications: (Narcotics/Opioids - YES)	8/02/2016 10:02 AM	0	0	Active
Medications: (Glitazones - NO)	Medications: (Glitazones - NO)	Medications: (Glitazones - NO)	8/02/2016 10:01 AM	0	0	Active
Medications: (Glitazones - YES)	Medications: (Glitazones - YES)	Medications: (Glitazones - YES)	8/02/2016 10:01 AM	0	0	Active
Medications: (Metformin - NO)	Medications: (Metformin - NO)	Medications: (Metformin - NO)	8/02/2016 10:00 AM	0	0	Active
Medications: (Metformin - YES)	Medications: (Metformin - YES)	Medications: (Metformin - YES)	8/02/2016 10:00 AM	0	0	Active
Medications: (Insulin H/ glycaemics - NO)	Medications: (Insulin H/ glycaemics - NO)	Medications: (Insulin H/ glycaemics - NO)	8/02/2016 10:00 AM	0	0	Active
Medications: (Insulin H/ glycaemics - YES)	Medications: (Insulin H/ glycaemics - YES)	Medications: (Insulin H/ glycaemics - YES)	8/02/2016 10:00 AM	0	0	Active
<div> 1 2 3 4 5 6 7 8 9 10 ... Last </div>						
Refresh Prompts List						

**In the 'Create Prompt' window you will see a list of currently active filters on top of the screen.** You can now add more criteria to the active filters using the individual report sections to select your criteria. The condition 'Asthma' in my filter could have also been added through the 'Disease' report by selecting 'Asthma' there. PAT CAT and CAT4 often provide multiple ways on how to achieve the same outcome.

Create Prompt

Filter: Filtering By: Practice: (Prac\_MM\_BP1), Conditions: (Asthma - YES)

Name:

Status:

Active

Summary:

Reason:

> ☐ Demographics

> ☐ Ethnicity

> ☐ Allergies

> ☐ Smoking

> ☐ Alcohol

> ☐ BMI Count

> ☐ Waist CVD Risk

> ☐ Waist Diabetes Risk

> ☐ BP

> ☐ Spirometry

> ☐ Physical Activity

> ☐ Cholesterol

> ☐ Total Chol/HDL Ratio

> ☐ HDL

> ☐ LDL

> ☐ Triglycerides

> ☐ eGFR

Save

For this example I am creating a prompt that will alert Topbar users at the specified clinic if a patient presents who has Asthma, who is daily or irregular smoker and never had a spirometry test entered. The test name should be the message that informs the clinician what to do, and in the 'Summary' and 'Reason' fields additional information can be given. All three fields need to be filled in.

To filter for this I am using the [practice filter](#)(see page 87) to select the practice(s) of interest and the [conditions filter](#)(see page 88) to find patients with asthma.

**Create Prompt**

Filter: Filtering By: Practice: (Prac\_MM\_BP1), Conditions: (Asthma - YES)

Name: **Patient has Asthma and smokes, please perform Spirometry test**

Status: Active

Summary: Patients with Asthma who are daily or irregular smokers with no record of spirometry results at clinic Prac\_MM\_BP1 will receive this prompt

Reason: Patients who smoke and have respiratory conditions are at high risk

Demographics

Ethnicity

Allergies

☒ Smoking

☒ Daily Smoker

☒ Irregular Smoker

☐ Ex Smoker

☐ Never Smoked

☐ Nothing Recorded

☐ Age<10 and Nothing Recorded

Alcohol

BMI Count

Waist CVD Risk

Waist Diabetes Risk

BP

☒ Spirometry

☐ FEV1/FVC<0.7

☐ FEV1/FVC>=0.7

☒ Nothing Recorded

Save

Once your prompt is complete, click on 'Save' to save the new prompt. Once saved, your new prompt will be displayed on top of the list of existing prompts. You can click on 'Refresh Prompts List' if you can't see your newly created prompt.

Prompts						
+ Create Prompt						
1 2 3 4 5 6 7 8 9 10 ... Last						
Name	Summary	Reason	Date Created	Dismissed	Deferred	Status
Patient has Asthma and smokes, please perform Spirometry test	Patients with Asthma who are daily or irregular smokers with no record of spirometry results at clinic Prac_MM_BP1 will receive this prompt	Patients who smoke and have respiratory conditions are at high risk	22/02/2016 2:00 PM	0	0	Active
Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	8/02/2016 10:54 AM	0	0	Active
Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	8/02/2016 10:02 AM	0	0	Active
Medications: (Narcotics/Opioids - YES)	Medications: (Narcotics/Opioids - YES)	Medications: (Narcotics/Opioids - YES)	8/02/2016 10:02 AM	0	0	Active
Medications: (Glitazones - NO)	Medications: (Glitazones - NO)	Medications: (Glitazones - NO)	8/02/2016 10:01 AM	0	0	Active
Medications: (Glitazones - YES)	Medications: (Glitazones - YES)	Medications: (Glitazones - YES)	8/02/2016 10:01 AM	0	0	Active
Refresh Prompts List						

⚠ Please note that prompts created in PAT CAT are currently send to Topbar overnight - you will NOT see the new prompts taking instant effect in the practices!  
PAT CAT prompts are not active in Topbar by default and need to be activated for each user before they will be displayed.

## 15.3 Viewing and Removing Prompts in PAT CAT

Once prompts are created in PAT CAT, they can be removed through the 'Prompts' icon on top of the screen.



The Prompts window will display all existing prompts, clicking on one of the prompts will allow you to edit the prompt. Information about Dismissed and Deferred numbers and the status (active/inactive) indicates if the prompts is active in Topbar are sent once a day (over night) to PAT CAT. Please see the [Topbar CAT Prompts guide](https://help.pencs.com.au/display/TUG/Using+CAT+Prompts+in+Topbar)<sup>47</sup> on how to activate/inactivate prompts on the clinic level.

<sup>47</sup> <https://help.pencs.com.au/display/TUG/Using+CAT+Prompts+in+Topbar>



Prompts						
+ Create Prompt						
1	2	3	4	5	6	7
8	9	10	...	Last		
Name	Summary	Reason	Date Created	Dismissed	Deferred	Status
Patient has Asthma and smokes, please perform Spirometry test	Patients with Asthma who are daily or irregular smokers with no record of spirometry results at clinic Prac_MM_BP1 will receive this prompts	Patients who smoke and have respiratory conditions are at high risk	22/02/2016 2:00 PM	0	0	Active
Patient has Asthma and smokes, please run Spirometry test	Patients with Asthma who are daily or irregular smokers with no record of spirometry results at clinic Prac_MM_BP1 will receive this prompts	Patients who smoke and have respiratory conditions are at high risk	22/02/2016 11:59 AM	0	0	Active
Creating male smoker prompt	Trying to create the male smoker prompt	Review the data	17/02/2016 11:57 AM	0	0	Active
Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	8/02/2016 10:54 AM	0	0	Active
Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	Medications: (Narcotics/Opioids - NO)	8/02/2016 10:02 AM	0	0	Active
Medications: (Narcotics/Opioids - YES)	Medications: (Narcotics/Opioids - YES)	Medications: (Narcotics/Opioids - YES)	8/02/2016 10:02 AM	0	0	Active
Medications: (Glitazones - NO)	Medications: (Glitazones - NO)	Medications: (Glitazones - NO)	8/02/2016 10:01 AM	0	0	Active
Medications: (Glitazones - YES)	Medications: (Glitazones - YES)	Medications: (Glitazones - YES)	8/02/2016 10:01 AM	0	0	Active
Refresh Prompts List						

Currently the only option to edit a prompt is to delete it by using the 'Delete' button on the bottom right.

Edit Patient has Asthma and smokes, please perform Spirometry test

Filter: Filtering By: Practice: (Prac\_MM\_BP1), Conditions: (Asthma - YES)

Name: Patient has Asthma and smokes, please perform Spirometry test

Status: Active

Summary: Patients with Asthma who are daily or irregular smokers with no record of spirometry results at clinic Prac\_MM\_BP1 will receive this prompts

Reason: Patients who smoke and have respiratory conditions are at high risk

> ☐ Demographics

> ☐ Ethnicity

> ☐ Allergies

> ☒ Smoking

> ☐ Alcohol

> ☐ BMI Count

> ☐ Waist CVD Risk

> ☐ Waist Diabetes Risk

> ☐ BP

> ☒ Spirometry

> ☐ Physical Activity

> ☐ Cholesterol

> ☐ Total Chol/HDL Ratio

> ☐ HDL

> ☐ LDL

> ☐ Triglycerides

> ☐ eGFR

Delete


Save

## 16 PAT CAT Network



The organisations currently using PAT CAT have expressed interest in sharing aggregated data across their catchment boundaries. The PAT CAT Network has been created to provide this functionality and will provide the ability will be particularly useful to compare indicators across multiple organisation catchments and/or state borders.

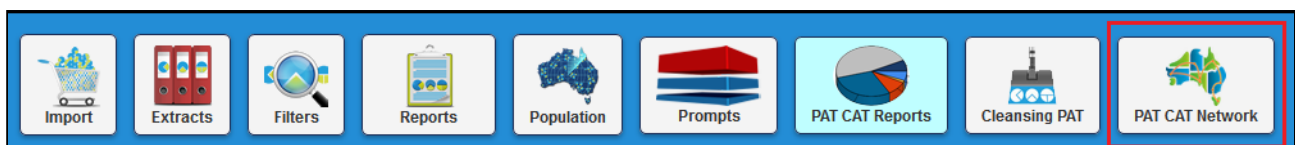
The PAT CAT Network allows information to be shared through the use of “Channels”. A channel defines a set of filters and graphs for which an organisation is willing to share data with another. An organisation “subscribes” to a channel to participate. Only aggregated data is shared. The data becomes available by “connecting” to a channel and then viewing the data through the normal PAT CAT interface along with the organisations own data for comparison. When connected to a channel, the predefined filters replace the usual PAT CAT filter panel and the graphs for which shared data is available are flagged with a \* on their tab. A filter is selected to recalculate the data.

 Only Super Users can create and share Channels - please contact PEN CS to nominate the super users in your organisation.

To enable data sharing without PEN CS becoming a data custodian we have expanded the PCS Network to handle the PAT CAT Network data travel. The PCS Network is currently used to provide the prompts data travel from PHN/ organisation to practice. It does not store any data from the individual organisations using PAT CAT, but rather stores the details of the direct data connections, i.e. who sends what to who.

Organisations are required to register to use the PAT CAT Network before they can share and view data. This is done the first time the organisation clicks on the PAT CAT Network icon and is managed through the PCS Network.

The PAT CAT Network functionality is accessed through the new PAT CAT Network icon:



Clicking the PAT CAT Network icon will open up the PAT CAT Network window. From this window you can create and join channels, see and respond to notifications and manage your subscribed and created channels. More detail is provided below.

Features:

- PCS Network does not store Patient Data
- PCS Network will only store Channel related data
- Data sharing is done directly between PAT CATs
- The aggregated value and percentage part of the data is encrypted
- Data transmission only through SSL
- Data sharing is only within the scope of the connected channel
- Organisations can only look at other PAT CAT data for the selected month
- Consent / Opt-In process for organisation is captured via the PCS Network

- Only PAT CAT Super Users can register to the PAT CAT Network.
- Only PAT CAT Super Users can create channels



Please contact PEN CS to nominate your super users - there is no cost involved!

PAT CAT Network

My Channels

Join Channel

+ Create Channel

Notifications

Subscribed

My Channels

Invites

Join Requests

Refresh List

Notifications	
PHN B invites you to join the channel: again	<div>+ Accept Invite</div> <div>✕ Decline Invite</div>
PHN B invites you to join the channel: again	<div>+ Accept Invite</div> <div>✕ Decline Invite</div>
PHN B invites you to join the channel: test	<div>+ Accept Invite</div> <div>✕ Decline Invite</div>

Close

The tabs on the PAT CAT Network window are described in detail below.

- [Types of Channels](#)(see page 201)
- [Creating a Channel](#)(see page 201)
- [Inviting an Organisation to join a Channel](#)(see page 207)
- [Working with Channels](#)(see page 212)
- [Managing Channels and Notifications](#)(see page 216)
- [Joining a Channel](#)(see page 219)

## 16.1 Types of Channels

Channels can be public or private. The organisation who created the channel will be its owner and will participate in all filters and graphs.

- Private Channel
- Other registered participants can only join upon accepting the invitation from the channel creator.
- Private channels will not be available for other organisations to request to join the channel
- Public Channel:
- Other registered participants can only join after either accepting the invitation from the channel creator or approval of its join request.
- Join request can be made by other organisations wanting to join the channel.
- Channel owner must approve the join requests.
- Public channels will be listed, so that other organisations can view their details

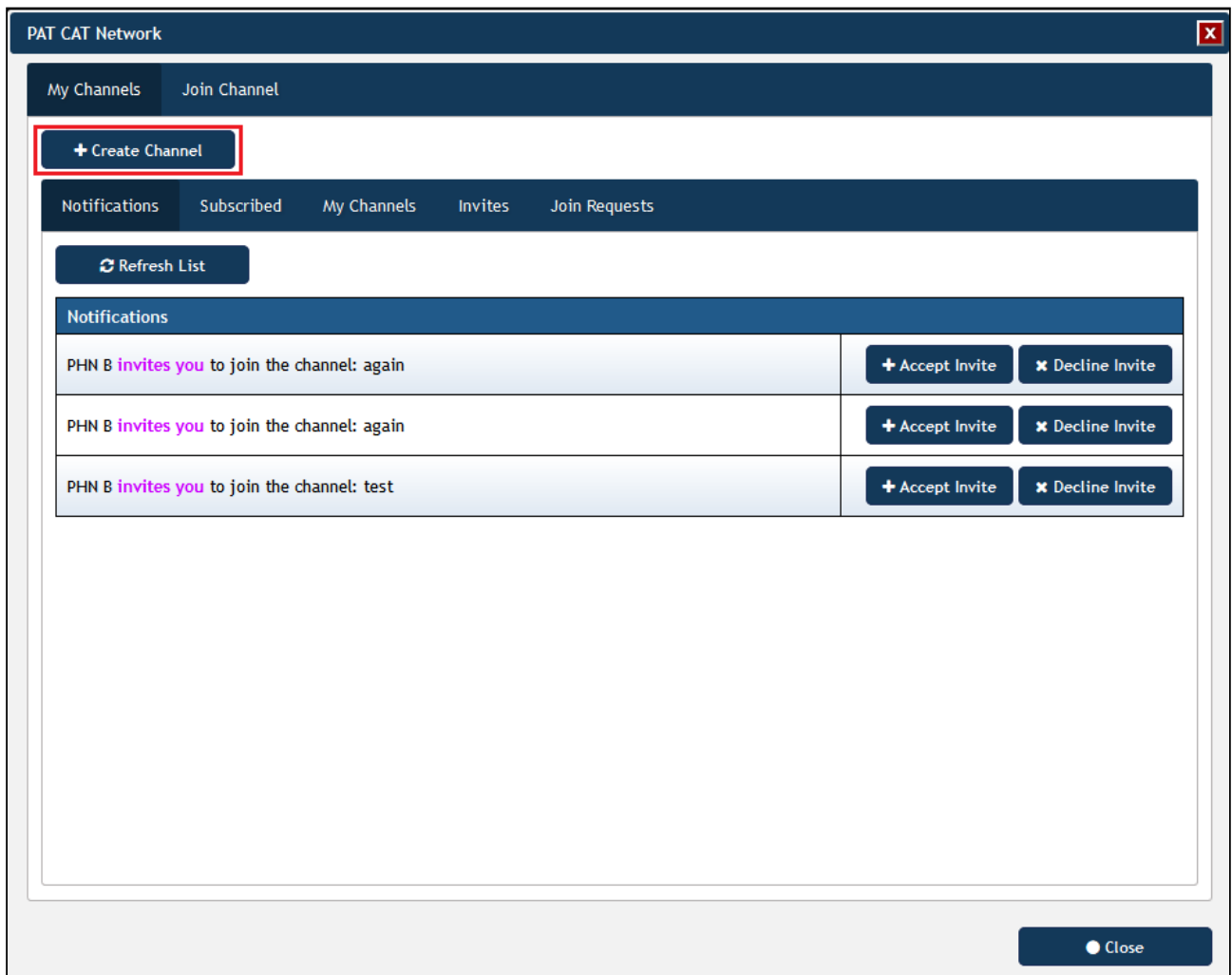
Channels contain the following information:

- Name
- Channel type (Public/Private)
- Graphs
- Filters

## 16.2 Creating a Channel

Channel creating makes data available immediately. This means that once all validations are passed and the user clicks to save a new channel, then the data will be available for transfer through the PCS Network and will be instantly available for viewing by another subscribed organisation.

Clicking on the '+ Create Channel' button will start the process.



A channel has to have a name and at least one filter and one graph. It needs to be given a public or private status.

Channel Details

Channel Name

Test Channel

Channel Type

Public

Filters

+ Add Filter

Click on 'Add Filter' to start adding filters into your channel

Graphs

+ Add Graph

Click on 'Add Graph' to start adding graphs into your channel

Save

Cancel

When adding a filter, PAT CAT will ask for a name. This name should describe the filter criteria used, as other organisations need to know what filter criteria have been applied. Once all filter criteria have been added and a name has been entered, the filter can be created.

! Practice based filters can't be added to a channel!

**Create Filter**

Filter Name:

General | Ethnicity | **Conditions** | Medications

**Chronic** | Mental Health | Other

<b>Diabetes</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Gestational <input type="checkbox"/> No	<b>Respiratory</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Asthma <input type="checkbox"/> No <input type="checkbox"/> COPD <input type="checkbox"/> No	<b>Cardiovascular</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Hypertension <input type="checkbox"/> No <input type="checkbox"/> Heart Failure <input type="checkbox"/> No <input type="checkbox"/> Cardiovascular Disease (CVD): <input type="checkbox"/> CHD <input type="checkbox"/> No <input type="checkbox"/> PVD <input type="checkbox"/> No <input type="checkbox"/> Stroke <input type="checkbox"/> No <input type="checkbox"/> Carotid Stenosis <input type="checkbox"/> No <input type="checkbox"/> MI <input type="checkbox"/> No <input type="checkbox"/> Renal Artery Stenosis <input type="checkbox"/> No	<b>Musculoskeletal</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inflammatory <input type="checkbox"/> No <input type="checkbox"/> Musculoskeletal <input type="checkbox"/> No <input type="checkbox"/> Bone Disease <input type="checkbox"/> No <input type="checkbox"/> Osteoporosis <input type="checkbox"/> No <input type="checkbox"/> Osteoarthritis <input type="checkbox"/> No	<b>Renal Impairment</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Chronic Renal Failure <input type="checkbox"/> No <input type="checkbox"/> Acute Renal Failure <input type="checkbox"/> No
--	--	--	--	---

[Clear Conditions](#)

[Clear Filters](#) [+ Create Filter](#) [Cancel](#)

All selected filter criteria will be listed as well as the name entered:

**Channel Details**

Channel Name:  Channel Type:

**Filters** [+ Add Filter](#)

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	active patients w...	Filtering By: Active Patients, Conditions: (Diabetes - YES)

[Remove Selected](#)

**Graphs** [+ Add Graph](#)

Click on 'Add Graph' to start adding graphs into your channel

Adding a Graph to a Channel is similar to adding a filter, clicking on the '+ Add Graph' button will show a list of all available graphs and you can select which graphs you want to share in this channel.



**Add Graph**

☒ Select All ☐ Clear Selection

- ☐ CV Event Risk Count
- ☐ CV Event Risk Exclude/Incomplete
- ☐ Demographics
- ☒ Diabetes Indicator
- ☒ Diabetes SIP Items Recorded
- ☒ Disease Prevalence
- ☐ DTP
- ☐ eGFR
- ☐ ES Age
- ☐ ES Uploads
- ☐ Ethnicity
- ☐ FBG
- ☐ FOBT Last Recorded
- ☐ FOBT Orders and Results
- ☐ FOBT Summary Report Card
- ☒ HbA1c
- ☐ HDL
- ☐ HPV
- ☐ Immunisation Child Schedule
- ☐ Indicated Diseases

**+ Add Graph** **Close**

After at least one filter and at least one graph have been added, the channel can be saved. Don't forget to set the type to Public or Private depending on your preferences. Public is the default setting for channels.

Channel Details

Channel Name

Test Channel

Channel Type

Public

Filters

+ Add Filter

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	active patients w...	Filtering By: Active Patients, Conditions: (Diabetes - YES)

Remove Selected

Graphs

+ Add Graph

<input type="checkbox"/>	Name
<input type="checkbox"/>	BP
<input type="checkbox"/>	Diabetes Indicator
<input type="checkbox"/>	Diabetes SIP Items Recorded
<input type="checkbox"/>	Disease Prevalence
<input type="checkbox"/>	HbA1c

Remove Selected

Save

Cancel

The new channel is now displayed (in alphabetical order) in the 'My Channel' tab.



PAT CAT Network

My Channels Join Channel

+ Create Channel

Notifications Subscribed **My Channels** Invites Join Requests


Refresh List

Name	Members	
Sample1234	PPHN A	+ Invite x Delete
demo13	PHN B, PPHN A	+ Invite x Delete
Test Channel	PPHN A	+ Invite x Delete

## 16.3 Inviting an Organisation to join a Channel

Only organisations who are registered as participants in the PAT CAT network will receive invitations to a channel. Only the owner/creator of a channel can send an invite to a channel. Invites will be shown in the invite list. An organisation can send a join request to the owner/creator of that public channel. Once the join request is accepted by the owner the channel will become available.

To invite an organisation to your channel, click on the '+ Invite' button:



PAT CAT Network

My Channels Join Channel

+ Create Channel

Notifications Subscribed **My Channels** Invites Join Requests

Refresh List

Name	Members	
Sample1234	PPHN A	+ Invite x Delete
demo13	PHN B, PPHN A	+ Invite x Delete
Test Channel	PPHN A	+ Invite x Delete

This will display another window showing a list of organisations that have registered for sharing data through the PAT CAT Network. Select those organisations you want to share your channel with and then click on '+ Invite PHN'.

The screenshot shows a window titled "Invite PHN" with a close button in the top right corner. Below the title bar, there are two buttons: "Select All" (with a checked checkbox icon) and "Clear Selection" (with an unchecked checkbox icon). The main content area is a list box containing four items, each with a checkbox: "PHN D" (checked), "PHN B" (checked), "PHN E" (unchecked), and "PHN C" (unchecked). At the bottom of the window, there are two buttons: "+ Invite PHN" and "Cancel".

All of your invites will be displayed on the 'Invites' tab, with each organisation listed separately. This will allow you to cancel individual invites if required.

PAT CAT Network ✕

My Channels Join Channel

+ Create Channel

Notifications Subscribed My Channels **Invites** Join Requests

Refresh List

1 2 3

Name	Members	PHN	
Sample1234	PPHN A	PHN E	✕ Cancel Invite
Sample1234	PPHN A	PHN C	✕ Cancel Invite
demo13	PPHN A, PHN B	PHN D	✕ Cancel Invite
demo13	PPHN A, PHN B	PHN C	✕ Cancel Invite
Test Channel	PPHN A	PHN D	✕ Cancel Invite
Test Channel	PPHN A	PHN B	✕ Cancel Invite

1 2 3

The organisations invited will see your invite under the Notifications tab. This is the view when logged in as PHN B:

PAT CAT Network

My Channels
Join Channel

+ Create Channel

Notifications
Subscribed
My Channels
Invites
Join Requests

Refresh List

Notifications	
PPHN A invites you to join the channel: A3general	+ Accept Invite × Decline Invite
PPHN A invites you to join the channel: PC	+ Accept Invite × Decline Invite
PPHN A invites you to join the channel: ZZZ	+ Accept Invite × Decline Invite
PPHN A invites you to join the channel: demo1	+ Accept Invite × Decline Invite
PPHN A invites you to join the channel: Demo11	+ Accept Invite × Decline Invite
PPHN A invites you to join the channel: Sample1234	+ Accept Invite × Decline Invite
PPHN A invites you to join the channel: Test Channel	+ Accept Invite × Decline Invite

Invitations can be accepted or declined. When accepted, the details of the channel are displayed and you can choose if you want to see (and share) all of the graphs or only some of them.



Remember that accepting an invite to a channel will give you access to the graphs in the channel AND will share your data across the same graphs!

Channel Details

Channel Name

Test Channel

Channel Type

Public

Filters

<input checked="" type="checkbox"/>	Name	Description
<input checked="" type="checkbox"/>	active patients w...	Filtering By: Active Patients, Conditions: (Diabetes - YES)

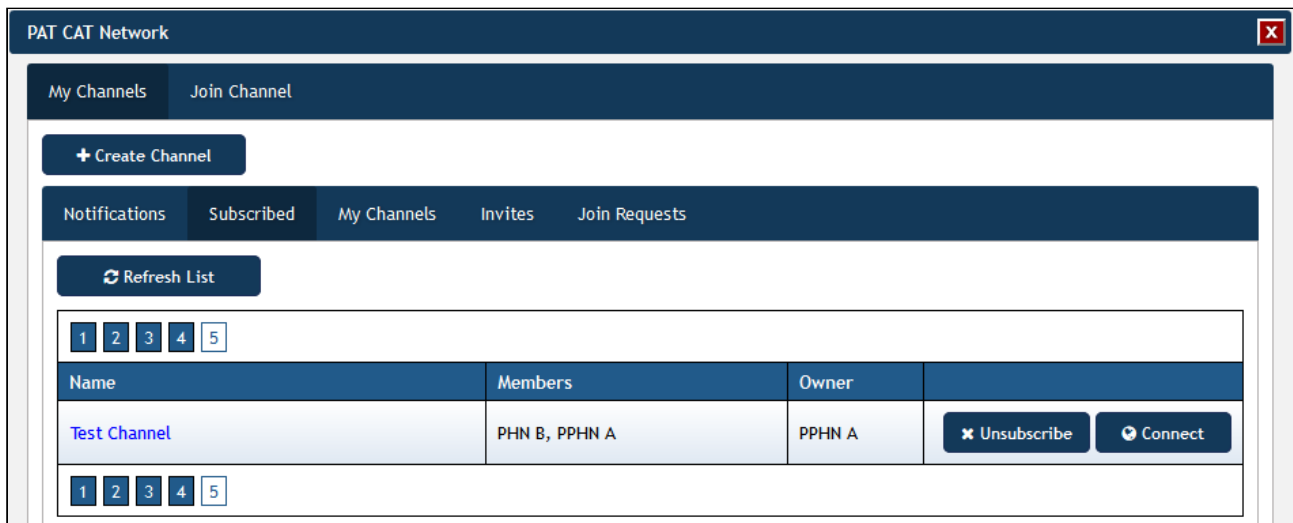
Graphs

<input checked="" type="checkbox"/>	Name
<input checked="" type="checkbox"/>	BP
<input checked="" type="checkbox"/>	Diabetes Indicator
<input checked="" type="checkbox"/>	Diabetes SIP Items Recorded
<input checked="" type="checkbox"/>	Disease Prevalence
<input checked="" type="checkbox"/>	HbA1c

Subscribe

Cancel

The new channel is now listed under your 'Subscribed' tab and you can connect to it to see the data from the other organisation(s).

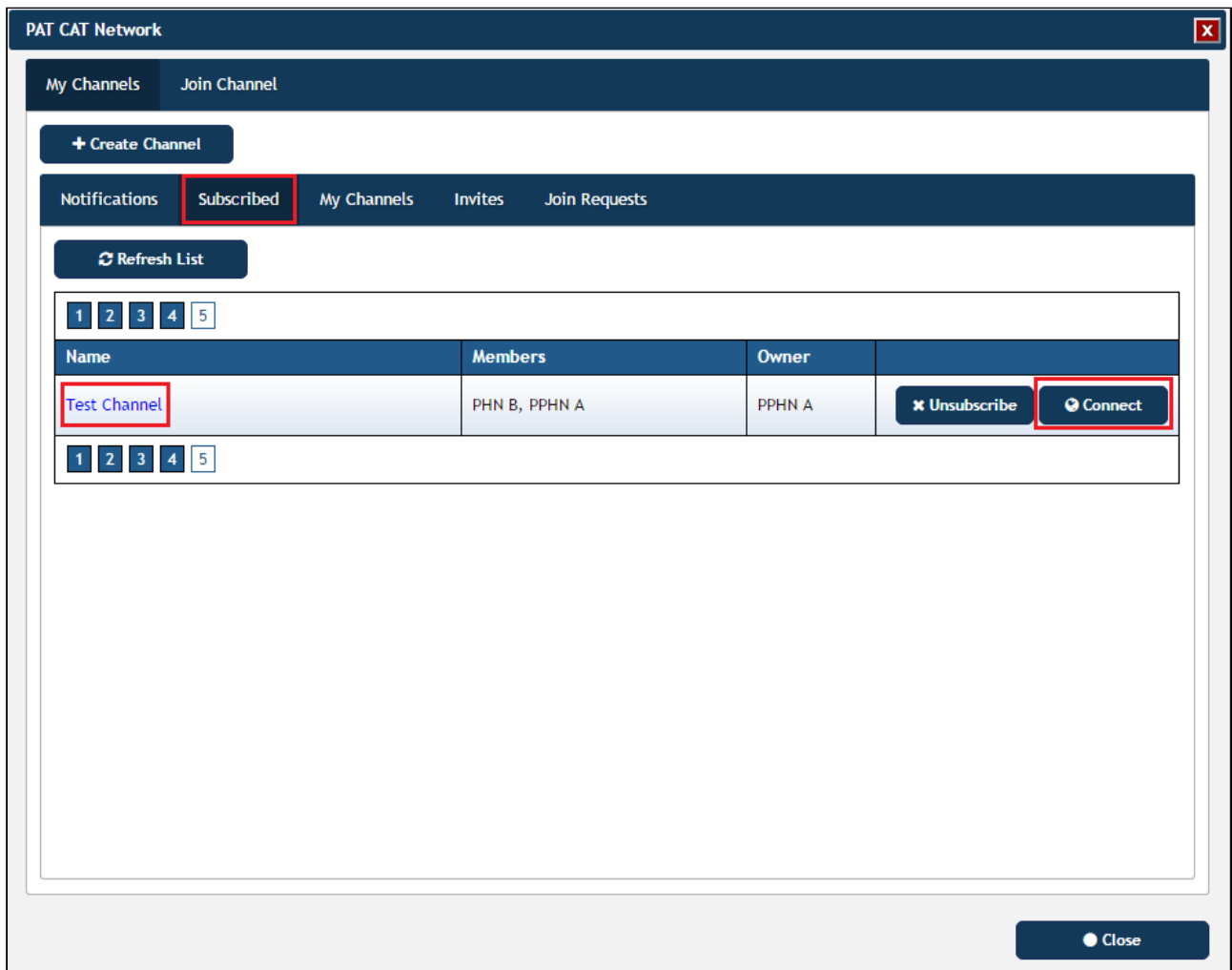


## 16.4 Working with Channels

Channels display shared data from other organisations as detailed in the channel description. A channel has to have at least one filter and one graph selected, but can have multiple of both. When you subscribe to a channel you automatically share your data with the owner(s) of that channel. Channels can be public or private - but information will not be shared without your consent for either type of channel. Public channels are visible to all organisations in the PAT CAT Network and an organisation can request to be part of any public channel. Private channels are only visible to the organisations specified by the channel creator.

Once you have received an invitation to a private channel or have been granted access to a public channel, the channels available to your organisation will be listed under the 'Subscribed' tab. The owner and other members of the channel will be listed, and you can connect or unsubscribe to/from a channel by clicking the respective button.





Once you connect to a channel, the following areas of PAT CAT will display the data from other organisations:

- Reports for the graphs that are available through the channel
- CSV and PDF download for the graphs that are available through the channel
- The data will be appended to the current grid
- The data will also be grouped, just like the current grouping functionality
- The data will be appended to the results
  - The data will also be grouped

PAT CAT will indicate which reports now contain shared information by placing a star next to the report name. The filter name and criteria for the channel are listed above the reports.



You need to select the channel filter to be able to see the data from the other organisations. Only filtered data is shared and the organisation who created the channel decides what filters and graphs will be shared in their channel!

Test Channel
Disconnect
Change

Filter Name

Filter Desc

active patients with diabetes

Filtering By: Active Patients, Conditions: (Diabetes - YES)

Select

Demographics
Ethnicity
Allergies
Smoking
Alcohol
Measures
Pathology
Disease
Screening
Co-morbidities
Medication
Diabetes SIP
CKD
Musculoskeletal
CV Event Risk
Immunisations
MBS Items
Visits
After Hours
Practice Data Quality Benchmark Report
Diabetes Indicators
Standard Reports
Digital Health

Diabetes Indicators
View Map
Show / Hide Columns
View Timeline
Download

There are hidden columns

No filters Applied for November 2016 audit month. Generated on 7/12/2016 12:25 PM

Measure	PPHN A	PPHN A %	Adjusted	Adjusted %
Total Population	14,902		1,683	
HbA1c <6%	143	0.96 %	24	1.43 %

The same report changes to display the channel data after clicking the 'Select' button to apply the filter. It now shows the total for all members of the channel and the details for all members of the channel, in this example PHN A and PHN B.

Test Channel
Disconnect
Change

Filter Name

Filter Desc

active patients with diabetes

Filtering By: Active Patients, Conditions: (Diabetes - YES)

Deselect

Filtering By: Active Patients, Conditions: (Diabetes - YES)

Demographics
Ethnicity
Allergies
Smoking
Alcohol
Measures
Pathology
Disease
Screening
Co-morbidities
Medication
Diabetes SIP
CKD
Musculoskeletal
CV Event Risk
Immunisations
MBS Items
Visits
After Hours
Practice Data Quality Benchmark Report
Diabetes Indicators
Standard Reports
Digital Health

Diabetes Indicators
View Map
Show / Hide Columns
View Timeline
Download

There are hidden columns

Filtering By: Active Patients, Conditions: (Diabetes - YES) for November 2016 audit month. Generated on 7/12/2016 12:27 PM

Measure	PPHN A	PPHN A %	Adjusted	Adjusted %	Test Channel	Test Channel %	PPHN A	PPHN A %	PHN B	PHN B %
Total Population	215		53		242		215		27	
HbA1c <6%	29	13.49 %	5	9.43 %	34	14.05 %	29	13.49 %	5	18.52 %

After connecting to a channel and selecting the channel filter the data will be displayed in your graph and the report view. In my example below I am logged on at PHN A and PHN B has shared their data with me through the 'Test Channel'. You can see the totals for the channel and for each channel participants listed in the Blood Pressure report below.

Blood Pressure

▲ Show / Hide Columns

There are hidden columns

Filtering By: Active Patients, Conditions: (Diabetes - YES) for November 2016 audit month. Generated on 7/12/2016 12:12 PM

Measure	PPHN A	PPHN A %	Adjusted	Adjusted %	Test Channel	Test Channel %	PPHN A	PPHN A %	PHN B	PHN B %	gp
Total Population	215		53		242		215		27		2
<= 130/80	19	8.84 %	3	5.66 %	23	9.50 %	19	8.84 %	4	14.81 %	0
> 140/90	50	23.26 %	8	15.09 %	53	21.90 %	50	23.26 %	3	11.11 %	0
No BP Recorded	120	55.81 %	36	67.92 %	138	57.02 %	120	55.81 %	18	66.67 %	2
Incomplete Data	10	4.65 %	2	3.77 %	12	4.96 %	10	4.65 %	2	7.41 %	0
> 130/80 and <= 140/90	16	7.44 %	4	7.55 %	16	6.61 %	16	7.44 %	0	0.00 %	0
Recorded	85	39.53 %	15	28.30 %	92	38.02 %	85	39.53 %	7	25.93 %	0

The displayed data can be customised through the 'Show / Hide Columns' button, which will show connected channel data as it does with the local data.

Show Hide Columns

Test Channel

☒ Test Channel
 

☒ PHN B
 ☒ PPHN A

Practice Groupings

☐ 1234
 

☐ BP LinkedEHR Test Clinic
 ☐ Jo.MD.Sky
 ☐ Jo.Sky\_TestClinic
 ☐ jo.testclinic
 ☐ sky.user2
 ☐ Test.BP
 ☐ test.md
 ☐ win10.topbar
 ☐ Zedmed.bigdata
 ☐ zedmed.new
 ☐ Zedmed.remote

☐ Ash
 

☐ AF.Topbar
 ☐ bp.zedmed
 ☐ Legacy Practice 20
 ☐ Legacy Practice 24

Individual Practices

☐ 8668-Topbar.win7
 ☐ 8723-Legacy Practice 20
 ☐ 8726-Legacy Practice 19
 ☐ 8730-new
 ☐ AF.Topbar
 ☐ AFMDtopbar
 ☐ ash.sky
 ☐ Ash.zedmedv24
 ☐ ash\_reg.bp
 ☐ BP LinkedEHR Test Clinic
 ☐ bp.zedmed
 ☐ deepti.test2
 ☐ Defect Test Clinic
 ☐ Eph Organisation
 ☐ Eph Organisation AAA
 ☐ Eph Organisation B
 ☐ Eph Organisation C
 ☐ Eph Organisation D
 ☐ Jo.MD.Sky
 ☐ Jo.Sky\_TestClinic

☐ Remember My Selections

Select All

Clear

Save

Close

## 16.5 Managing Channels and Notifications

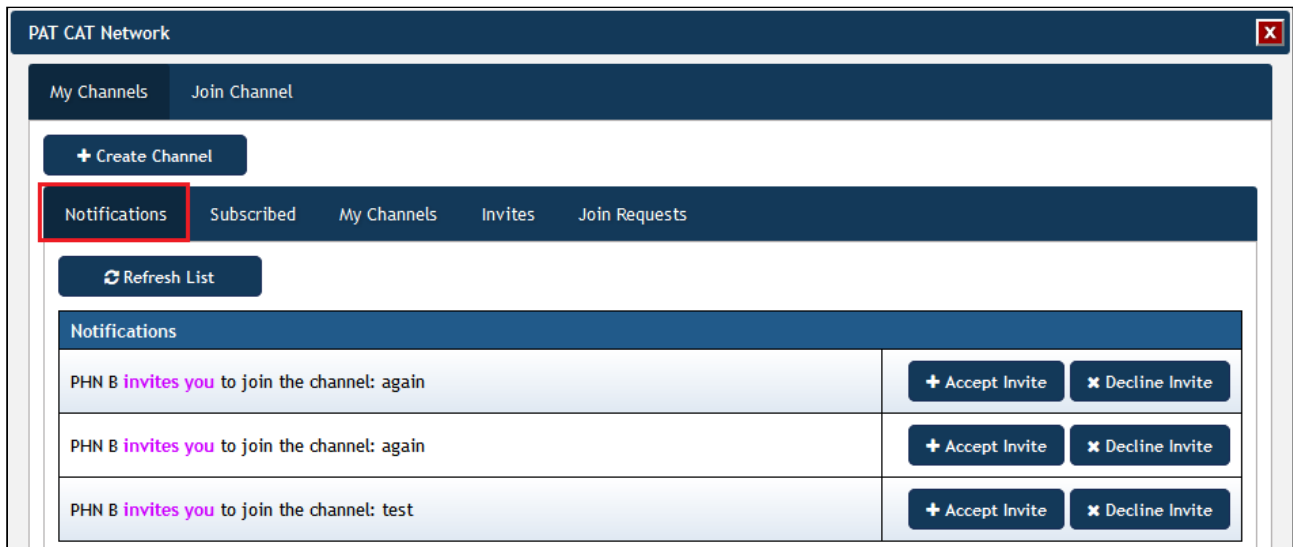
### 16.5.1 Notifications

A listing that displays all invites from other organisations and requests to join your channels by other organisations

Each notification in the listing will display the following info:

- Description of the notification.
  - For example:
    - organisation A wants to join Channel A

- organisation B invites you to join Channel ABC



You can accept or decline an invite.

## 16.5.2 Subscribed

A listing that displays all the channels the organisation is subscribed to.

Each items in the listing will display the following info:

- Channel Name
- Members (other subscribed organisations)
- The owner of the channel
- Ability to Unsubscribe
- Ability to Connect

Unsubscribing to a channel that the organisation owns, will require the organisation to select a new owner.

Organisations can connect to a channel by clicking on the “Connect” button. When connected, the Connect button will become “Disconnect”. The PAT CAT Filter section will change.

- The filter section will display the current connected Channel.
- Shows button to disconnect
- Shows button to Change Channel
- The filter section will only display a list of filters that the organisation has participated for the currently connected organisation
  - Each filter will display the filter name, description and button to select the filter

PAT CAT Network

My Channels

Join Channel

+ Create Channel

Notifications

Subscribed

My Channels

Invites

Join Requests

Refresh List

1 2 3 4 5 6 7 8 9 10 ... Last

Name	Members	Owner	
A1	PHN B, PHN C, PHN D, PHN E, PP...	PPHN A	<div>✕ Unsubscribe</div> <div>➕ Connect</div>
A2	PHN B, PHN C, PHN E, PPHN A	PPHN A	<div>✕ Unsubscribe</div> <div>➕ Connect</div>
A3general	PHN B, PHN D, PHN E, PPHN A	PPHN A	<div>✕ Unsubscribe</div> <div>➕ Connect</div>
A3general	PPHN A	PPHN A	<div>✕ Unsubscribe</div> <div>➕ Connect</div>
A4general	PHN B, PHN D, PPHN A	PPHN A	<div>✕ Unsubscribe</div> <div>➕ Connect</div>
D5general	PHN B, PHN E, PPHN A	PPHN A	<div>✕ Unsubscribe</div> <div>➕ Connect</div>
D6general	PHN B, PHN C, PPHN A	PPHN A	<div>✕ Unsubscribe</div> <div>➕ Connect</div>

1 2 3 4 5 6 7 8 9 10 ... Last

Close

### 16.5.3 My Channels

This tab will display all the channels the organisation has created

Each items in the listing will display the following info:

- Channel Name
- Members (other subscribed organisations)
- Ability to invite other organisations
- Ability to delete the channel

PAT CAT Network

My Channels Join Channel

+ Create Channel

Notifications Subscribed **My Channels** Invites Join Requests

Refresh List

Name	Members	
Sample1234	PPHN A	+ Invite x Delete
demo13	PHN B, PPHN A	+ Invite x Delete
Test Channel	PHN B, PPHN A	+ Invite x Delete

#### 16.5.4 Invites

The invites tab shows all invites you have created and allows to remove invites if required. Details on how to create an invite see here: [Inviting an organisation to join a Channel](#)(see page 207)

#### 16.5.5 Join Requests

When an organisations is interested in joining one or more of your public channels, the join request will be displayed here.

### 16.6 Joining a Channel

Public channels are displayed under the 'Join Channel' tab. This tab displays the name of the channel, the current members and the owner (creator) of the channel.

PAT CAT Network

My Channels

Join Channel

Refresh List

Name	Members	Owner	
again	PHN B	PHN B	+ Send Join Request
again	PHN B	PHN B	+ Send Join Request
test	PHN B	PHN B	+ Send Join Request

Close

Clicking on the name of the channel will display the details of filters and reports used in the channel:



Channel Details

Channel Name

Channel Type

Public

Filters

Name	Description
test	Filtering By: Indigenous

Graphs

Name
Demographics
Diabetes Indicator

Close

## 17 PAT CAT BI Module



PAT BI will offers granular data in a fully supported and documented database, running along your current PAT CAT database to allow an easy connection of a Business Intelligence tool of your choice. Full details of the database and requirements are here:

- [PAT BI Details](#)(see page 222)

A presentation by Luke Molony from Aginic and a recorded webinar are available below:

[Aginic PAT CAT BI Module Presentation.pdf](#)<sup>48</sup>

[BI Module Webinar - June 2017](#)<sup>49</sup>

### 17.1 PAT BI Details



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<sup>48</sup> <https://help.pencs.com.au/download/attachments/14025001/PenCS-BISchemaPreso.pdf?api=v2&modificationDate=1499122831057&version=1>

<sup>49</sup> <https://help.pencs.com.au/download/attachments/14025001/patcatbidemo.mp4?api=v2&modificationDate=1499123154340&version=1>



Pen CS will be opening up the full capability of PAT CAT through a purpose built API.

#### Taking Your Population Health Reporting to the Next Level

The PAT BI database provides unprecedented access to the data derived and submitted from CAT4 to your PAT CAT. A purpose built granular database designed for use with Business Intelligence (BI) Tools such as Qlik, Power BI etc. empowers your PHN/ACCHO to explore the depth of data currently at your disposal. Practice data is stored at patient level with an encrypted unique patient identifier allowing for comprehensive longitudinal reporting.



#### KEY FEATURES

- Uninterrupted access to your data
- Granular patient level database structure
- Fully documented database schema
- Includes PAT CAT database cleaning tools and services
- Capacity for patient and practice longitudinal reporting
- If you are using the Pen CS Geocoding Service you will have the added advantage of bringing together your practices CAT4 clinical data with additional data sets using the exposed Statistical Area 2 (SA2) codes. Each patient, in CAT4, has their address mapped to a SA2 code. Once an SA2 code is assigned to a patient, it can be linked to data sets available outside of the practice clinical information system such as immunisation rates and ABS data.

#### 17.1.0.1 PAT BI Database Server Specifications

	Minimum Requirements	Recommended Requirements
<b>Operating System</b>	Windows Server 2012 (Standard/R2) X64 or higher	
<b>Processor</b>	8 Logical Cores	32 Logical Cores or more
<b>RAM</b>	16 GB	64 GB or more
<b>Hard Disk</b>	500 GB*	1 TB* or more
<b>Microsoft .NET Framework</b>	.NET 3.5, 4.5 and 4.6.1	
<b>Database</b>	Microsoft SQL Server 2014 Standard Edition	Microsoft SQL Server 2016 Standard Edition
<b>Other Requirements</b>	<ul style="list-style-type: none"> <li>• SQL Server Management Studio</li> <li>• Mixed Mode Authentication</li> <li>• SQL Server Agent</li> <li>• Firewall exception for connectivity</li> <li>- Standard SQL server ports are</li> <li>• TCP 1433</li> <li>• UDP 1434</li> <li>• Remote access facilities for installation and maintenance by Pen CS</li> <li>• with local admin privileges and database owner privileges</li> </ul>	
<b>Operational Requirements</b>	<ul style="list-style-type: none"> <li>• We recommend having an experienced database administrator to maintain the database and the server</li> <li>• The PHN holds the sole responsibility to protect and/or manage the database (including related artifacts) and the server</li> </ul>	

\* Refer to the Estimated Database Size Growth table.

## 17.1.0.2 Estimated Database Size Growth

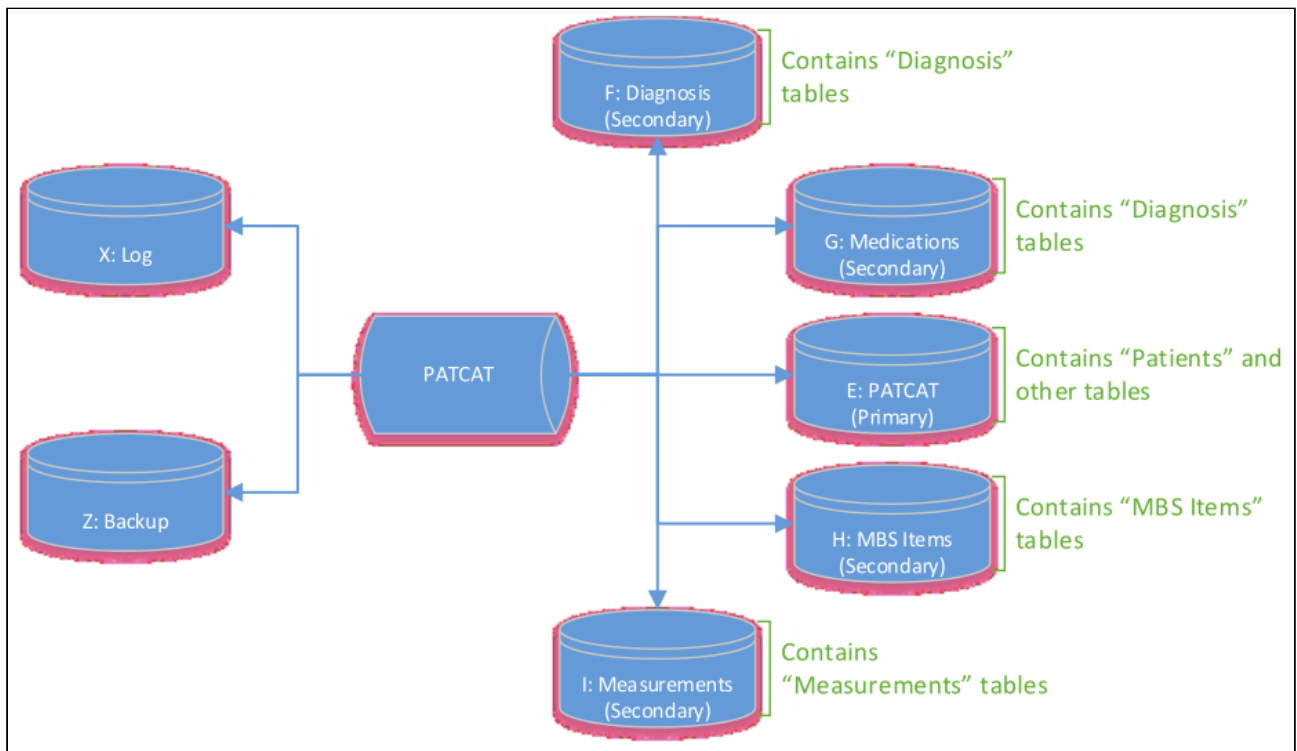
<b>Patients per Extract</b>	<b>Total Practices</b>	<b>Total Duration of Submission (months)</b>	<b>Total Patients for the Duration</b>	<b>Estimated Size (GB)</b>
12,000	250	3	9,000,000	140
12,000	250	6	18,000,000	279
12,000	250	9	27,000,000	419
12,000	250	12	36,000,000	558
12,000	250	15	45,000,000	698
12,000	250	18	54,000,000	837
12,000	250	21	63,000,000	977
12,000	250	24	72,000,000	1,116
12,000	250	27	81,000,000	1,256
12,000	250	30	90,000,000	1,395
12,000	250	33	99,000,000	1,535
12,000	250	36	108,000,000	1,674
12,000	250	39	117,000,000	1,814
12,000	250	42	126,000,000	1,953
12,000	250	45	135,000,000	2,093
12,000	250	48	144,000,000	2,232
12,000	250	51	153,000,000	2,372

<b>Patients per Extract</b>	<b>Total Practices</b>	<b>Total Duration of Submission (months)</b>	<b>Total Patients for the Duration</b>	<b>Estimated Size (GB)</b>
12,000	250	54	162,000,000	2,511
12,000	250	57	171,000,000	2,651
12,000	250	60	180,000,000	2,790
12,000	250	63	189,000,000	2,930
12,000	250	66	198,000,000	3,069
12,000	250	69	207,000,000	3,209
12,000	250	72	216,000,000	3,348
12,000	250	75	225,000,000	3,488
12,000	250	78	234,000,000	3,627
12,000	250	81	243,000,000	3,767
12,000	250	84	252,000,000	3,906
12,000	250	87	261,000,000	4,046
12,000	250	90	270,000,000	4,185

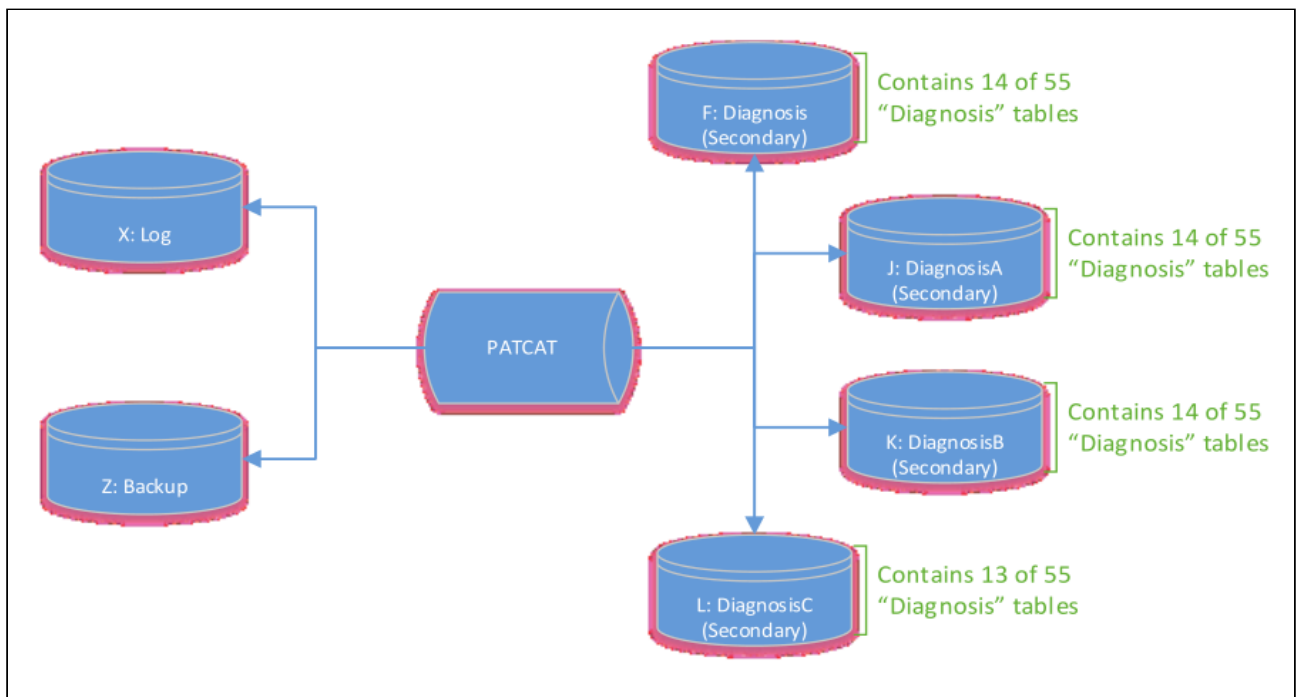
"Estimated Size (GB) = ((Patients Per Extract × Total Practices × Total Duration) / 1,000,000) × 15.50

### 17.1.0.3 Complex Database Storage

Data growth will eventually hit a limit where increasing disk space is no longer possible. In order to solve the limit issue, we can split the data into multiple drives. Splitting data over multiple disk increases performance of read and writes operations as this spreads the I/O loads, allowing for parallel queries and specific backup/restore of data.



When a drive reach its storage limit, it's possible to split the data into multiple drives. An example (below) shows the Diagnosis split into 4 disks (other secondary tables has been omitted).



**Important:** Splitting data into multiple disk incurs a maintenance overhead and complexity in backups, they should be reviewed when splitting data into multiple disks. We recommend having an experienced database administrator to maintain the database and the server. The PHN holds the sole responsibility to protect and/or manage the database (including related artifacts) and the server

Large databases are the domain of a DBA/System engineer for a large database. The below items form the basis of the decision that a DBA/System engineer will need to make as the database grows. These include but are not limited to:

<ul style="list-style-type: none"> <li>• <b>Data Disk</b> o Quality SSD etc</li> <li>• Size (one large, many small)</li> <li>• Disk Controllers (number of, disk per controller, quality of, speed, cache size) o RAID</li> <li>• Type (SAN, NAS, DAS)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>CPU</b> <ul style="list-style-type: none"> <li>• Type</li> <li>• Speed</li> <li>• Number of</li> <li>• Number configured for SQL Server</li> </ul> </li> <li>• <b>Memory</b> <ul style="list-style-type: none"> <li>• Type</li> <li>• Speed</li> <li>• Total Size</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>High Availability</b> <ul style="list-style-type: none"> <li>• failover clustering</li> <li>• Database mirroring</li> <li>• Log Shipping</li> <li>• Replication</li> <li>• Scalable shared data</li> </ul> </li> <li>• <b>Network</b> <ul style="list-style-type: none"> <li>• Type</li> <li>• Speed</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• <b>Backup/ Restoration Plan</b> <ul style="list-style-type: none"> <li>• Recovery Model</li> <li>• Full backup cycle</li> <li>• Differential backup cycle</li> <li>• Log backup</li> <li>• Restoration procedures</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Maintenance Plan</b> <ul style="list-style-type: none"> <li>• Data and log file management (size of files)</li> <li>• Index fragmentation (when to defrag)</li> <li>• Statistics (when to recalculate)</li> <li>• Corruption detection</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Monitoring</b> <ul style="list-style-type: none"> <li>• All of the above</li> <li>• Long running queries</li> <li>• File growth</li> <li>• Number of users/ applications</li> </ul> </li> </ul>

In addition to the PAT BI Database you also get a detailed Database Schema document that will explain exactly how the database tables are connected to each other. Below is a sample template of the PAT BI Database Schema,

Medication_Hormone_Replacement_Therapy_Oestrogen_Only			
---	--	--	--




Active	bit	Yes	<p>The status of 'Hormone Replacement Therapy Oestrogen Only'. This will either be True, False or NULL. For example:</p> <ul style="list-style-type: none"> <li>• Patient has an active (True) 'Hormone Replacement Therapy Oestrogen Only'</li> <li>• Patient has an inactive (False) 'Hormone Replacement Therapy Oestrogen Only'</li> <li>• Patient does not have (NULL) 'Hormone Replacement Therapy Oestrogen Only'</li> </ul>
End_Date	datetime	Yes	The end date and time of 'Hormone Replacement Therapy Oestrogen Only'
ExtractID	bigint	No	The reference identifier of an extract. Use this column to query data for an extract or collection of extracts
ID	bigint	No	The primary key and seed
PatientID	bigint	No	The reference identifier of the patient. Use this column to query data for a patient or collection of patients
Prescription_Date	datetime	Yes	The date and time of the prescription

## 18 The Geocoding Process

The Clinical Audit Tool encryption, de-identification and geocoding process ensures that any patient data leaving a practice is kept secure and private, whilst also allowing aggregation and geospatial representation of this data. The process may be summarised as follows:

1. Data is collected from the clinical information system and saved as an encrypted extract file
2. Data is de-identified via the FAT CAT process (Filtering and Anonymisation Tool for CAT)
3. The de-identified data is tagged with a unique and encrypted code that can be matched with a geographical location in PAT CAT
4. Data is aggregated in PAT CAT

 Please note that the Australian Bureau of Statistics has updated their SA2 ([full definition here](#)<sup>50</sup>) areas after the 2016 census. PAT CAT mapping will be updated to the new mapping as detailed [here](#)<sup>51</sup> - currently planned over the 2017 Christmas period.

- [Data Encryption](#)(see page 230)
- [Data De-identification](#)(see page 231)
- [Geocoding](#)(see page 231)
- [FAQ Geocoding](#)(see page 232)

### 18.1 Data Encryption

Users of CAT4 are responsible for the safety of the extracted data just as they are responsible for any other patient data collected in a clinic. To minimise the potential for misuse of the extract files CAT4 has a number of data security features built into it:

When the practice staff presses the 'Collect' Button in CAT4, to create a report, two files are produced. The two files produced by CAT4 are encrypted to ensure the data can only be viewed within CAT. A de-identified data file can be created within CAT4 using the 'de-identify dataset' tool. This is the only data file that can be exported and taken off-site by

- using the CAT4 'Send To' function (recommended) - full details are here: [Sending data](#)<sup>52</sup>

This is recommended as it:

- provides password protection and encryption options so the file can be sent securely,
- keeps a history log of where and when the file has been sent and by which user login, and
- ensures that the practice has control over sending the file.

Patients who have withdrawn their consent to share data can be flagged in CAT. This will remove them from the de-identified data file. For details see here: [Patient Consent Withdrawn - Opt Out](#)<sup>53</sup>

<sup>50</sup>[http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%252520Subject/1270.0.55.001~July%2525202016~Main%252520Features~Statistical%252520Area%252520Level%2525202%252520\(SA2\)~10014](http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%252520Subject/1270.0.55.001~July%2525202016~Main%252520Features~Statistical%252520Area%252520Level%2525202%252520(SA2)~10014)

<sup>51</sup><http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/1270.0.55.001Appendix7July%25202016?opendocument&tabname=Notes&prodno=1270.0.55.001&issue=July%25202016&num=&view>

<sup>52</sup> <https://help.pencs.com.au/display/CG/Sending+data>

<sup>53</sup> <https://help.pencs.com.au/display/CG/Patient+Consent+Withdrawn+-+Opt+Out>

## 18.2 Data De-identification

The data de-identification and geocoding process occurs through the De-identify Dataset / Add GTAGs functionality included in CAT4.

When an extract is run through the De-identify Dataset / Add GTAGs functionality;

- all patients who have withdrawn consent for their data to be used in clinical research are removed;
- the extract is de-identified by removing all identifiable information such as name, address and date of birth. The only personal information which remains in a de-identified extract is gender, ethnicity and the age of a patient in years.

de-identified data refers to patient clinical data (e.g. diagnosis, measurements, pathology etc) that does not contain information that can be used to reverse identify the patient. De-identified data is permissible for use where it is not practicable to obtain informed consent for use of data. PEN CS has provided tools within CAT4 that can be run by the practice to create a de-identified patient data set. These tools are collectively known as FAT CAT, the Filtering and Anonymisation Tool for CAT. They are incorporated into CAT4.

FAT CAT ensures that the de-identified data extract produced by Classic CAT strictly adheres to the National Privacy Principles.

- The Filtering process removes any patients who have withdrawn their consent to share data from the de-identified dataset. These patients can be flagged within CAT (Refer [CAT Patient Consent Withdrawn Quick Reference Guide](#)<sup>54</sup>).
- The Anonymisation process de-identifies the data. All patient information that is identifiable or partially identifiable is removed from the de-identified extract (e.g. name, address, postcode, date of birth, Medicare number etc).

Classic CAT de-identified data files that have been through the FAT CAT process are tagged as “certified”. PAT CAT recognises FAT CAT “certified” data files and these are the only data files that PAT CAT will import and display and rejects the files that were not FAT CAT “certified”.

## 18.3 Geocoding

The geo-coding process is achieved by the following steps:

1. CAT separating the patients address from de-identified demographic and clinical information to ensure they are never held anywhere together outside the practice.
2. CAT tagging the de-identified data with a unique and encrypted code so on arrival in PAT CAT it can be matched to a geographical location. This code has no meaning outside the PAT CAT system.
3. CAT sending the address securely to an Australian based mapping service which returns the geospatial location information for each address for usage by PAT CAT.
4. These codes are used to create a map in PAT CAT utilising the geospatial location information matched with the de-identified data to create a map displaying the number of patients with a specific profile and how they are distributed. This provides the ability to correlate patient problems with location and look for patterns.
5. PAT CAT will not display patients in an area where the number drops below 5.

---

<sup>54</sup> <https://help.pencs.com.au/display/CG/Patient+Consent+Withdrawn+Settings>

To ensure patient privacy, all mapping of patient data in PAT CAT is of aggregated data, individual patients are never shown. In fact it requires at least five patients to be present within a map segment (SA2) for any information to be shown.

## 18.4 FAQ Geocoding

### **How are the extracts geocoded ?**

The extracts are geocoded when they are created each month.

### **If there is more than one patient at a practice at the same address are two geocodes required ?**

No, the same geocode can be used for multiple patients.

### **Can CAT4 Extracts be retrospectively geocoded ?**

Generally geocoding is set up to geocode an extract using scheduler when the extract is sent to PAT CAT. It is possible to retrospectively geocode an extract, however it requires logging on to the practice and manually geocoding it and sending it to PAT CAT.

### **Does the PHN need to get permission from the practice to geocode the data?**

It is up to the PHN to establish the agreement with the practice.

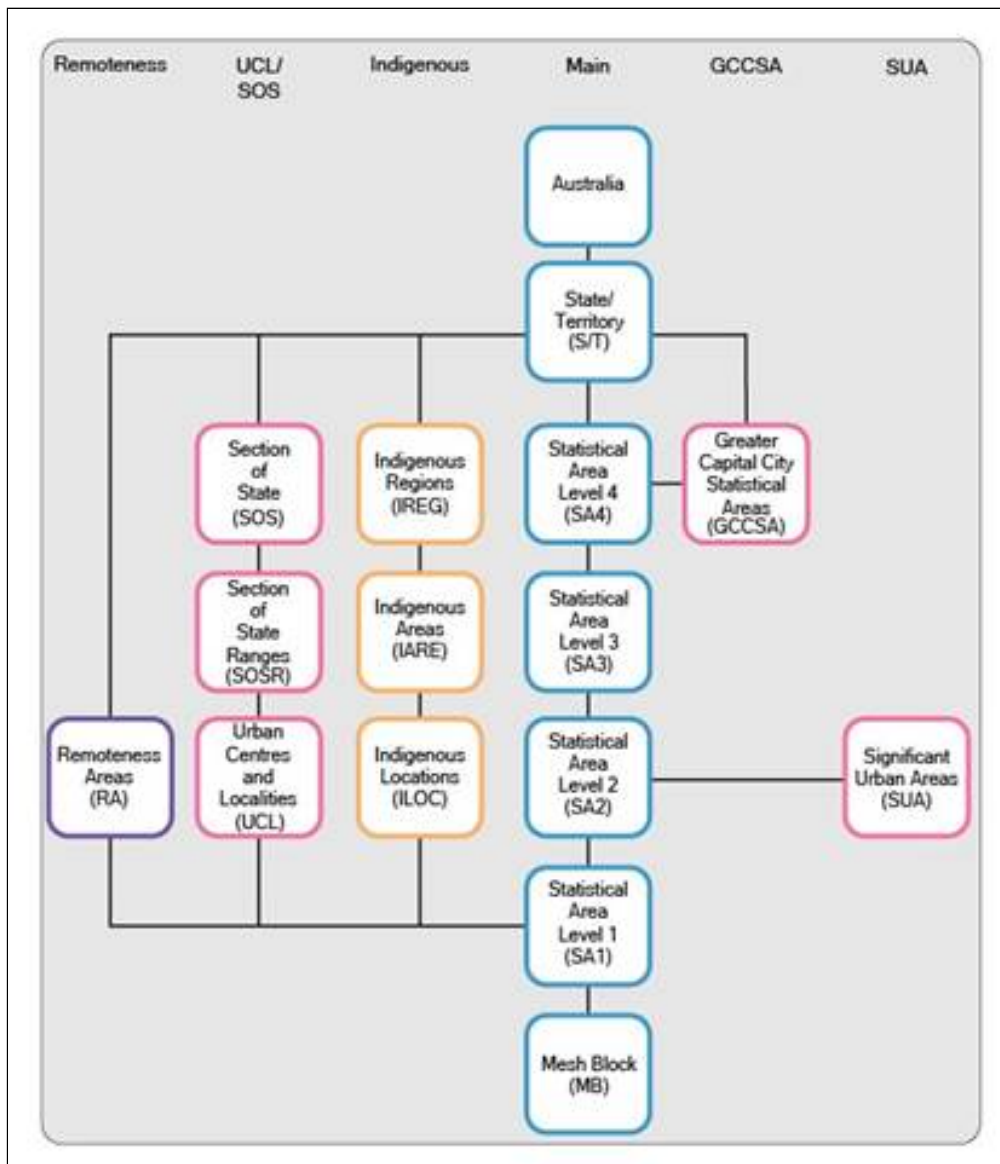
### **Is it possible to get the geocoded output an spreadsheet file?**

Yes but this will require some configuration changes and possibly ethical clearance, please contact PEN CS for further information.

### **What privacy safeguards are in place with geocoding ?**

If there are less than 5 patients in an SA2, then no data will be displayed.

### **What is the hierarchy of SA Codes ?**



What are the differences between SA1, SA2, SA3, AND SA4 ?

SA	Number	Approximate Population	Average Population
SA4	88	300,000-500,000	Regional 100,000-300,000 Metro 300,000-500,000
SA3	333	30,000-130,000	130,000
SA2	2,196	3,000-25,000	10,000

SA1	Approx 55,000	200-800	400
-----	---------------	---------	-----

**Where do I find out more information about what a SA2 and SA3 are ?**

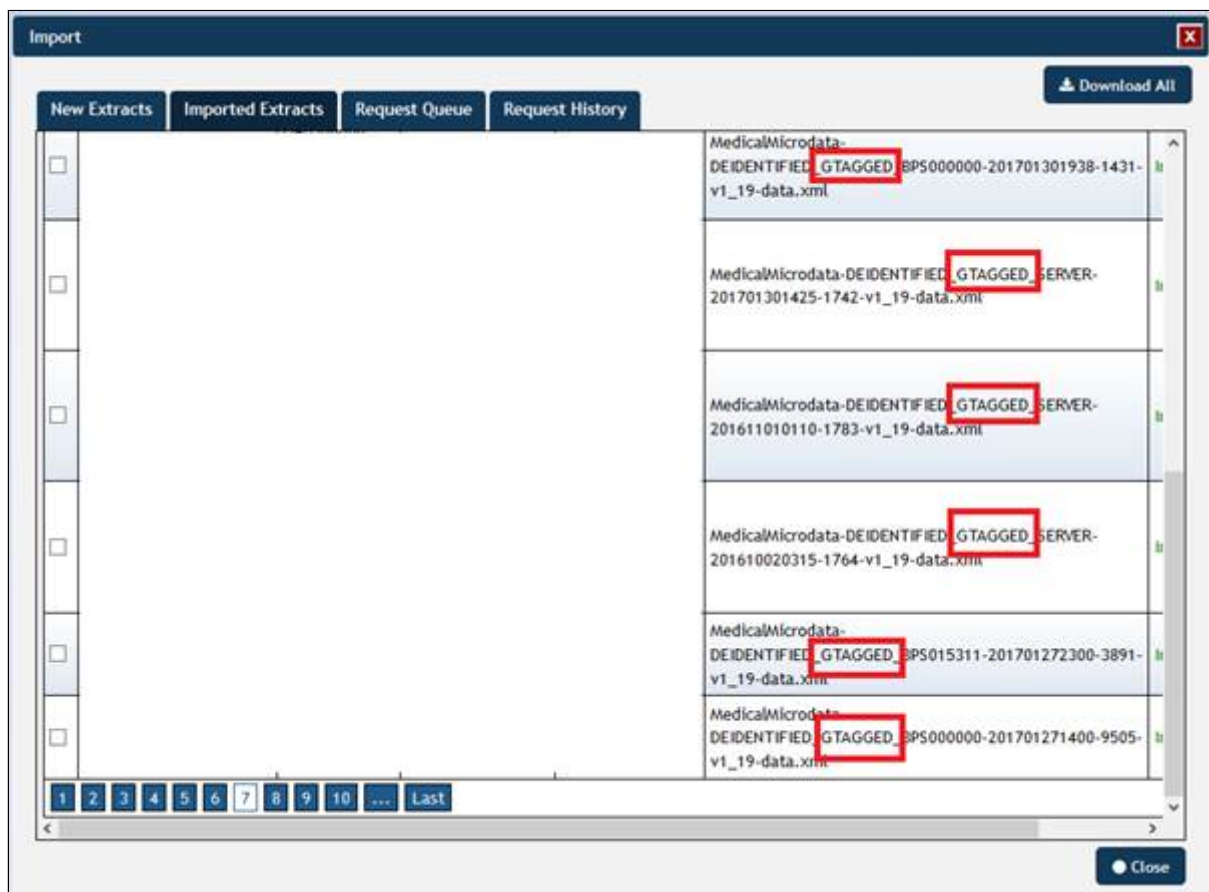
<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001~July%202016~Main%20Features~Main%20structure~10002>

**Is there a National Map that shows the different statistical areas?**

<http://stat.abs.gov.au/itt/r.jsp?ABSMaps>

**How do I tell if an extract has been Geocoded?**

The name of the extract will have the word GTAGGED in the file name as shown below. This can be accessed from the 'Import' window in PAT CAT



**Why does PAT CAT Mapping use SA codes instead of post codes ?**

Post codes could be potentially identifiable data when used in conjunction with statistical medical information, SA codes can effectively balance the need for accuracy and patient data.

**Is it possible to show just the adjusted patients ?**

At this stage this is not possible.

To find out more about adjusted patients click here (<http://help.pencs.com.au/display/ds/Adjusted+Column+Details>)

**Where would I find a list of concordances for the PHN ?**

<http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Concordances>

**Is it possible to produce shapefiles?**

Not at this stage.

**Where is the presentation that was shown about this functionality?**

You can find the presentation on the home page at [DOWNLOAD ALL PAT CAT USER GUIDES AS PDF](#)(see page 237)

**What does the \* next to a practice or organisation name mean?**

The \* indicates that there are less than five patients in one or more SA2 for the practice or organisation. Please refer to [Privacy restrictions on the display of Aggregated Data](#)(see page 176) for full details on this feature.

**What happened to the new SA2 areas introduced 2017?**

Please note that the Australian Bureau of Statistics has updated their SA2 ([full definition here](#)<sup>55</sup>) areas after the 2016 census. PAT CAT mapping has been updated to the new mapping as detailed [here](#)<sup>56</sup>

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<sup>55</sup>[http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%252520Subject/1270.0.55.001~July%2525202016~Main%252520Features~Statistical%252520Area%252520Level%2525202%252520\(SA2\)~10014](http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%252520Subject/1270.0.55.001~July%2525202016~Main%252520Features~Statistical%252520Area%252520Level%2525202%252520(SA2)~10014)

<sup>56</sup><http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/1270.0.55.001Appendix7July%25202016?opendocument&tabname=Notes&prodno=1270.0.55.001&issue=July%25202016&num=&view>

## 19 Presentations and PAT CAT user guides in PDF

### 19.1 User Guides

[PAT CAT USER GUIDE](#)<sup>57</sup>

### 19.2 Quick Reference Guides

[CAT PLUS PROMPTS IN PAT CAT](#)<sup>58</sup>

[UPLOAD DATA TO PAT CAT](#)<sup>59</sup>

### 19.3 Presentations

[Geocoding Presentation April 2017](#)(see page 236)

[PAT CAT BI Module Aginic Presentation.pdf](#)<sup>60</sup>

[PAT CAT BI Module Webinar Video June 2017](#)<sup>61</sup>

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<sup>57</sup> <http://help.pencs.com.au/rest/scroll-pdf/1.0/sync-export?exportSchemeld=-C0A8017201515F731D00A9F0627BD246&rootPageld=1475799>

<sup>58</sup> <http://help.pencs.com.au/rest/scroll-pdf/1.0/sync-export?exportSchemeld=-C0A8017201515F731D00A9F0627BD246&rootPageld=1477751>

<sup>59</sup> <http://help.pencs.com.au/rest/scroll-pdf/1.0/sync-export?exportSchemeld=-C0A801720154C263F49CDE007B12C50&rootPageld=1476226>

<sup>60</sup> <http://help.pencs.com.au/download/attachments/14025001/PenCS-BISchemaPreso.pdf?version=1&modificationDate=1499122831057&api=v2>

<sup>61</sup> <http://help.pencs.com.au/download/attachments/14025001/patcatbidemo.mp4?version=1&modificationDate=1499123154340&api=v2>



## 20 DOWNLOAD ALL PAT CAT USER GUIDES AS PDF

### 20.1 Presentations

[Geocoding Presentation.pdf](#)<sup>62</sup>

[PAT CAT BI Module Aginic Presentation.pdf](#)<sup>63</sup>

[PAT CAT BI Module Webinar Video June 2017](#)<sup>64</sup>

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<sup>62</sup> <https://help.pencs.com.au/download/attachments/14025089/Geocoding%20Presentation.pdf?api=v2&modificationDate=1499228500370&version=1>

<sup>63</sup> <http://help.pencs.com.au/download/attachments/14025001/PenCS-BISchemaPreso.pdf?version=1&modificationDate=1499122831057&api=v2>

<sup>64</sup> <http://help.pencs.com.au/download/attachments/14025001/patcatbidemo.mp4?version=1&modificationDate=1499123154340&api=v2>

## 21 PAT Programs



PAT Programs enables PHNs/ACCHOs to report on the patient health outcomes who are participating in a quality improvement or any other program.

A PAT Program is set-up using PAT CAT's existing filters and reports. You can nominate your program name, create a program logo and a Topbar Program App icon. Then select your patient inclusion criteria, enrol your practices participating in the Program and you are ready to start using PAT Programs.

From now any time a patient who meets your program's patient inclusion criteria presents at a participating practice, Topbar will notify the provider. Notifications can provide an option to enrol the patient in your Program or alternatively launch a website of your choosing to provide the health professional of education. This can work very well with HealthPathWays as you can specify a URL that meets the patient's needs or provides.

You can watch our videos on PAT Programs here:

[Creating a PAT Program \(7 minute video\)](#)<sup>65</sup>

[Configuring and Reporting for PAT Programs \(6 minute video\)](#)<sup>66</sup>

This guide will show you how to set up a program. To receive prompts created by PAT Programs you will need Topbar installed, the relevant guide for the Topbar app can be found here: [PAT Programs App](#)<sup>67</sup>

- [PAT Programs - Creating a new Program](#)(see page 238)
- [PAT Programs - Prompts Behaviour Configuration](#)(see page 247)
- [Pat Programs - Hyperlinks configuration](#)(see page 249)
- [PAT Programs - Adding Practices to a Program](#)(see page 252)
- [PAT Programs - Reporting](#)(see page 255)

### 21.1 PAT Programs - Creating a new Program

This guide describes how to create a new program in PAT CAT, in this example it is an enrolment prompt. To see the PAT Program functionality in Topbar please see here: [PAT Programs App](#)<sup>68</sup>

To create a new PAT Program you will need to be logged into PAT CAT and then click on the PAT Program link on top of your screen:

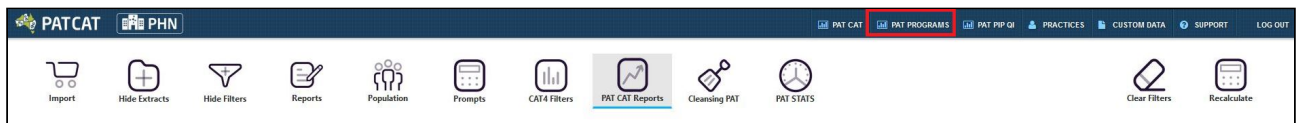
---

<sup>65</sup> <https://vimeo.com/258739296>

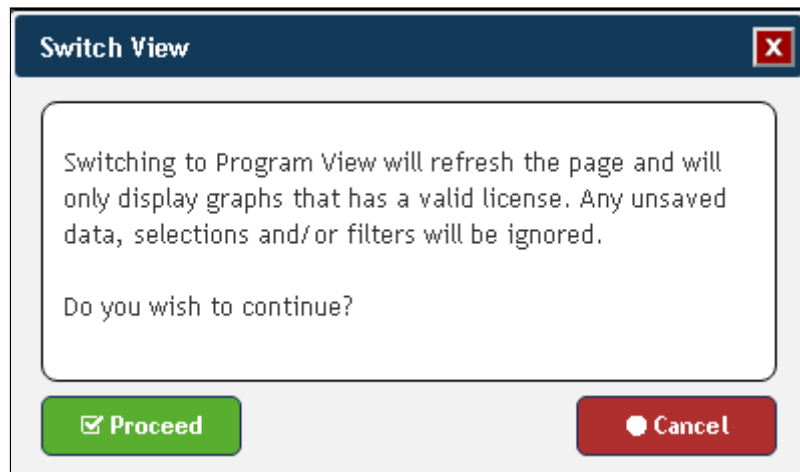
<sup>66</sup> <https://vimeo.com/258739214>

<sup>67</sup> <https://help.pencs.com.au/display/TUG/PAT+Programs+App>

<sup>68</sup> <https://help.pencs.com.au/display/TUG/PAT+Programs+App>



This will switch into the PAT Programs view preceded by a warning window. Click on "Proceed" to switch views:



The Program View is nearly identical to PAT CAT, but has different functionality and one additional icon to manage your programs:



To create a new program you need to decide if you want to use a filter or if you want to work with reports only. The actual program creation is very similar to the way a PAT CAT Prompt is created (see here for details on PAT CAT Prompts: [Creating a Prompt in PAT CAT](https://help.pencs.com.au/display/CR/Find+patients+with+high+cholesterol+eligible+for+My+Health+For+Life) (see page 191))

In this example we will use a filter based on the My Health For Life recipe on how to find patients with high cholesterol who are on lipid lowering medication (details here: [Find patients with high cholesterol eligible for My Health For Life](https://help.pencs.com.au/display/CR/Find+patients+with+high+cholesterol+eligible+for+My+Health+For+Life)<sup>69</sup>)

The recipe details that the population we are interested in has no existing diagnosis of diabetes, Heart Failure, CVD or chronic kidney disease, so we will apply this filter first on the Conditions tab:

<sup>69</sup> <https://help.pencs.com.au/display/CR/Find+patients+with+high+cholesterol+eligible+for+My+Health+For+Life>

General	Practices	Ethnicity	Conditions	Medications	Results	Patient Status	Health Care Homes	Saved Filters	
<div> <div>Chronic</div> <div>Mental Health</div> <div>Other</div> </div>									
<b>Diabetes</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gestational <input type="checkbox"/> No		<b>Respiratory</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Asthma <input type="checkbox"/> No <input type="checkbox"/> COPD <input type="checkbox"/> No		<b>Cardiovascular</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Hypertension <input type="checkbox"/> No <input type="checkbox"/> Heart Failure <input checked="" type="checkbox"/> No Cardiovascular Disease (CVD): <input type="checkbox"/> CHD <input checked="" type="checkbox"/> No <input type="checkbox"/> PVD <input checked="" type="checkbox"/> No <input type="checkbox"/> Stroke <input checked="" type="checkbox"/> No <input type="checkbox"/> Carotid Stenosis <input checked="" type="checkbox"/> No <input type="checkbox"/> MI <input checked="" type="checkbox"/> No <input type="checkbox"/> Renal Artery Stenosis <input checked="" type="checkbox"/> No			<b>Musculoskeletal</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Inflammatory <input type="checkbox"/> No <input type="checkbox"/> Musculoskeletal <input type="checkbox"/> No <input type="checkbox"/> Bone Disease <input type="checkbox"/> No <input type="checkbox"/> Osteoporosis <input type="checkbox"/> No <input type="checkbox"/> Osteoarthritis <input type="checkbox"/> No		<b>Renal Impairment</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Chronic Renal Failure <input checked="" type="checkbox"/> No <input type="checkbox"/> Acute Renal Failure <input type="checkbox"/> No
								Clear Conditions	

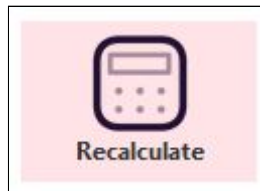
Then we only include patients who have been prescribed lipid modifying medications:

General	Practices	Ethnicity	Conditions	Medications	Results	Patient Status	Health Care Homes	Saved Filters
<div> <div>Medications - Heart</div> <div>Medications - Respiratory</div> <div>Medications - Other</div> </div>								
<b>ACE or ARB</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> ACE <input type="checkbox"/> No <input type="checkbox"/> ARB <input type="checkbox"/> No		<b>Antithrombotics</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Aspirin <input type="checkbox"/> No <input type="checkbox"/> Clopidogrel <input type="checkbox"/> No <input type="checkbox"/> Dabigatran <input type="checkbox"/> No <input type="checkbox"/> Warfarin <input type="checkbox"/> No		<b>Beta Blockers</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Antihypertensives <input type="checkbox"/> No <input type="checkbox"/> Chronic Heart Failure <input type="checkbox"/> No <input type="checkbox"/> Myocardial Infarction <input type="checkbox"/> No		<b>Calcium</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Diuretics</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Lipid Modifying</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
								Clear Medications

And we are only interested in cholesterol results from the last 24 months:

General	Practices	Ethnicity	Conditions	Medications	Results	Patient Status	Health Care Homes	Saved Filters
<b>Last Recorded Result</b> The date range selected will filter out results or events that are not within the selected period and treat them as not recorded. This filter is not applicable to graphs that display time periods. Use for: Measures, Pathology, MBS Items, After Hours and Visit Types <div> <input type="radio"/> All           <input type="radio"/> &lt;= 6 months           <input type="radio"/> &lt;= 12 months           <input checked="" type="radio"/> &lt;= 24 months           <input type="radio"/> Date Range (from - to)         </div> <div> <input type="text"/> 31 to <input type="text"/> 31         </div>								

Click on "Recalculate" to apply the filter excluding patients with the conditions specified above.



Click on "Manage Programs" to create your program.








The Program Management window will be displayed, with all current programs created at your organisation. As we want to create a new program, click on the "+Create Program" button on the top left.

Program Management

+ Create Program

Refresh Program List

1	2	3	4	5	6				
	ID	Icon	Name	Status	Type	Practices	Prompts	Response Stats	
<input type="checkbox"/>	156			Approved	Enrolment	5	2	Prompts Displayed: 49 Prompts Accepted: 2 Prompts Dismissed: 0 Prompts Deferred: 0	<div>Edit</div> <div>Select</div>
<input type="checkbox"/>	162			Approved	Hyperlink	6	2	Prompts Displayed: 67 Prompts Accepted: 10 Prompts Dismissed: 2 Prompts Deferred: 0	<div>Edit</div> <div>Select</div>
<input type="checkbox"/>	163			Approved	Enrolment	5	3	Prompts Displayed: 3 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	<div>Edit</div> <div>Select</div>
<input type="checkbox"/>	165			Approved	Enrolment	3	1	Prompts Displayed: 19 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	<div>Edit</div> <div>Select</div>
<input type="checkbox"/>	161			Approved	Enrolment	8	3	Prompts Displayed: 121 Prompts Accepted: 10 Prompts Dismissed: 2 Prompts Deferred: 1	<div>Edit</div> <div>Select</div>

1

2

3

4

5

6

Close

The "Create Program" window has a number of options:

- Program Name: Enter a name for your program here, you won't be able to save or publish a program without a name
- Logo and Icon upload: You have to upload an image file (.jpg or .png preferred) matching the size details; 300px\*100px for the logo and 105\*105px for the icon. These will be displayed in Topbar and should be relevant to your program and assist users to identify the purpose of the prompt/program
- "Add Existing Prompt": PAT Programs can utilise any prompt you have created either as part of another program or for a PAT CAT Prompt. All existing prompts will be displayed if you click the button.
- "Create Prompt": You can create a new prompt which will be shown in this guide
- "Configure Prompt Behaviour": Choose between a hyperlink and an enrolment prompt and configure other behaviour for Topbar, full details can be found here: [PAT Programs - Prompts Behaviour Configuration](#)(see page 247)

Prepare your logo and icon files, keeping in mind that they have to meet the sizing exactly. Then upload both logo and icon by using the respective buttons. In this example the My Health for Life logo is used. PEN CS is not affiliated with the My Health For Life program but we support the Heart Foundation and QLD Health by providing step by step guides for users of our software. For more information please visit [www.myhealthforlife.com.au/](http://www.myhealthforlife.com.au/)<sup>70</sup> and for our recipes please go to [My Health For Life Recipes](http://help.pencs.com.au/display/CR/My+Health+For+Life+Recipes)<sup>71</sup>

In the example below the logo and icon have been uploaded


<sup>70</sup> <http://www.myhealthforlife.com.au/>

<sup>71</sup> <http://help.pencs.com.au/display/CR/My+Health+For+Life+Recipes>

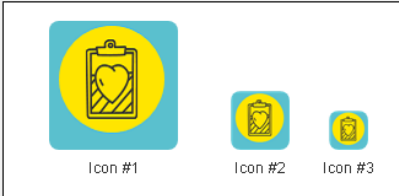
**Create Program**

Program Name

Logo  300px (W) x 100px (H)



Icon  105px (W) x 105px (H)



Program Configuration : Enrolment	Prompt Behaviour
Display Red Notification:	No
Display Green Tick:	Yes - Any Prompt Accepted
Dismiss/Defer Buttons Visible:	Yes

Name	Date Added
No prompts found. To add an existing prompt, click on "Add Existing Prompt". To create a new prompt, click on "Create Prompt"	

You have unsaved changes. Click Save to commit these changes.



### Configuring Prompt Behaviour:

There are two options for prompts, enrolment or Hyperlink prompts. You have to decide on the type of prompt before you create new prompts. A program can only have prompts of one type and the type can't be changed after prompt creation. Please check here for full details: [PAT Programs - Prompts Behaviour Configuration](#)(see page 247)

## Adding a Prompt

The next step is to add a prompt. In this case we are only interested in patients with high cholesterol, above 5.5 mmol/L so we have to create a prompt. Click on the "Create Prompt" button:

In the "Create Prompt" window you need to enter a name for the prompt, a summary and a reason. Then select the relevant values from the reports available on the right, in our case a cholesterol of higher than 5.5. If you select additional reports the criteria will be added to the prompt, it will be an AND search, so you could add for example other measures such as blood pressure or BMI. When done, click on "Save".

⚠ Please note that not all reports will be visible when you first start using PAT Programs - if a particular report you require is missing contact PEN CS Support. We don't show all reports to improve performance but can add all available reports on request.

Create Prompt

Filter:

Filtering By: Conditions: (Diabetes - NO, Heart Failure - NO, CHD - NO, PVD - NO, Stroke - NO, Carotid Stenosis - NO, MI - NO, Renal Artery Stenosis - NO), Medications: (Lipid M/ fying - YES),

Name:

MHFL High Cholesterol

Status:

Active

Summary:

patients with a cholesterol of higher than 5.5 in the last 2 years who are taking lipid lowering medication

Reason:

these patients are at risk and are eligible for enrollment into the My Health For Life program

Image:

Video:

Select Image to Upload

895px (W) x 503px (H)

ACR

Alcohol

Allergies

BMI Count

BP

Cholesterol

< 4.0

>= 4.0 and <= 5.5

> 5.5 and <= 6.5

> 6.5 and <= 7.5

> 7.5

No Cholesterol Recorded

Creatinine Serum Status

Demographics

Disease Prevalence

eGFR

Ethnicity

HbA1c

HDL

Save

You have added one prompt to your program. This program, once active, will be triggered by any patient with a cholesterol above 5.5 in the last 2 years.

You can attach an image (has to be 895\*503 pixel) or a link to a Youtube video to each prompt you create. These will be shown in Topbar to provide additional information for the clinician and the patient.

However PAT Programs is more flexible and can provide additional prompts - we are going to add another prompt to find patients with an LDL >2 measured in the last two years as well. Please note that by adding a new prompt the

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program will find patients with high cholesterol OR high LDL - if you want to find only patients with high values for both you need to add both criteria in the same prompt.

Repeat the actions described above to create a new prompt targeting patients with the same criteria but this time we are looking for a high LDL result:



Enter the details for the prompt criteria (LDL > 2) and a summary and reason:

Create Prompt

Filter: Filtering By: Conditions: (Diabetes - NO, Heart Failure - NO, CHD - NO, PVD - NO, Stroke - NO, Carotid Stenosis - NO, MI - NO, Renal Artery Stenosis - NO), Medications: (Lipid M/ fying - YES),

Name: High LDL

☒ Programs only prompt

Status: Active

Summary: patients with an LDL result from the last 24 months higher than 2 who are taking lipid lowering medication

Reason: these patients are at risk and are eligible for enrollment into the My Health For Life program

☒ Image: ☐ Video:

Select Image to Upload

895px (W) x 503px (H)

ACR

Alcohol

Allergies

BMI Count

BP

Cholesterol

☐ < 4.0
☐ >= 4.0 and <= 5.5
☒ > 5.5 and <= 6.5
☒ > 6.5 and <= 7.5
☒ > 7.5
☐ No Cholesterol Recorded

Creatinine Serum Status

Demographics

Disease Prevalence

eGFR

Ethnicity

HbA1c

HDL

Save

Click "Save" to save your new prompt into the program.

The MHFL High Cholesterol program has now been saved and has two different prompts to pick up patients with different lipid results:

Edit Program

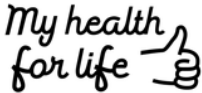
Program Name

MHFL High Cholesterol

Logo

300px (W) x 100px (H)

Select Logo to Upload




Logo


Icon

105px (W) x 105px (H)


Select Icon to Upload



Icon #1



Icon #2



Icon #3

+ Add Existing Prompt

+ Create Prompt

⚙️ Configure Prompt Behaviour

Program Configuration : Enrolment

Prompt Behaviour

Display Red Notification:

No

Display Green Tick:

Yes - Any Prompt Accepted

Dismiss/Defer Buttons Visible:

Yes



	Name	Date Added
<input checked="" type="checkbox"/>	MHFL High Cholesterol <b>Filters</b> : Conditions: (Diabetes - NO, Heart Failure - NO, CHD - NO, PVD - NO, Stroke - NO, Carotid Stenosis - NO, MI - NO, Renal Artery Stenosis - NO), Medications: (Lipid M/fying - YES), Last Results: <= 24 mths <b>Graphs</b> : No graphs selected	15 February 2018 05:12:43 PM
<input type="checkbox"/>	High LDL <b>Filters</b> : No filters applied <b>Graphs</b> : LDL	26 February 2018 11:05:05 AM

Save

Save and Publish

Cancel

These prompts act as an OR selection, so any patients meeting at least one of the prompts will receive the enrolment prompt. Once you have added all prompts required for your program, click on 'Save and Publish' to publish your new program. Just saving will allow you to continue at a later stage and only when you have added all required prompts and other details the program should be published. The new program is now showing in the Program Management list as 'Pending Approval'.

Program Management										
<a href="#">+ Create Program</a>		<a href="#">Refresh Program List</a>								
1	2	3	4	5	6					
	ID	Icon	Name	Status	Type	Practices	Prompts	Response Stats	Creation Date	
<input type="checkbox"/>	151		Matthias Test Program	Approved	Enrolment	2	1	Prompts Displayed: 2 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	22/08/2017	<a href="#">Edit</a> <a href="#">Select</a>
<input type="checkbox"/>	177		MHFL High Cholesterol	Pending Approval	Enrolment	0	2	Prompts Displayed: 0 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	15/02/2018	<a href="#">Edit</a> <a href="#">Select</a>

Once a new program is created, it will need to be approved by PEN CS - please contact our support team to get the program approved. Only after approval the related prompts will show in your Topbar!

The final step is to add practices to the new program you have created - full details are described here: [PAT Programs - Adding Practices to a Program](#)(see page 252)

## 21.2 PAT Programs - Prompts Behaviour Configuration

PAT Programs currently has two types of prompts that will be displayed in Topbar when a patient matching the program criteria presents. There are also a number of prompt behaviour options that can all be configured from the "Create Programs" screen:

Create Program

Program Name

Logo

300px (W) x 100px (H)

Select Logo to Upload

Icon

105px (W) x 105px (H)

Select Icon to Upload

+ Add Existing Prompt

+ Create Prompt

**Configure Prompt Behaviour**

Program Configuration : Enrolment

Prompt Behaviour

Display Red Notification:

No

Display Green Tick:

Yes - Any Prompt Accepted

Dismiss/Defer Buttons Visible:

Yes

Description:

-

Link Text:

-

Link:

-

Name

Date Added

No prompts found. To add an existing prompt, click on "Add Existing Prompt". To create a new prompt, click on "Create Prompt"

You have unsaved changes. Click Save to commit these changes.

Save

Save and Publish

Cancel

Clicking on the "Configure Prompt Behaviour" will open the "Configure Prompt" window:

**Configure Prompt**

Name: -

Program Configuration: Enrolment

Description: Enrolment  
Hyperlink

enter description to be displayed in Topbar here

Link Text: enter text to be displayed in Topbar here for the link

Link: enter URL for link here

**Program Behaviour**

Display Red Notifications: ☐ Yes ☒ No

Display Green Tick: ☒ Yes - Any Prompt Accepted  
☐ Yes - Any Prompt Accepted and All Prompts Actioned  
☐ No

Dismiss/Defer Buttons Visible: ☒ Yes ☐ No

**Update** **Close**

Firstly choose between an Enrolment or Hyperlink prompt from the program configuration dropdown box. This can't be changed once saved, but the display options can be changed later if needed.

### Enrolment Prompts

An Enrolment Prompt allows the clinician to enrol patients in a particular program created in PAT Programs. An example for this functionality is the Health Care Homes (HCH) program that is currently being used by the HCH trial sites (details here: [Health Care Homes App](https://help.pencs.com.au/display/TUG/Health+Care+Homes+App)<sup>72</sup>) but there are many other possible uses for this functionality.

PAT CAT will show a filter for enrolled patients if a program with enrolment prompts is selected and allow to filter for enrolled patients only.

### Hyperlink Prompts

A hyperlink prompt will provide the user with a targeted, one click option to visit a particular web page. This could provide patient information or link to a specific page in HealthPathWays to inform the clinician about pathways for a particular condition or any other information available online.

<sup>72</sup> <https://help.pencs.com.au/display/TUG/Health+Care+Homes+App>

Then the program behaviour can be configured. This will affect how your prompts will display in Topbar when a patient matching the prompt criteria presents.

- "Display Red Notification": Default is No, if Yes is selected, a notification expressed as a number in a red



circle is displayed on the icon in Topbar:

- "Display Green Tick" Default is Yes for any prompt accepted. This green tick will be displayed when a patient



has been enrolled or a prompt has otherwise been accepted

- "Dismiss/Defer Buttons Visible": controls if the Topbar app shows the options to dismiss or defer a prompt
- "Link Text" and "Link" fields: For full details on the configuration of hyperlinks please see here: [Pat Programs - Hyperlinks configuration](#)(see page 249)

## 21.3 Pat Programs - Hyperlinks configuration

The functionality to provide hyperlinks to clinicians based on the patient currently open in the clinical system and in the consult room can be used in many different ways. The links can be, as described elsewhere, link for example to a specific page on the local HealthPathWays site and thus provide targeted information for patient or clinician. It can open an online registration or any other resource relevant to either patient or clinician. With the latest update to PAT CAT we have introduced the option to create hyperlinks specific to each prompt in case the PAT Program contains multiple prompts targeting patients with different issues.

In the example below we have a link for additional information that was created through the 'Configure Prompt Behaviour' as well as a prompt specific hyperlink. Both processes are described below.

+ Add Existing Prompt
+ Create Prompt
Configure Prompt Behaviour

Program Configuration : Hyperlink

Prompt Behaviour

Display Red Notification: Yes  
Display Green Tick: No  
Dismiss/Defer Buttons Visible: No  
Description: This link provides information for diabetics and kidney screening and is displayed for patients with diabetes who are taking ACE/ARBs in combination with Diuretics  

Link Text: additional information online  
Link: http://more.info.com.au

☒

Name  
Kidney Health and Medication Combination Risk  
Filters : Conditions: (Diabetes - YES), Medications: (ACE or ARB - YES, Diuretics - YES)  
Graphs : No graphs selected

Button Label  
Renal Disease Screening

Button Link  
<https://sydney.healthpathways.org.au/loginfiles/Linking.aspx?>

Program hyperlink  
Prompt hyperlink

Date Added  
08 August 2018 02:02:21 PM

Remove Selected Prompts
Configure Prompt Button Labels and Links

Save
Cancel

### 21.3.1 Program Hyperlinks

For the Program related hyperlink configuration please follow the steps described here: [PAT Programs - Prompts Behaviour Configuration](#)(see page 247)

The information entered in the 'Link Text' and 'Link' fields will show under the program configuration once entered:

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<a href="#">+ Add Existing Prompt</a> <a href="#">+ Create Prompt</a> <a href="#">⚙️ Configure Prompt Behaviour</a>	
Program Configuration : Hyperlink	<p><b>Prompt Behaviour</b></p> <p>Display Red Notification: Yes</p> <p>Display Green Tick: No</p> <p>Dismiss/Defer Buttons Visible: No</p> <p>Description: This link provides information for diabetics and kidney screening and is displayed for patients with diabetes who are taking ACE/ARBs in combination with Diuretics</p> <p><b>Link Text:</b> additional information online</p> <p><b>Link:</b> <a href="http://more.info.com.au">http://more.info.com.au</a></p>

⚠️ Please note that Enrolment prompts can have a link in the program configuration as well. This can be used to provide additional information about the enrolment program, for example the MyHealth For Life program's website.

In Topbar this link is displayed on top of the notification

Kidney Health and Medication		NOTIFICATIONS	SETTINGS	ENROLMENT
<p>Description:</p> <p>This link provides information for diabetics and kidney screening and is displayed for patients with diabetes who are taking ACE/ARBs in combination with Diuretics</p> <p><a href="#">ADDITIONAL INFORMATION ONLINE</a></p>				
PROMPT TEXT	LAST ACCESSED			
Kidney Health and Medication Combination Risk	04/09/2018	<a href="#">RENAL DISEASE SCREENING</a>		

### 21.3.2 Prompt Hyperlinks

The link configuration for each prompt is displayed on the bottom of the 'Edit Program' window:

[+ Add Existing Prompt](#)
[+ Create Prompt](#)
[⚙️ Configure Prompt Behaviour](#)

---

Program Configuration : Hyperlink

*Prompt Behaviour*

Display Red Notification: Yes  
 Display Green Tick: No  
 Dismiss/Defer Buttons Visible: No  
 Description: This link provides information for diabetics and kidney screening and is displayed for patients with diabetes who are taking ACE/ARBs in combination with Diuretics  
 Link Text: additional information online  
 Link: <http://more.info.com.au>

---

	Name	Button Label	Button Link	Date Added
<input checked="" type="checkbox"/>	Kidney Health and Medication Combination Risk Filters : Conditions: (Diabetes - YES), Medications: (ACE or ARB - YES, Diuretics - YES) Graphs : No graphs selected			08 August 2018 02:02:21 PM

[✂️ Remove Selected Prompts](#)
[⚙️ Configure Prompt Button Labels and Links](#)
[💾 Save](#)
[⌂ Cancel](#)

Selecting the prompt and clicking on the 'Configure Prompt Button Labels and Links' will open a new window with a button label and link field.

**Configure Prompt Labels and Links**

Name	Button Label	Button Link
Kidney Health and Medication Combination Risk	<input type="text" value="Renal Disease Screening"/>	<input type="text" value="https://sydney.healthpathways.org.au/loginfiles/Lan"/>

[💾 Update](#)
[⌂ Cancel](#)

The link details will then be shown for each prompt in the 'Button Label' and 'Button Link' columns:

+ Add Existing Prompt
+ Create Prompt
Configure Prompt Behaviour

Program Configuration : Hyperlink

Prompt Behaviour

Display Red Notification: Yes  
Display Green Tick: No  
Dismiss/Defer Buttons Visible: No  
Description: This link provides information for diabetics and kidney screening and is displayed for patients with diabetes who are taking ACE/ARBs in combination with Diuretics  
Link Text: additional information online  
Link: <http://more.info.com.au>

	Name	Button Label	Button Link	Date Added
<input checked="" type="checkbox"/>	<b>Kidney Health and Medication Combination Risk</b> Filters : Conditions: (Diabetes - YES), Medications: (ACE or ARB - YES, Diuretics - YES) Graphs : No graphs selected	Renal Disease Screening	<a href="https://sydney.healthpathways.org.au/loginfiles/Landing.aspx?">https://sydney.healthpathways.org.au/loginfiles/Landing.aspx?</a>	08 August 2018 02:02:21 PM

Remove Selected Prompts
Configure Prompt Button Labels and Links
Save
Cancel

Once created the link(s) will be displayed as part of the prompt text:

Kidney Health and Medication
NOTIFICATIONS
SETTINGS
ENROLMENT

Description:

This link provides information for diabetics and kidney screening and is displayed for patients with diabetes who are taking ACE/ARBs in combination with Diuretics

ADDITIONAL INFORMATION ONLINE

PROMPT TEXT	LAST ACCESSED	
Kidney Health and Medication Combination Risk	04/09/2018	RENAL DISEASE SCREENING



Hyperlink button details can be updated after a program has been created, as online resources may change or more information becomes available. Other details of a PAT Program, such as filter or report criteria however, can't be changed once a program or prompt has been created.

## 21.4 PAT Programs - Adding Practices to a Program

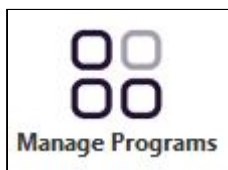
After your program has been published and is approved, you will still have to add practices to the new program. This step ensures that only participating practices will receive the prompts and it allows you to measure outcomes based on selected practices.




To add one or more practices to your program, you have to be on the PAT Program page - to get there click on the PAT Programs link:





Once the new page has loaded you will notice the change in logo on the top left:



Now click on  to see the available programs.

On the Program Management window find your program and click on "Select"

Program Management										
<a href="#">+ Create Program</a>		<a href="#">Refresh Program List</a>								
1	2	3	4	5	6					
	ID	Icon	Name	Status	Type	Practices	Prompts	Response Stats	Creation Date	
<input type="checkbox"/>	151		Matthias Test Program	Approved	Enrolment	2	1	Prompts Displayed: 2 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	22/08/2017	<a href="#">Edit</a> <a href="#">Select</a>
<input type="checkbox"/>	177		MHFL High Cholesterol	Approved	Enrolment	0	2	Prompts Displayed: 0 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	15/02/2018	<a href="#">Edit</a> <a href="#">Select</a>

This will show you the selected program above the filters and you can click on "Deselect" to exit from this program.

**PATCAT PROGRAMS**

Import Hide Extracts Hide Filters Reports Population Prompts CAT4 Filters **Programs Reports** Manage Programs

**EXTRACTS BY MONTH**

- February 2021 1/2
- January 2021 1/2
- December 2020 0/2
- November 2020 0/2
- October 2020 0/2
- September 2020 0/2
- August 2020 0/2
- July 2020 0/2
- June 2020 0/2

**COVID-19 Vaccine Priority Patients** [Deselect]

General Practices Ethnicity Conditions Medications Date Range (Results) Date Range (Visits) Patient Status Risk Factors Saved Filters Prompt

Gender: ☐ Male ☐ Female ☐ Other

DVA: ☐ DVA ☐ Non DVA

Health Cover: ☐ Medicare No. ☐ No

Age: Start Age  End Age  ☒ Yrs ☐ Mths ☐ No Age

Last Visit: ☒ Last Visit ☐ First Visit

Any: ☐ Any ☐ None

<6 mths: ☒ <6 mths ☐ <12 mths

<15 mths: ☐ <15 mths ☐ <24 mths

<30 mths: ☐ <30 mths

Date Range:  to

To enrol practices into the selected program, click on "Practices" on the top right of your screen:



This will show a list of all your practices as in your standard PAT CAT configuration detailed here: [Setting up Practices](#)(see page 23)

Now you have the additional option to enrol practices in the selected program listed on top of the screen:

Practice List					
Practice List (Program: MHFL High Cholesterol)					
Hide Unlicensed Practices		Merge Licensed and Unlicensed Practice		Hide Unenrolled Practices	
Link	Practice Name	Practice ID	Email	Enrolled	Submitting Data
		practice-3.3-A			
	1Jyoti_Practice	1Jyoti_Practice			
	AFtestTopbar	AFtestTopbar			
	Ash Client Org	Ash Client Org			

To enrol a practice double click on the practice name and on the "Edit Practice" screen tick the box for "Enrolled to Program", then save.

Edit Practice

Practice Name

Matthias QA Clinic

Practice ID \*

Matthias QA Clinic

Email

Submitting Data

☒

Merged

No

Enrolled to Program

☒

✓ Save

● Cancel

The practice is now listed with a green tick in the "Enrolled" column:

Practice List (Program: MHFL High Cholesterol)					
Hide Unlicensed Practices		Merge Licensed and Unlicensed Practice		Hide Unenrolled Practices	
Link	Practice Name	Practice ID	Email	Enrolled	Submitting Data
<a href="#">●</a>	Matthias QA Clinic	Matthias QA Clinic		✓	✓

Practices can be enrolled in multiple programs!

## 21.5 PAT Programs - Reporting

After a program has been created, approved and practices have been enrolled to use the program, data relevant to the program will be arriving in PAT CAT through the CAT4 data uploads. If a practice enrolls a patient that information will be included in the de-identified data and PAT CAT allows to filter for prompt status. This in turn will allow the PHN or other organisation to report on health outcomes and quality improvement for the enrolled patient group and over time create data for regression analysis and evaluation of program success.

To use the program specific filter, PAT CAT needs to be in the PAT Programs screen - to get there click on the PAT Programs link:



Once the new page has loaded you will notice the change in logo on the top left:



Now click on **Manage Programs** to see the available programs.

On the Program Management window find your program and click on "Select"

Program Management										
<a href="#">+ Create Program</a>		<a href="#">Refresh Program List</a>								
1	2	3	4	5	6					
	ID	Icon	Name	Status	Type	Practices	Prompts	Response Stats	Creation Date	
<input type="checkbox"/>	151		Matthias Test Program	Approved	Enrolment	2	1	Prompts Displayed: 2 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	22/08/2017	<a href="#">Edit</a> <a href="#">Select</a>
<input type="checkbox"/>	177		MHFL High Cholesterol	Approved	Enrolment	0	2	Prompts Displayed: 0 Prompts Accepted: 0 Prompts Dismissed: 0 Prompts Deferred: 0	15/02/2018	<a href="#">Edit</a> <a href="#">Select</a>

This will show you the selected program above the filters and you can click on "Deselect" to exit from this program.

PAT CAT

Import
 Show Extracts
 Hide Filters
 Reports
 Population
 Prompts
 Programs Reports
 Manage Programs

**MHFL High Cholesterol**
[Deselect](#)

[General](#)
[Practices](#)
[Ethnicity](#)
[Conditions](#)
[Medications](#)
[Results](#)
[Patient Status](#)
[Health Care Homes](#)
[Saved Filters](#)
[Prompt](#)

**Gender**
☐ Male
 ☐ Female
 ☐ Other

**DVA**
☐ DVA
 ☐ Non DVA

**Age**
 Start Age 
 End Age 
☒ Yrs ☐ Mths
 ☐ No Age

**Last Visit**
☒ Any
 ☐ None
 ☐ <6 mths
 ☐ <12 mths
 ☐ <15 mths
 ☐ <24 mths
 ☐ <30 mths
 ☐ Date Range
  31 to  31

There is now a new filter tab available specific to the program you have selected called "Prompts". The contents of this tab will reflect the program selected, so if your program has multiple prompts each one will be shown. The example below is for the program created here: [PAT Programs - Creating a new Program](#)(see page 238). This program has two enrolment prompts for patients meeting the criteria:

**MHFL High Cholesterol**
Deselect

General Practices Ethnicity Conditions Medications Results Patient Status Health Care Homes Saved Filters **Prompt**

**Important:** When saving a filter or creating prompts, any selections made here are ignored

Prompt Name	Accepted	Deferred	Dismissed	Displayed
MHFL High Cholesterol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High LDL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The filter allows to select patients who have accepted enrolment into the program as well as patients where the prompt was deferred or dismissed by the clinician. The "Displayed" option will filter for those patients where the prompt was displayed but no other action was performed by the clinician. This can be used to evaluate how many patients met the prompt criteria as well measure the activity of clinicians in regards to the prompt displayed.

For a hyperlink prompt different options are shown - only the option "Accepted" and "Displayed" can be used for the filter. Accepted means that the clinician has clicked on the hyperlink and has accessed the site linked to the prompt, "Displayed" means no action was taken.

General Practices Ethnicity Conditions Medications Results Patient Status Health Care Homes Saved Filters **Prompt**

**Important:** When saving a filter or creating prompts, any selections made here are ignored

Prompt Name	Accepted	Displayed
Jo_BP_Prompt > 130/80 and <= 140/90	<input type="checkbox"/>	<input type="checkbox"/>
Jo_P1	<input type="checkbox"/>	<input type="checkbox"/>

## 22 PAT2CAT Filters



This latest addition to CAT Plus is designed to assist PHNs and other organisations using PAT CAT to work with primary health care staff. This new functionality enables custom filters based on the existing filters and reports in PAT CAT to be created and sent to selected practices. Population health findings in PAT CAT based on de-identified data are used to provide clinicians with lists of patients matching the criteria and thus enable ongoing quality improvement. The PAT2CAT filters can also be used as a source for [Topbar Prompts](#)<sup>73</sup> and [Recall CAT - SMS and Voice Messaging for CAT4](#)<sup>74</sup>

### PHN/ACCHO Benefits

- Allows the practice to re-identify 'at-risk' patients, with a single click in CAT 4.
- Facilitates improved QIP in primary health and general practice, driving better patient outcomes
- Allows for easy updating of patient lists at regular intervals to drive timely QIP activities.
- Creates no extra work for the practice and reduces administrative overhead
- Practices added after a PAT2CAT filter has been created will receive the filter



Please note that PAT2CAT filters are not included by default in your CAT Plus license. There is an additional charge for this functionality, please contact PEN CS Support or your account manager for details.

Here is a short video describing how to create and manage PAT2CAT filters: [PAT2CAT Filters video](#)<sup>75</sup>

Using PAT CAT find de-identified patient cohorts whose care can be improved can now be combined with practice level data. Once a new custom filter has been created and send to a CAT4 user it can be used just like any other filter. For full details see here: [PAT2CAT Custom Filters in CAT4](#)<sup>76</sup>.

See the details on how to create, manage and use the new custom filters here:

- [Creating PAT2CAT Filters](#)(see page 258)
- [Managing PAT2CAT Filters](#)(see page 260)
- [PAT2CAT Filters in CAT4](#)(see page 262)

### 22.1 Creating PAT2CAT Filters

To create a PAT2CAT filter you need to log on to PAT CAT and your organisation has to have the functionality enabled. You will see a new icon in PAT CAT called CAT4 Filters:



<sup>73</sup> <https://help.pencs.com.au/display/TUG/CAT+PLUS+Prompts+App>

<sup>74</sup> <https://help.pencs.com.au/display/CG/Recall+CAT+-+SMS+and+Voice+Messaging+for+CAT4>

<sup>75</sup> <https://vimeo.com/pencs/pat2cat>

<sup>76</sup> <https://help.pencs.com.au/display/CG/PAT2CAT+Custom+Filters+in+CAT4>

Before you create a new filter you need to apply your criteria as PAT CAT will use the filters currently applied for the new PAT2CAT filter.

- ⚠ Remember to apply the relevant filters in your PAT CAT BEFORE creating a new PAT2CAT filter, in particular the practice filter. If you don't filter for practices then your new filter will be available to all practices linked to your PAT CAT! This will include practices added later to your PAT CAT.

In our example we will be creating a PAT2CAT filter to find patients with Coronary Heart Disease who have not had a blood pressure and a cholesterol check-up in the last 12 months. You can use any filter and report combination of interest to you and your organisation.

Filtering By:

- Visit < 15 Mths
- Active Patients
- Practice: (Matthias QA Clinic) - make sure you are selecting only relevant practices
- Conditions: (CHD - YES)
- Last Results: <= 12 mths

After selecting the above filter criteria in the respective filter tabs, click on Recalculate to apply the filters. Then click on the new CAT4 Filters icon to finalise your new PAT2CAT filter.

Filter Name	Summary	Reason	Date Created	Status
-------------	---------	--------	--------------	--------

Your new filter will inherit all the conditions used above and now you can select additional criteria (but don't have to). In the example below I have selected patients who didn't have a BP and cholesterol check-up entered into their record in the last 12 months.

- ⚠ Custom filters work in the same way as a cross tabulation in CAT4, meaning that if you select all categories in a report tab the result will be an 'OR' filter, but as soon as you select only some categories on a report tab, the filter will become an 'AND' filter. The example below will only show those patients meeting ALL selected criteria, so anyone without a BP and a cholesterol recorded, but if you had selected the whole Blood Pressure report and the Cholesterol report tab, anyone would be included.

**Create Filter**

Filter: Filtering By: Visit < 15 Mths, Active Patients, Practice: (Matthias QA Clinic), Conditions: (CHD - YES), Last Results: <= 12 mths

Name: CHD patients overdue for BP and Lipids

Status: Active

Summary: This filter identifies all active patients with Coronary Heart Disease who have visited in the last 12 months and had no BP and Cholesterol checked in the last 12 months

Reason: It is an important check up for patients with CHD

- ☐ 5 Year Risk of a Cardiovascular Event
- ☐ ACR
- ☐ Alcohol
- ☐ Allergies
- ☐ BMI Count
- ☒ BP
  - ☐ <= 130/80
  - ☐ > 140/90
  - ☒ No BP Recorded
  - ☐ Incomplete Data
  - ☐ > 130/80 and <= 140/90
- ☒ Cholesterol
  - ☐ < 4.0
  - ☐ >= 4.0 and <= 5.5
  - ☐ > 5.5 and <= 6.5
  - ☐ > 6.5 and <= 7.5
  - ☐ > 7.5
  - ☒ No Cholesterol Recorded
- ☐ Creatinine Serum Status
- ☐ Demographics

**Save**

Once your PAT2CAT filter is complete, click on 'Save' to save it. This filter will be immediately available to all CAT4 users linked to your PAT CAT, unless you have, as above, only included a particular practice or group of practices in the new filter.

## 22.2 Managing PAT2CAT Filters

Once a filter has been created, the filter criteria can't be changed in PAT CAT. Filters can be accessed by clicking on the CAT4 Filters icon:




This will show a list of all existing PAT2CAT filters including the details such as summary, reason, date created and status:



CAT4 Filters <span style="float: right;">✕</span>				
Remember to apply filters and assign practices before creating a new filter				
<a href="#">+ Create a new filter</a>				
Filter Name	Summary	Reason	Date Created	Status
> Test1	Test1- test2edit	Test1- test 2	18/07/2018	Inactive
> Test2	BP	BP	18/07/2018	Inactive
> Test3	Test3	Test3	18/07/2018	Inactive
> Test4	Test4	Test4	18/07/2018	Inactive

Clicking on an existing filter will expand the details and show the 'Edit' button.

 The practice list at the bottom of the filter details is colour coded and once a practice has loaded and applied the filter at least once, the colour will change from red to green. This provides important feedback if the PAT2CAT filters are used by the targeted practices!

▼ CHD patients overdue for BP...	BP and Cholesterol are impo...	Important for CHD patient care	07/08/2018	Active
<p>Filter Name: CHD patients overdue for BP and Cholesterol</p> <p>Summary: BP and Cholesterol are important check-ups</p> <p>Reason: Important for CHD patient care</p> <p>Filter Criteria: Filtering By: Visit &lt; 15 Mths, Active Patients, Practice: (jo3.3, Manju_HCH_CAT, Matthias QA Clinic), Conditions: (CHD - YES), Last Results: &lt;= 12 mths</p> <p>Graphs: No graphs selected</p> <p>Practices: <span style="border: 1px solid red; padding: 2px;">Matthias QA Clinic</span></p>				
				<a href="#">Edit</a>

Filter criteria, once created, can't be changed but it can be made inactive or deleted, using the drop-down status menu or the 'Delete' button on the bottom left. You can also change the Summary and the Reason text fields if required.

**Edit CHD patients overdue for BP and Lipids**

Filter: Filtering By: Visit < 15 Mths, Active Patients, Practice: (Matthias QA Clinic), Conditions: (CHD - YES), Last Results: <= 12 mths

Name: CHD patients overdue for BP and Lipids

Status: Active Inactive

Summary: Active identifies all active patients with Coronary Heart Disease  
Inactive identified in the last 12 months and had no BP and Cholesterol checked in the last 12 months

Reason: It is an important check up for patients with CHD

☐ 5 Year Risk of a Cardiovascular Event

☐ ACR

☐ Alcohol

☐ Allergies

☐ BMI Count

☒ BP

☐ <= 130/80

☐ > 140/90

☒ No BP Recorded

☐ Incomplete Data

☐ > 130/80 and <= 140/90

☒ Cholesterol

☐ < 4.0

☐ >= 4.0 and <= 5.5

☐ > 5.5 and <= 6.5

☐ > 6.5 and <= 7.5

☐ > 7.5

☒ No Cholesterol Recorded

☐ Creatinine Serum Status

☐ Demographics

## 22.3 PAT2CAT Filters in CAT4

Custom Filters are filters created in PAT CAT and sent to your CAT4. This functionality is designed to support continuous quality improvement by providing ready made filters to target patients of interest. Details of the filters should be discussed with the organisation you are sharing your de-identified data with, as they can create the filters to meet your requirements/interests.

For a guide on how to create custom filters see here: [PAT2CAT Filters](#)<sup>77</sup>

These filters will make it very easy to identify a group of patients at your practice based on the filter criteria. Once identified you can use [Recall CAT - SMS and Voice Messaging for CAT4](#)<sup>78</sup> to invite the patients to come in for a check up or you can create prompts in Topbar using [CAT PLUS PROMPTS](#)<sup>79</sup>.

<sup>77</sup> <https://help.pencs.com.au/display/ds/PAT2CAT+Filters>

<sup>78</sup> <https://help.pencs.com.au/display/CG/Recall+CAT+-+SMS+and+Voice+Messaging+for+CAT4>

<sup>79</sup> <https://help.pencs.com.au/display/CP/CAT+PLUS+PROMPTS>

Your organisation will have to be licensed for this functionality and once you log onto CAT4 you will see the new filter tab:

Filter Name	Date Created	Match	Not Match
Covid Vaccine - High Risk Patients	18/02/2021	<input type="checkbox"/>	<input type="checkbox"/>

All filters relevant to your clinic created in PAT CAT will be displayed here. If you can't see a filter you can try and click on 'Reload Filters' - this will refresh the display. Contact your PHN or other organisation you are sharing data with if a particular filter is not visible and you expect it to be available.

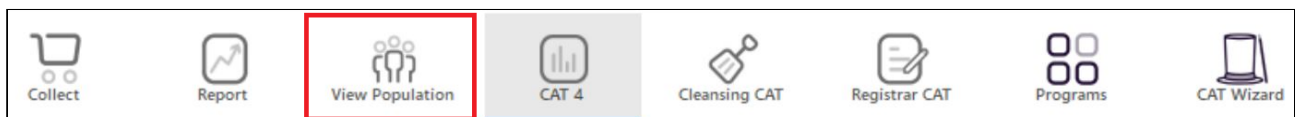
You will see the organisation(s) who have create the custom filter and the filter name. You can choose to apply the filter to find all patients matching the filter criteria or find everyone NOT matching the criteria. In our example we want to find the list of patients with CHD who are overdue for their BP and Cholesterol, so the 'Match' tick box is selected.

Filter Name	Date Created	Match	Not Match
Covid Vaccine - High Risk Patients	18/02/2021	<input checked="" type="checkbox"/>	<input type="checkbox"/>

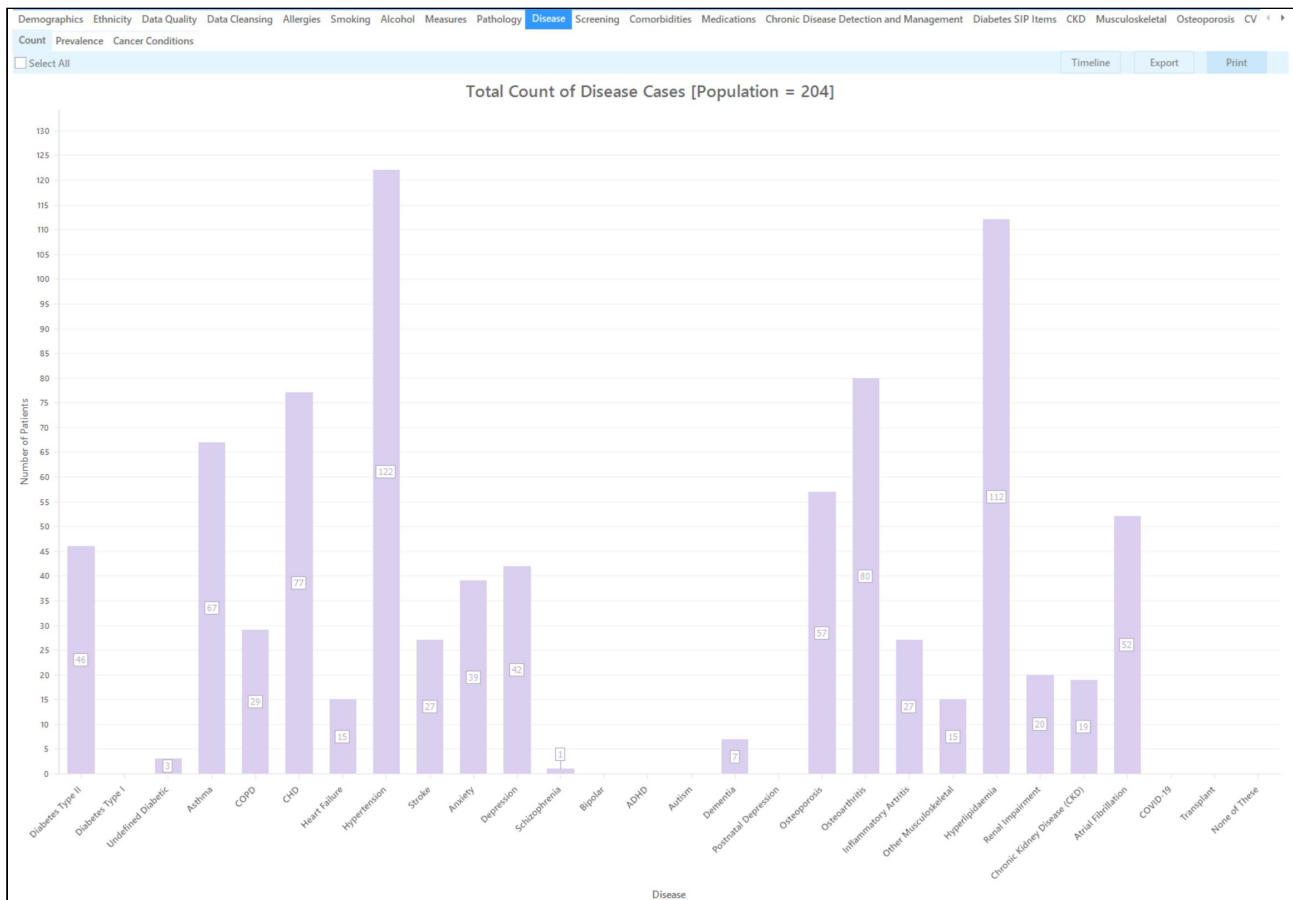
Once you have made the selection on the custom filter panel you can either recalculate or you can add other filter criteria if required, and then recalculate.



Once the custom filter has been applied, you can just click on the 'View Population' icon which will show the list of patients matching the filter criteria in the current data extract.



You can however also look at other reports for these patients, for example the 'Disease' report to see what other conditions have been recorded asides from CHD:



If you are looking at pathology or other results, remember that while the filter includes only patients with results older than 12 months (by using the [Date Range \(Results\) Filtering](#)<sup>80</sup>), your pathology or measures report will show these results unless you apply additional filters. In our example we are only showing those patients with no BP AND Cholesterol in the last 12 months, so it uses a build in [Cross Tabulation Report](#)<sup>81</sup> as well.

Custom filters can be saved either as they are or in combination with other filter criteria, by simply using the 'Saved Filters' tab and saving the new filter following the steps described here: [Saving Filter Criteria](#)<sup>82</sup>.

These filters are dynamic, so if you have new patients who match the conditions in the filter, they will be included in the new data extract and picked up by the filter.

<sup>80</sup> <https://help.pencs.com.au/display/CG/Date+Range+%28Results%29+Filtering>

<sup>81</sup> <https://help.pencs.com.au/display/CG/Cross+Tabulation+Report>

<sup>82</sup> <https://help.pencs.com.au/display/CG/Saving+Filter+Criteria>