Winter Strategy – clinical data auditing activities using CAT4[1]

Excerpts from the data cleansing manuals of the Sentinel Practices Data Sourcing (SPDS) project

Acknowledgment:

The data cleansing activities and instructions included in this document are excerpts from the Sentinel Practices Data Cleansing Manual and the current and/or future Supplements to the Sentinel Practices Data Cleansing Manual which are primary care clinical auditing tools respectively, conceptualised and drafted by the project team of the Sentinel Practices Data Sourcing (SPDS) project. This project is an innovative population health and primary care quality improvement based investigation into chronic conditions and associated risk factors conducted by COORDINARE – South Eastern NSW PHN.

While formal release of the SPDS supplementary manuals (additional instruction guides for advanced clinical auditing) will be undertaken in the near future, this excerpt document includes all auditing activities from the SPDS project. This document has been prepared to support COORDINARE's Winter Strategy to assist general practices in proving optimal care to the most vulnerable cohort of patients during the winter months of any given year. Activities in this excerpt aim to identify patients who can be most at risk of poor health outcomes during winter seasons and assist to create lists of such vulnerable cohorts of patients to support the optimal follow-up by clinicians and general practice staff.

It should be noted that these activities are only applicable to practices currently partaking in the SPDS project and thereby have the PenCS CAT4 tool installed on their practice systems. Secondary use of any and all information included in this document requires appropriate citation/acknowledgement of the SPDS project and its affiliated personnel and organisation.

Lastly, a pre-requisite to accurately and meaningfully undertake these activities is the completion of the Basic Level Data Cleansing & Initial Clinical Audit as per the SPDS project's data cleansing manual. If this has not been achieved then activities below are likely to reveal less meaningful results than anticipated.

For further details or queries please contact Abhijeet Ghosh at aghosh@coordinare.org.au

If your practice is not a current participant of the SPDS project and you would like more information, please contact your COORDINARE Health Coordination Consultant.

Contents

1 All activities are aimed for practices partaking in the Sentinel Practices Data Sourcing (SPDS) project that have PenCS CAT4 installed on their systems

PATIENTS WITH DIABETES

WHO HAVE NOT HAD A CYCLE OF CARE DONE AND RECORDED IN THE LAST 12 MONTHS

1. PATIENTS WITH OUTSTANDING DIABETES ANNUAL CYCLE OF CARE ITEMS

An annual "cycle of care" must be completed for each diabetic patient, based on RACGP and Diabetes Australia guidelines[2]. Apart from the usual consultative inclusions of - providing self-care education on managing diabetes; reviewing diet and encouraging good dietary choices; reviewing medications; reviewing levels of physical activity and encouraging good levels of physical activity; and checking smoking status and encouraging smoking cessation (if relevant) which are recommended to be done as required; the cycle also includes identified checks/examinations that need to be entered as distinct data into the electronic records of the patient. These include: -

Data items for Diabetes Annual Cycle of Care*	Frequency of checking and entering into electronic patient records
Measured blood pressure	6 monthly so twice in last 12 months
Measured HbA1c level	once in last 12 months
Comprehensive eye examination	once in last 24 months
Measured height and weight for BMI calculation	6 monthly so twice in last 12 months
Measured total cholesterol	once in last 12 months
Measured total triglycerides	once in last 12 months
Measured HDL cholesterol	once in last 12 months
Test for microalbuminuria	once in last 12 months
Comprehensive foot examination	6 monthly so twice in last 12 months

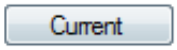
** Additionally PenCS CAT also checks for a recorded smoking status for the patient*

These items need to be entered in the correct sections of the EMR for accurate patient follow-up and clinical information auditing that enable the generation of appropriate recalls and reminder lists.

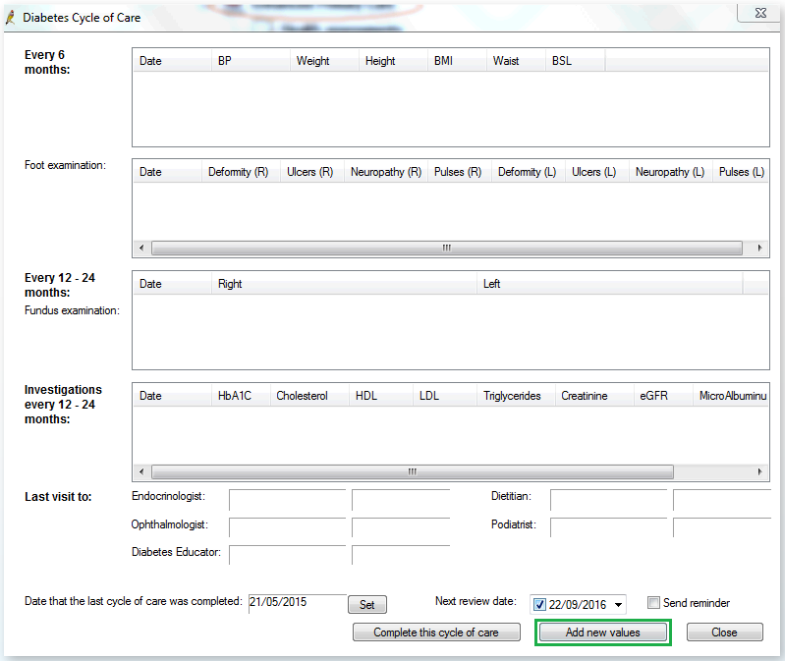
In Best Practice EMR, these items exist under the **Enhanced Primary Care** section

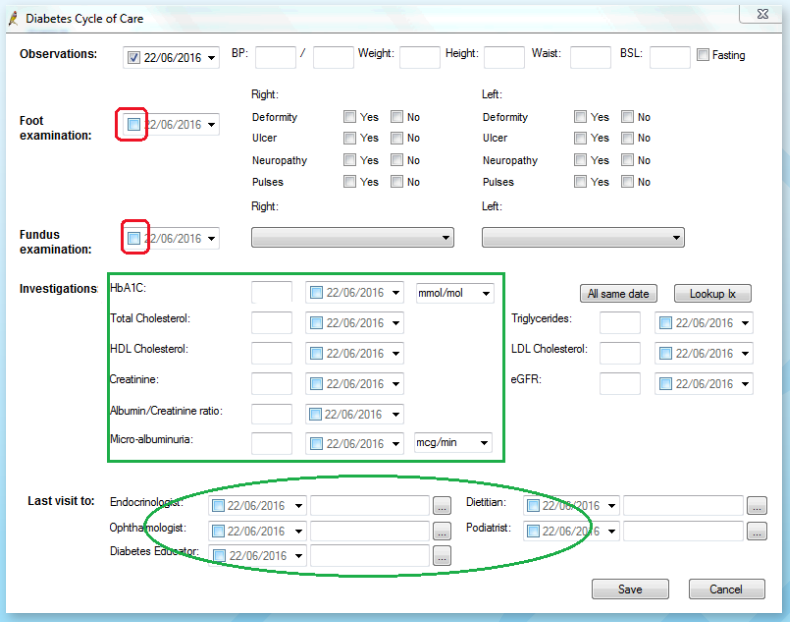
2 https://www.ndss.com.au/your-diabetes-annual-cycle-of-care

Under this section clicking on the



button opens up the **Diabetes Annual Cycle of Care** box wherein a practitioner should add values and findings electronically by clicking on the button



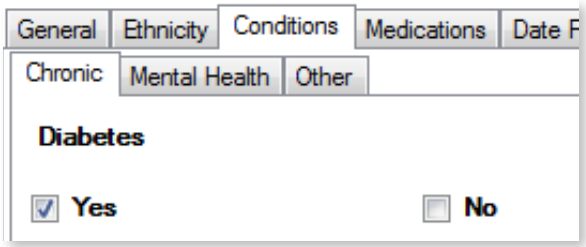


All the above highlighted entries should be filled in to the EMR and only then PenCS CAT and the EMR query tools would be able to report on them and enable the generation of accurate recalls and reminders

To identify which data item is missing for which Diabetic patient: -

1. Click on View Filter

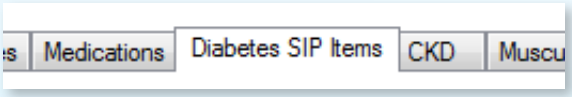
2. Under the Conditions section of the **Filter area** go to the sub-tab that says Chronic and select **Yes** for Diabetes



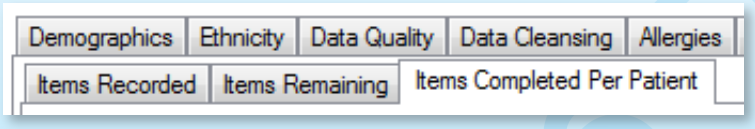
3. Click on the Recalculate button located on the right upper corner of PenCS CAT screen

4. Now all charts in the **Reports section** below will only display information for patients that have a coded diagnosis of any form of diabetes on their electronic health records

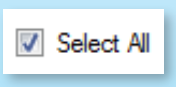
5. In the **Reports section** below click on the tab that says Diabetes SIP Items



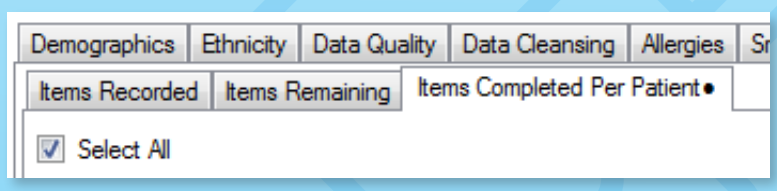
6. Go to the sub-tab that says Items Completed Per Patient



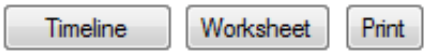
7. Check the Select all box located just above the chart on the left side



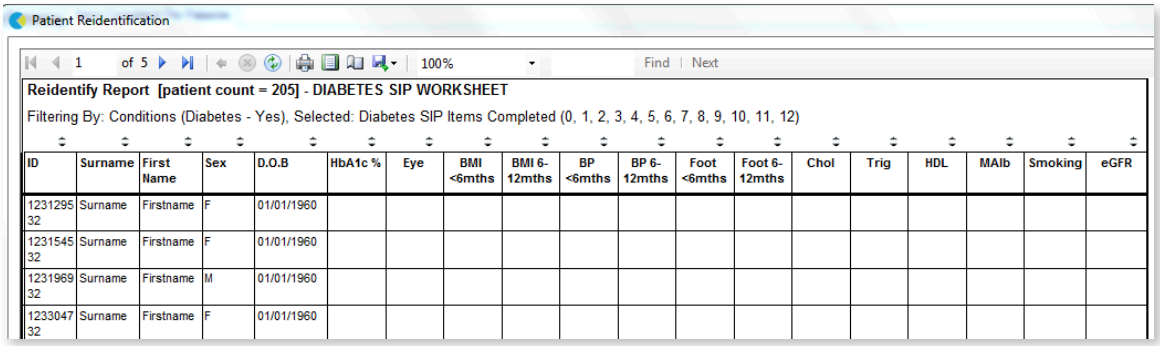
8. Once selected you will notice all bars of the chart below selected and the sub-tab that says Items Completed Per Patient has a dot (·) on it indicating that sections of the chart corresponding to that tab/sub-tab have been selected.Then click the Worksheet button located just above the chart on the right side



9. Then click the Worksheet button located just above the chart on the right side



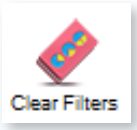
10. You will now get a patient re-identification list with the names of all patients in your practice that have a coded diagnosis of diabetes along with tabulated lists identifying which particular annual cycle of care item needs to be reviewed for the respective patients



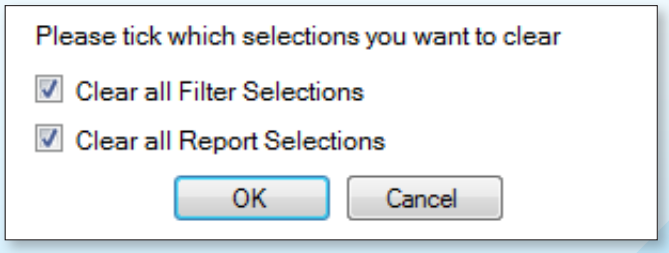
ID	Surname	First Name	Sex	D.O.B	HbA1c %	Eye	BMI <6mths	BMI 6-12mths	BP <6mths	BP 6-12mths	Foot <6mths	Foot 6-12mths	Chol	Trig	HDL	MAlb	Smoking	eGFR
123129532	Surname	Firstname	F	01/01/1960														
123154532	Surname	Firstname	F	01/01/1960														
123196932	Surname	Firstname	M	01/01/1960														
123304732	Surname	Firstname	F	01/01/1960														

11. This list can be printed or saved in an excel (CSV) format and subsequently actioned

12. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



13. Select clear all filter selections and clear all report selections on the pop-up and click OK



14. Now you are ready to run the next data cleansing activity

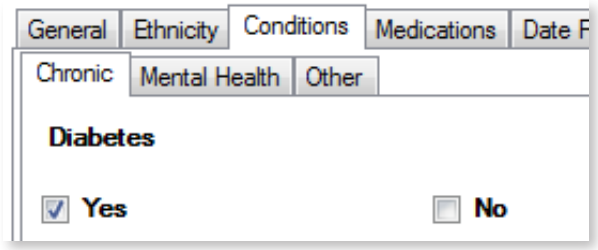
SUBSET OF 1
PATIENTS WITH DIABETES

WHO HAVE NOT BEEN IMMUNISED FOR INFLUENZA IN THE LAST 12 MONTHS

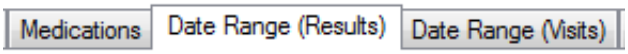
2. SUBSET OF 1 – PATIENTS WITH DIABETES WHO HAVE NOT BEEN IMMUNISED FOR INFLUENZA IN THE LAST 12 MONTHS

1. Click on View Filter

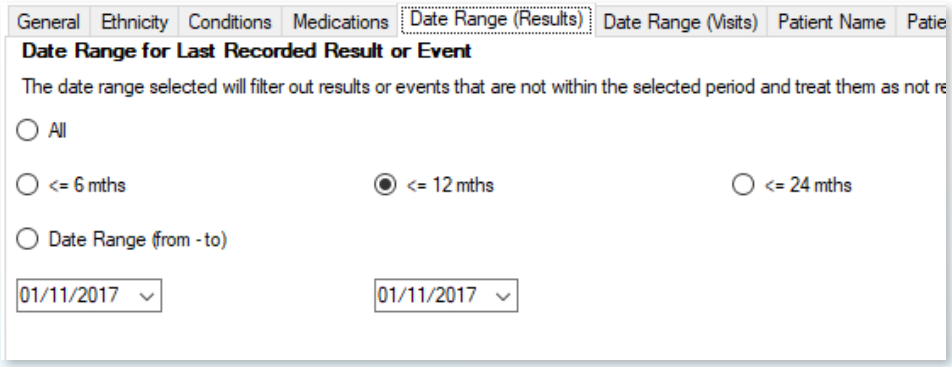
2. Under the Conditions section of the **Filter area** go to the sub-tab that says Chronic and select **Yes** for Diabetes



3. Click on the Date range (Results) section



4. Tick "<= 12 mths"

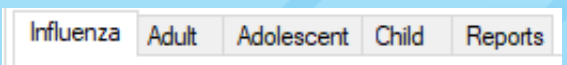


5. Click on the Recalculate button located on the right upper corner of PenCS CAT screen

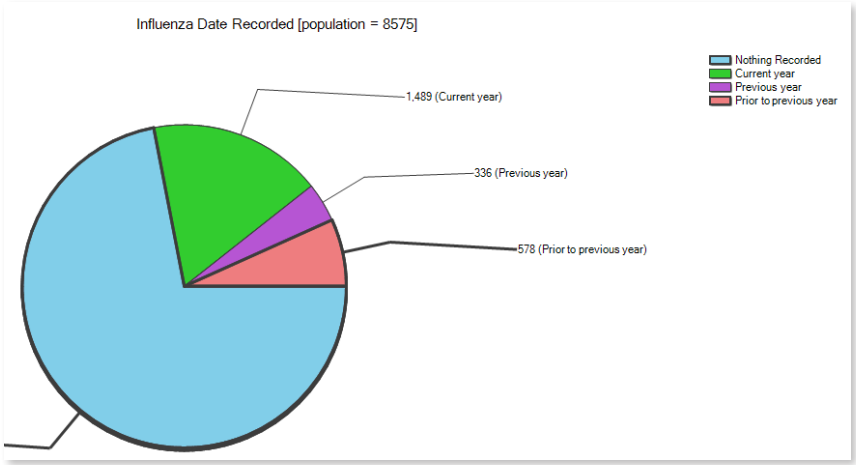
6. Now all charts in the **Reports section** below will only display information for patients that have a coded diagnosis of any form of diabetes on their electronic health records and have had results or events recorded in the last 12 months

7. In the **Reports section** below click on the tab that says Immunisations

8. Click on the sub-tab that says Influenza

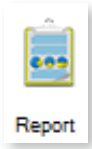


9. The chart below displays your data as a breakdown of Influenza vaccination status of all diabetic patients for the last 12 months

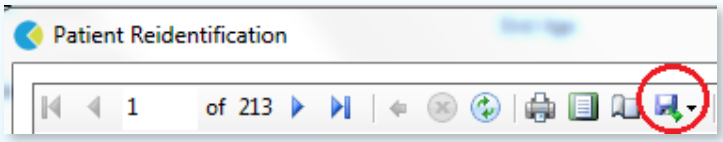


10. Click on the segment of the pie chart that says Nothing Recorded and the section that says Prior to previous year

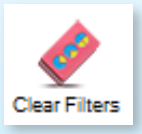
11. Click on Report



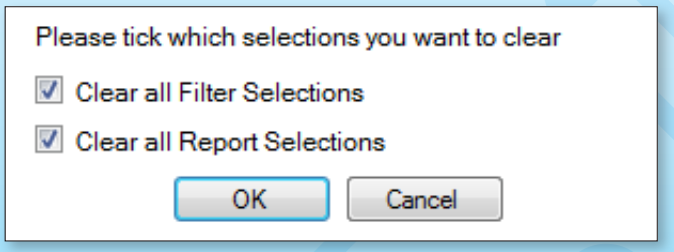
12. This will show up the list of these patients which can be printed out or saved and then reviewed on the patients' individual records on your electronic medical record system



13. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



14. Select clear all filter selections and clear all report selections on the pop-up and click OK



15. Now you are ready to run the next data cleansing activity

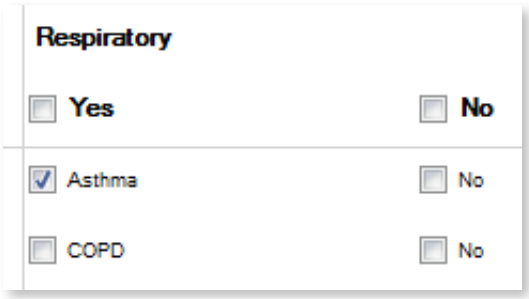
PATIENTS WITH ASTHMA

WHO HAVE NOT HAD AN ASTHMA CYCLE OF CARE DONE AND RECORDED IN THE LAST 12 MONTHS

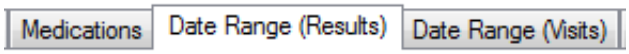
3. PATIENTS WITH ASTHMA WHO HAVE NOT HAD AN ASTHMA CYCLE OF CARE DONE AND RECORDED IN THE LAST 12 MONTHS

1. Click on View Filter

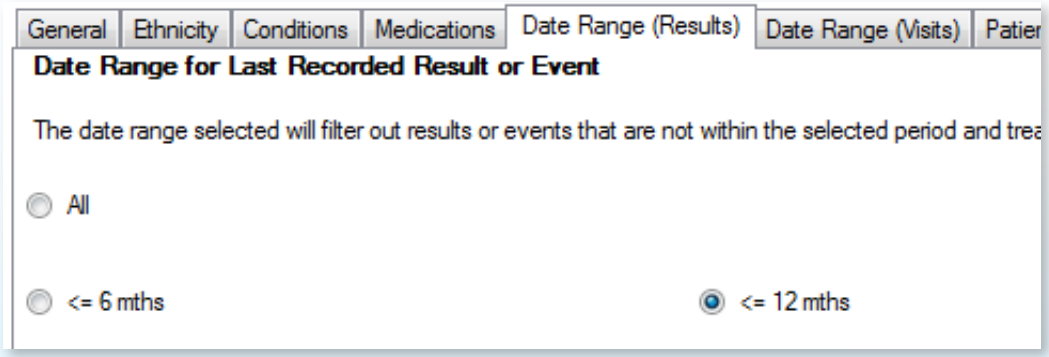
2. Under the Conditions section of the **Filter area** go to the sub-tab that says Chronic and select Asthma under the Respiratory section



3. Click on the Date range (Results) section of the **Filter area**



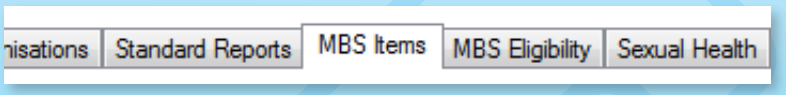
4. Tick "<= 12 mths"



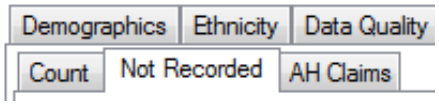
5. Click on the Recalculate button located on the right upper corner of PenCS CAT screen

6. Now all charts in the **Reports section** below will only display information for patients that have a coded diagnosis of asthma on their electronic health records and have had results or events recorded in the last 12 months.

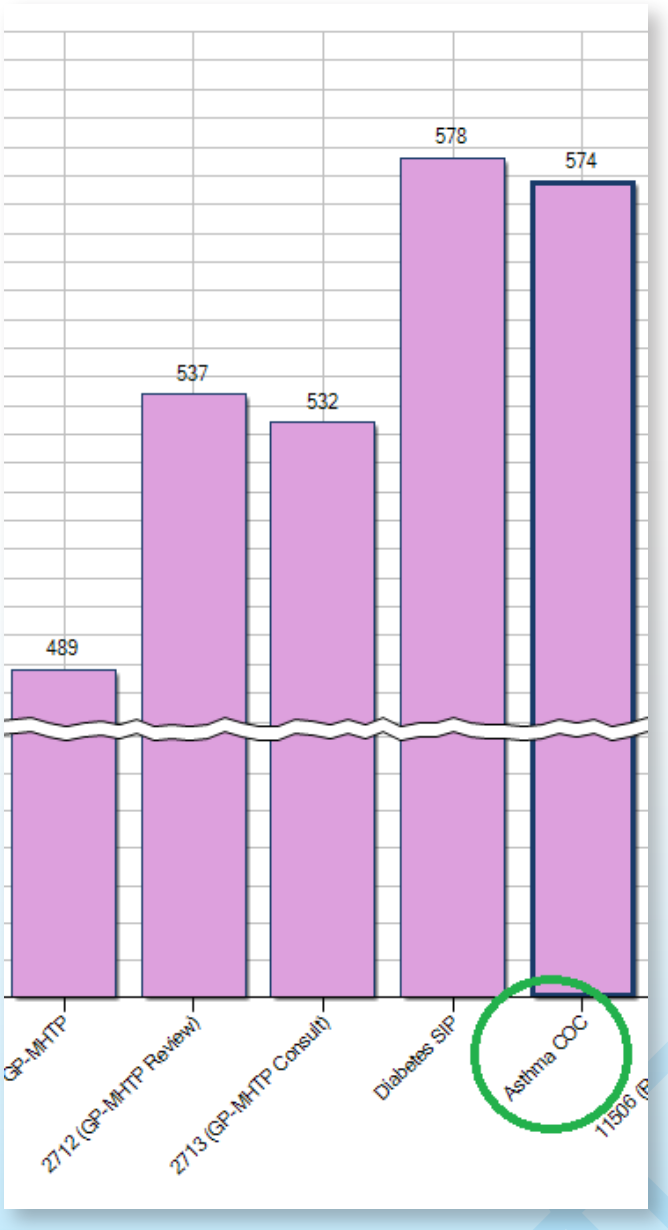
7. In the **Reports section** below go to the tab that says MBS Items



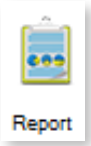
8. Then go to the sub-tab that says Not Recorded



Select the bar whose axis title says Asthma COC

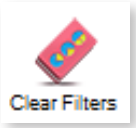


10. Click on Report

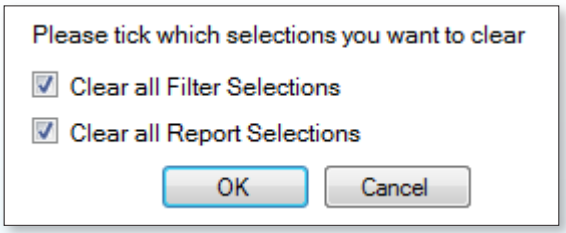


11. This will show up the list of these patients which can be printed out or saved and then reviewed on the patients' individual records on Best Practice

12. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



13. Select clear all filter selections and clear all report selections on the pop-up and click OK



14. Now you are ready to run the next data cleansing activity

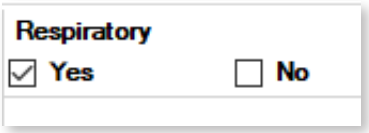
SUBSET OF 2 PATIENTS WITH ASTHMA OR CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

WHO HAVE NOT BEEN IMMUNISED FOR INFLUENZA IN THE LAST 12 MONTHS

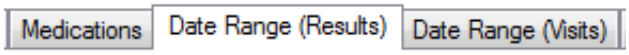
4. SUBSET OF 2 – PATIENTS WITH ASTHMA OR CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) WHO HAVE NOT BEEN IMMUNISED FOR INFLUENZA IN THE LAST 12 MONTHS

1. Click on View Filter

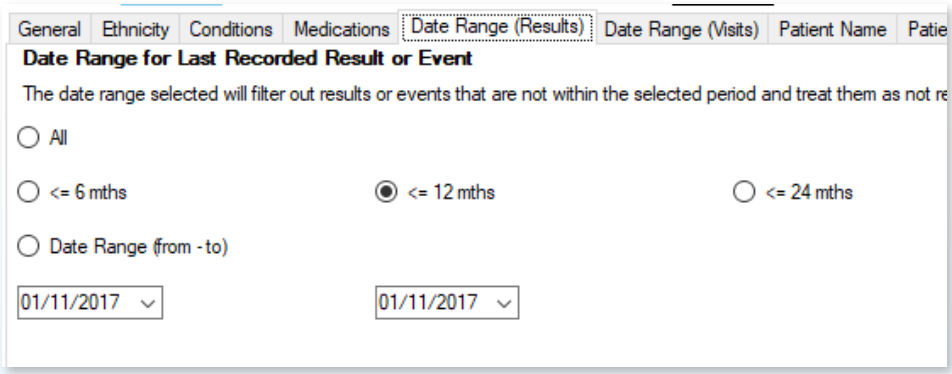
2. Under the Conditions section of the **Filter area** go to the sub-tab that says Chronic and select Yes for Respiratory



3. Click on the Date range (Results) section



4. Tick "<= 12 mths"



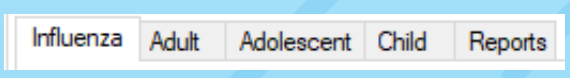
5. Click on the Recalculate button located on the right upper corner of PenCS CAT screen

6. Now all charts in the **Reports section** below will only display information for patients that have a coded diagnosis of any form of asthma or COPD on their electronic health records and have had results or events recorded in the last 12 months

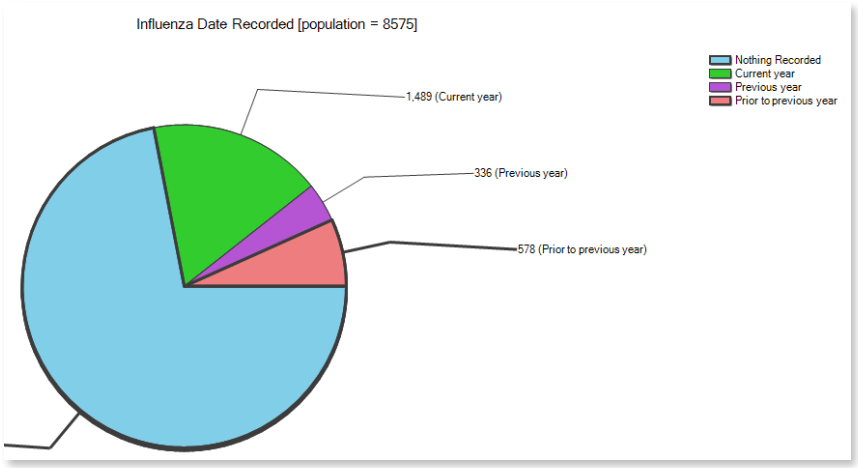
7. In the **Reports section** below click on the tab that says Immunisations

8. Click on the sub-tab that says Influenza

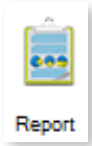
9. The chart below displays your data as a breakdown of Influenza vaccination status of all asthma and COPD patients for the last 12 months



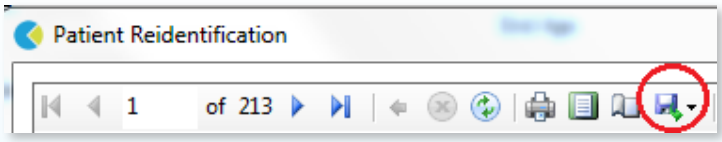
10. Click on the segment of the pie chart that says Nothing Recorded and the section that says Prior to previous year



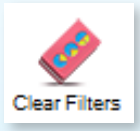
11. Click on Report



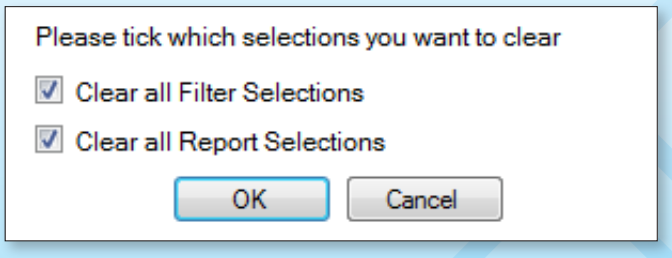
12. This will show up the list of these patients which can be printed out or saved and then reviewed on the patients' individual records on your electronic medical record system



13. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



14. Select clear all filter selections and clear all report selections on the pop-up and click OK



15. Now you are ready to run the next data cleansing activity

PATIENTS AGED 50 YEARS AND OVER

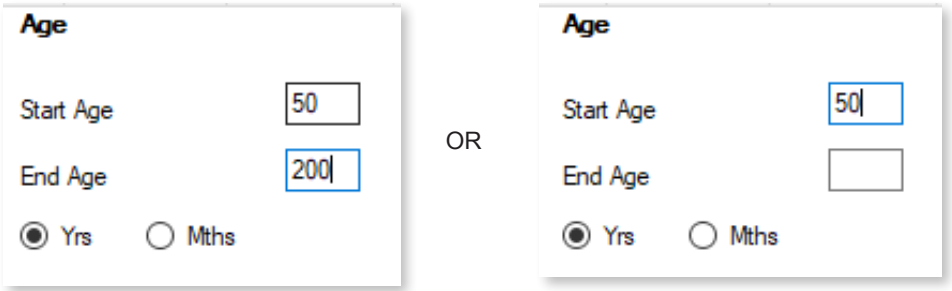
WHO HAVE NOT BEEN IMMUNISED FOR INFLUENZA IN THE LAST 12 MONTHS

5. PATIENTS AGED 50 YEARS AND OVER WHO HAVE NOT BEEN IMMUNISED FOR INFLUENZA IN THE LAST 12 MONTHS

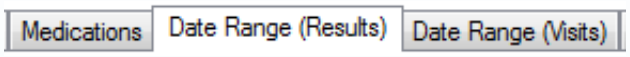
Influenza vaccination for older adults has been empirically proven to be a cost-effective[3] and valid[4] mechanism of prevention of hospitalisation for pneumonia and influenza.

1. Click on View Filter

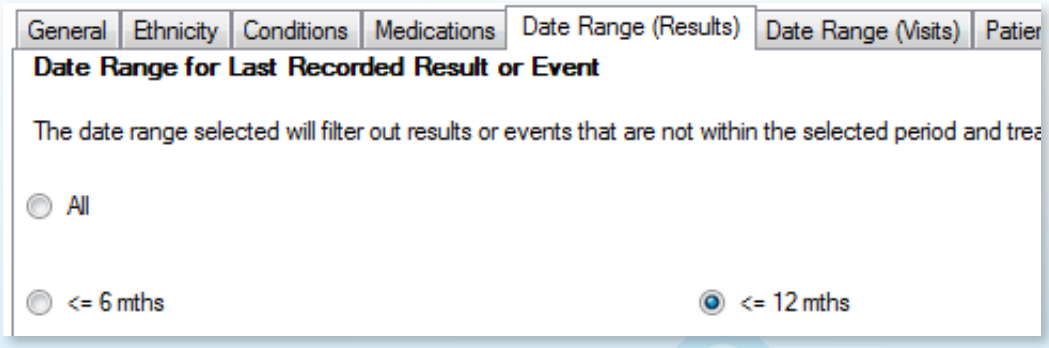
2. Under the General section of the Filter area go to the Age section and select Start Age as 50 and leave the End Age as blank (if you have NOT comprehensively undertaken and finished the activities of the *Sentinel Practices Data Cleansing Manual* then put End Age as 200)



3. Click on the Date range (Results) section of the **Filter area**



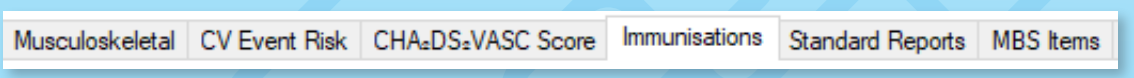
4. Tick "<= 12 mths"



5. Click on the Recalculate button located on the right upper corner of PenCS CAT screen

6. Now all charts in the **Reports section** below will only display information for patients aged 50 years and over who have had results or events recorded in the last 12 months.

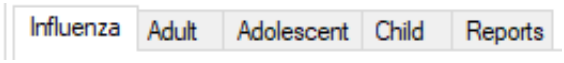
7. In the **Reports section** below go to the tab that says immunisations



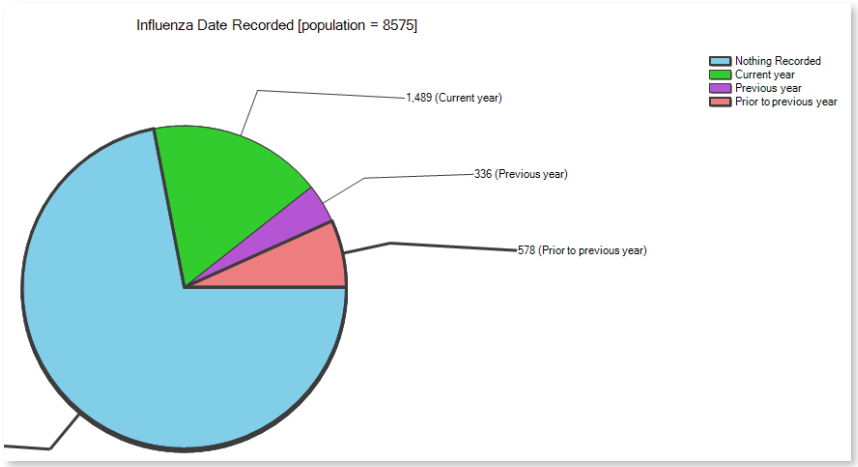
3 Aballéa S, Chancellor J, Martin M, Wutzler P, Carrat F, Gasparini R, Toniolo-Neto J, Drummond M, Weinstein M. The cost-effectiveness of influenza vaccination for people aged 50 to 64 years: an international model. Value Health. 2007 Mar-Apr; 10(2):98-116.

4 Baxter R, Ray GT, Fireman BH. Effect of influenza vaccination on hospitalizations in persons aged 50 years and older. Vaccine. 2010 Oct 21; 28(45):7267-72. Epub 2010 Sep 9.

8. Click on the sub-tab that says Influenza

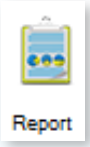


9. The chart below displays your data as a breakdown of Influenza vaccination status of all patients aged 50 years and over for the last 12 months

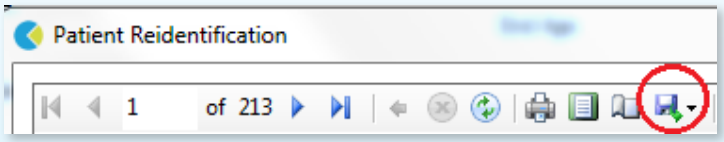


10. Click on the segment of the pie chart that says Nothing Recorded and the section that says Prior to previous year

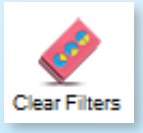
11. Click on Report



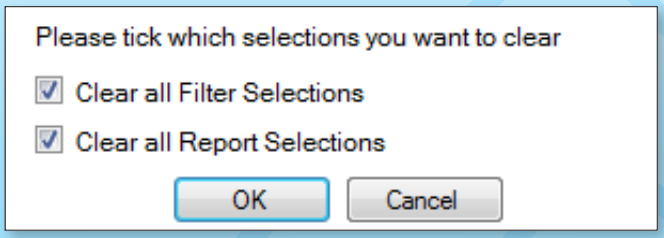
12. This will show up the list of these patients which can be printed out or saved and then reviewed on the patients' individual records on your electronic medical record system



13. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



14. Select clear all filter selections and clear all report selections on the pop-up and click OK



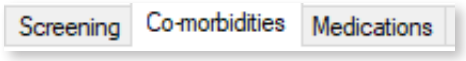
15. Now you are ready to run the next data cleansing activity

PATIENTS WITH MULTIPLE CHRONIC CONDITION CATEGORIES

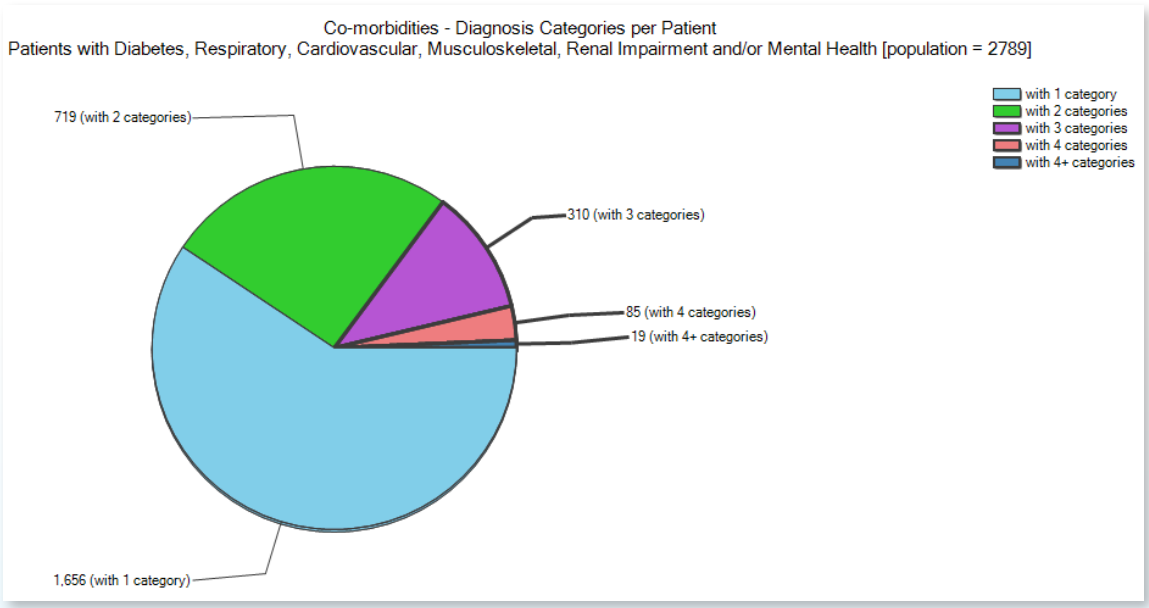
6. PATIENTS WITH MULTIPLE CHRONIC CONDITION CATEGORIES

The following few activities identify some general vulnerable cohort of patients (not specific to winter) who should be specifically reviewed for their ongoing care to prevent any winter related hospitalisations and/or exacerbation of their existing chronic conditions.

1. In the **Reports section** go to the tab that says Co-morbidities

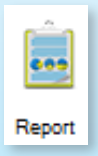


2. The chart below displays your data as a breakdown of the number of patients with the respective number of chronic condition categories as per the coded diagnosis and past history items on their electronic health records

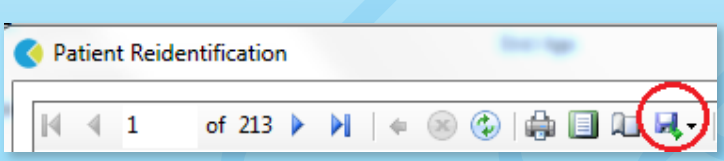


3. Click on the segment of the pie chart that says with 3 categories, the section that says with 4 categories and the section that says 4+ categories

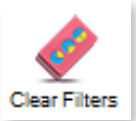
4. Click on Report



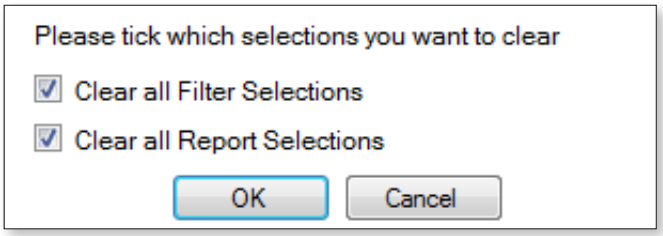
5. This will show up the list of these patients which can be printed out or saved and then reviewed on the patients' individual records on your electronic medical record system



6. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



7. Select clear all filter selections and clear all report selections on the pop-up and click OK

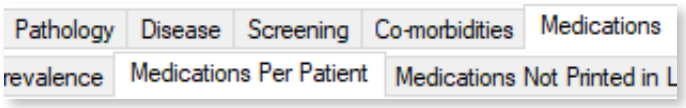


8. Now you are ready to run the next data cleansing activity

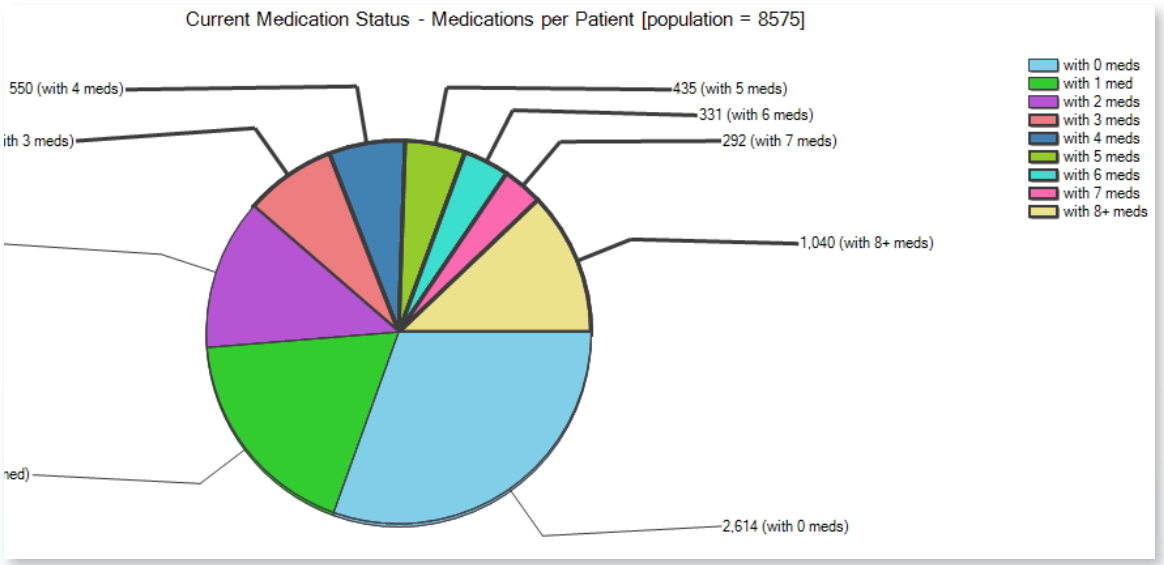
PATIENTS WITH MULTIPLE MEDICATIONS

7. PATIENTS WITH MULTIPLE MEDICATIONS

1. In the **Reports section** go to the tab that says Medications and the go to the sub-tab that says Medications Per Patient



2. The chart below displays your data as a breakdown of the number of patients with the respective number of medications as per the prescription records on their electronic health records

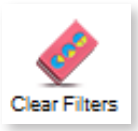


3. Click on the segments of the pie chart that have 3 or meds - with 3 meds, with 4 meds, with 4 meds, with 5 meds, with 6 meds, with 7 meds and with 8+ meds

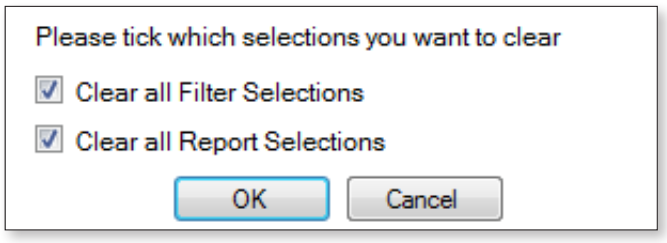
4. Click on Report

5. This will show up the list of these patients which can be printed out or saved and then reviewed on the patients' individual records on your electronic medical record system

6. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



7. Select clear all filter selections and clear all report selections on the pop-up and click OK



8. Now you are ready to run the next data cleansing activity

PATIENTS AGED 65 YEARS AND ABOVE WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

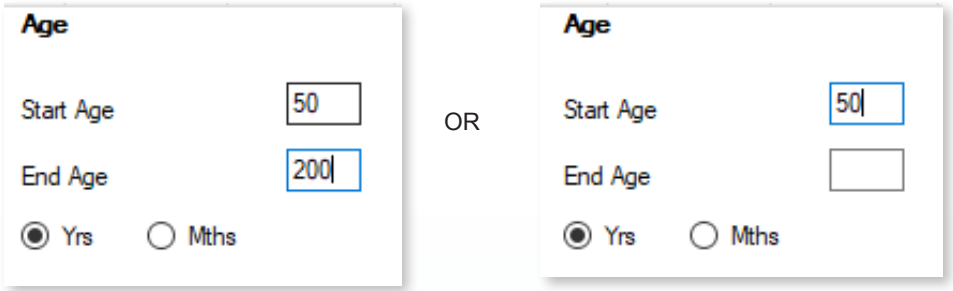
8. PATIENT AGED 65 YEARS AND ABOVE WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

COPD contributes to the highest total number of bed days spent for potentially preventable hospitalisations (PPH) in the South Eastern NSW PHN (SENSWPHN) catchment and amongst the major causes of PPH as per 2015-16 figures, COPD is the only condition wherein hospitalisation rates for SENSWPHN catchment were higher than national rates[5]. Within the population, hospitalisation rates for COPD are significantly higher for the cohort of persons aged 65 years and above compared to overall all age total rates[6].

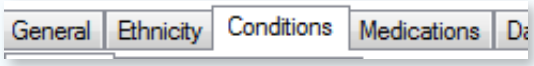
Therefore, identifying this cohort especially during the winter period is estimated to have clinical significance.

1. Click on View Filter

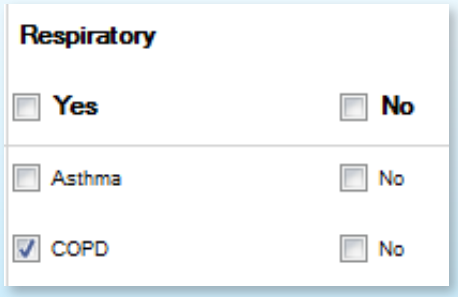
2. Under the General section of the Filter area go to the Age section and select Start Age as 65 and leave the End Age as blank (if you have NOT comprehensively undertaken and finished the activities of the *Sentinel Practices Data Cleansing Manual* then put End Age as 200)



3. Click on the Conditions section of the filter area



4. In the Respiratory section tick Yes for COPD



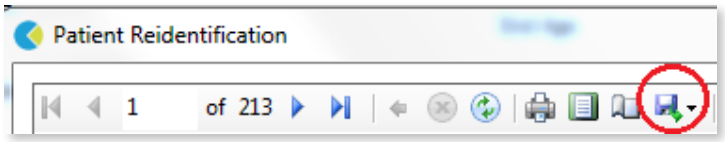
5. Click the 'Recalculate' button located on the right upper corner of PenCS CAT screenClick on Clear Filters button located near the right upper corner of PenCS CAT screen

5 Ghosh A, 2017. Potentially Preventable Hospitalisations Annual Update Snapshot - 2015-16. COORDINARE – South Eastern NSW PHN.

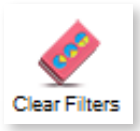
6 Ghosh A, 2017. Brief COPD Snapshot of the Illawarra Shoalhaven. COORDINARE – South Eastern NSW PHN.

6. Click the View Population button on the top

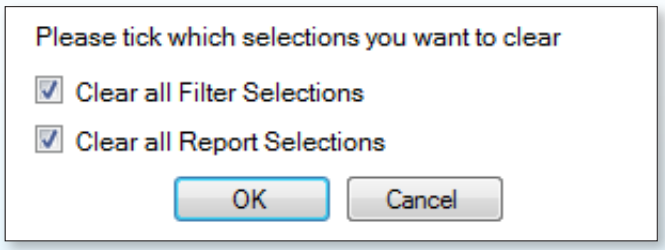
7. This will show up the list of these patients which can be printed out or saved and then reviewed on the patients' individual records on your electronic medical record system



8. Click on Clear Filters button located near the right upper corner of PenCS CAT screen



9. Select clear all filter selections and clear all report selections on the pop-up and click OK



10. Now you are ready to run the next data cleansing activity