Standardised Data Coding

using

Bp Premier

Learning Workbook

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Learning Objectives

1. To increase awareness and understanding of the value of structured and coded health information.
2. To increase understanding of the most important areas in the record that should be structured and coded – core clinical data.
3. To increase the level of structured and coded information being entered into clinical information systems by practice staff.

The value of using coded / structured data

The value of using coded / structured data over free text data entry can be determined from the benefits that it provides. The benefits from coding data that is entered into clinical information systems include:

- To enable sharing of patient health information with other providers and patients for improved continuity of care
- To help create sustainable practices of the future that are more adaptable to change
- To facilitate safe and effective healthcare via improved accuracy and understanding of consistent terminology
- To enable more proactive management through the building of registers of patients with certain conditions
- To minimise adverse patient outcomes and prevent near misses
- Improved accuracy, consistency and legibility of patient health records by healthcare providers

Quality Improvement Activities

Continuous Quality Improvement is an essential element of high performing healthcare organisations as it facilitates sustainable businesses, high quality of care, consistent service delivery and improved revenue opportunities. General practices accredited to the RACGP Standards need to show regular commitment to quality improvement initiatives to successfully achieve the evaluation criteria and attain practice accreditation.

To measure the effectiveness of quality improvement activities, healthcare organisations need a method of measuring progress towards achieving their stated objectives. Consistent data coding systems drive meaningful quality improvement activities.* (RACGP Standards 4th Ed) by providing a method of measurement as this helps us to determine whether a planned change is successful or not.

For example, a quality improvement initiative aimed at building an accurate register of patients with 'COPD' will need to determine the current rate of recording / #of patients with a coded diagnosis of COPD in the patient's medical history. If the condition was entered as 'free text' this measurement will result in a very low baseline. ie a low % of patients with a coded diagnosis of COPD.

Included below is an example of a template used for recording and managing quality improvement activities. This template can be used within a healthcare organisation by the practice team to develop a repository of practice improvement ideas, benefits and success stories. It can also be used as evidence to support the practice accreditation evaluation process.

The idea is to document the aims of the improvement activity, the ideas to achieve the aim and the steps that will be undertaken including how success will be measured. It is important to remember that not all improvement activities will lead to success. That's why we need to test our ideas, measure their impact on the aims of the activity and determine a course of action based on the measurable results. For example, a PDSA aimed at improving allergy recording may involve printing a list of all patients with no allergy information on their file. However, using this list as a means of identifying patients with missing allergy information may prove to be a time consuming approach to improve recording if it necessitates having to check the list each time a patient presents.

PDSA TEMPLATE WITH SAMPLE IMPROVEMENT ACTIVITY

What is our GOAL **(what are we trying to accomplish)**	**Raise Awareness of Clinical Coding** ▪ **Code diagnoses**			
What measures will we use? (i.e. data)	% of diagnoses in Past Medical History for active patients that are coded rather than free text on their electronic medical record.			
What ideas can we use? **(how are we going to achieve our goal)**	*List ideas here to work on in table below* • Team meeting to discuss the issue, benefits & how to address • Attend education e.g. webinars / face to face sessions • Post-education follow-up team discussion • GP & RN team review of clinical documentation • Use of Cleanup History tool to merge uncoded with coded diagnosis • Pen CAT / Polar Data Quality Audit of records to measure baseline			
IDEAS	**PLAN** **How will we do it – who, what, where and when?**	**DO** **Did we do it**	**STUDY** **What happened?**	**ACT** **What is our next step?**
1. Team meeting	Practice Manager to organise, staff room DATE			
2. Education	Watch videos Read Summary sheets Read workbooks			
3. Diagnosis Coder				
4.				

Activity – Use the blank PDSA form (Appendix A) to create a customised improvement plan for your practice.

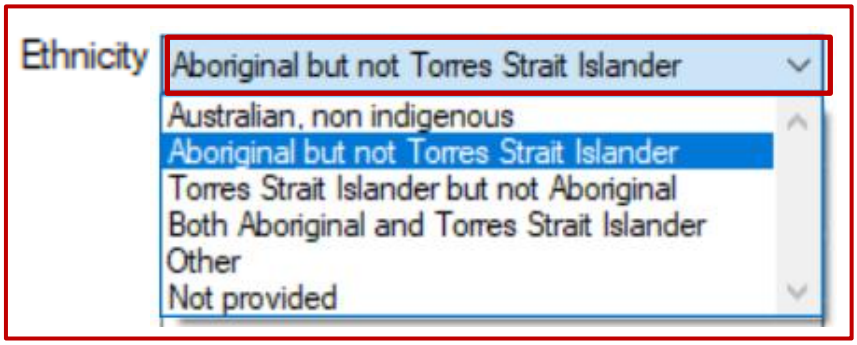
Adding Aboriginal and Torres Strait Islander status

Aboriginal and Torres Strait Islander people are under-identified in many health-related data collections. Self-report in response to the standard Indigenous status question is the most accurate means of ascertaining a patient's Indigenous or non-Indigenous status and this information is recorded in the patient record as 'ATSI status'. The response to this question allows service providers to ensure that Aboriginal and Torres Strait Islander patients have an opportunity to access relevant services specifically designed to meet the needs of Indigenous Australians – if they choose.

Adding Aboriginal and/or Torres Strait Islander status:

1. **Open** a patient record **(F2).**
2. Select **Open > Demographics**.
3. Select the **Ethnicity**

   drop-down arrow.
4. Select a**n option** from the list.



Note: if '**Other**' is chosen, a pop-up list of ethnicities will be displayed to select from.

5. **Save.**

Question: ***Are you [is the person] of Aboriginal or Torres Strait Islander origin?***

Response: Four standard response options are provided in MedicalDirector Clinical as follows:

1. No, Australian, non indigenous
2. Yes, Aboriginal but not Torres Strait Islander
3. Yes, Torres Strait Islander but not Aboriginal
4. Yes, Both Aboriginal and Torres Strait Islander
5. Other
6. Not provided

Note: If the question has not been completed on a returned form, this should be followed up and confirmed with the patient.

Further Information: How to ask about ATSI status
Further Information: How to ask about ATSI status
RACGP "Identification of Aboriginal and Torres Strait Islander people in Australian general practices"
RACGP "National Guide to a preventive health assessment for Aboriginal and Torres strait Islander people"
AIHW "National best practice guidelines for collecting Indigenous status in health data sets"

Activity – Adding coded Aboriginal & Torres Strait Islander status to the patient record

1. Login to Bp Premier Samples database as Dr Findacure (password = 'samples').
2. Open Maree Ackerman's patient file **(F2).**
3. Select Open > Demographics from the drop-down menus.
4. Select the **Ethnicity drop-down** arrow.
5. Select an **option** from the list
6. **Save.**

Case Study: Adding coded Aboriginal & Torres Strait Islander status

Scenario:

Bobby Is an Aboriginal male patient with a number of significant health issues who attended a mainstream GP clinic for the first time, visiting Dr Robinson.

As was Dr Robinson's standard practice, upon identification of Indigenous status, he spent time getting to know his new patient and talking in detail about his medical and social history. Through this broader discussion of Bobby's medical history, Dr Robinson found out that although previous doctors had given Bobby referrals for blood tests, he had never had the tests done.

When discussing the reasons for this, Dr Robinson found out about issues with transport and fears of the tests being expensive. Dr Robinson then discussion registering for close the gap to help with the cost of medicines and ways to assist Bobby with ongoing care.

Outcome:

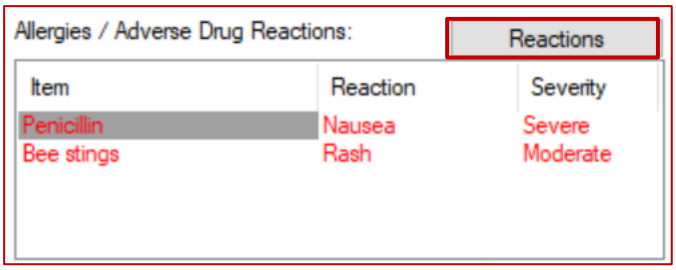
After the consultation, the practice manager called the laboratory, organised bulk billing and helped arrange transport to the laboratory. The blood tests indicated that further medical interventions were necessary.

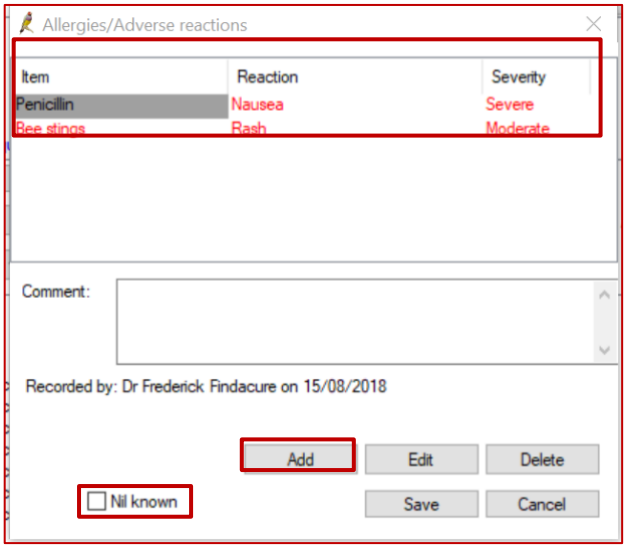
Adding an allergy or adverse reaction

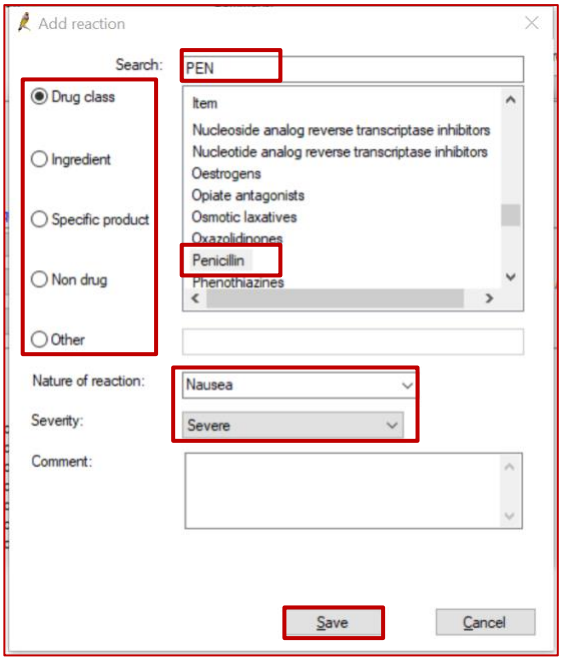
Allergy information can be entered on the patient record in the upper left corner of the window. This information is displayed in red. If the patient has no allergies or adverse reactions, tick 'Nil Known' to indicate the patient has been asked about allergies.

Adding an Allergy / Reaction in the patient record:

1. **Open** a patient record **(F2).**
2. **Select the Reactions button** in the patient demographic area at the top of the screen to go directly to the allergies / adverse drug reactions section.
3. Select the **Add** button.
4. Select a **Search** option: Choose from Drug Class, Ingredient, Specific Product, Non Drug or Other.
5. **Enter the first few characters of the item** into the Search field. As you type in a drug name or class, a list of names is displayed matching the search. Double click a name from the list to select it.
6. Select the **Nature of Reaction** from the dropdown list (e.g. rash, nausea etc).
7. Select the **Severity** of the reaction from the dropdown list.
8. **Save**.







Note: If you select Ingredient, Specific Product or other, only exact matches will generate a warning when prescribing.

Select Drug class to be warned about all products in a class and always pay attention to Warnings.

Activity – Adding coded allergy information to the patient record

1. **Login to Bp Premier Samples database** as Findacure (password = 'samples').
2. Open Maree Ackerman's patient file (F2).
3. Select the **Reactions** button.
4. Select **Add**.
5. Enter an allergy to **Nitrates** by **Drug Class**
6. Nature of reaction = **Rash**
7. Severity = **Severe**
8. **Save.**
9. Check that the new allergy has been added to the patient record.

Case Study: Adding an allergy or adverse reaction

Scenario:

Kate is a 53-year-old teacher and mother from Sydney. She had no known allergies until the day a nurse gave her an aspirin for a headache. Immediately after taking the medication she started to feel significantly worse. She began to experience shortness of breath and her eyes were completely bloodshot. She immediately returned to the nurse and said "Look at my eyes, they've gone completely red. I'm feeling worse. I don't feel like I can get any air". The nurse immediately called for the GP who administered adrenaline just as Kate started to collapse. That was the first anaphylactic reaction Kate had ever had.

Outcome:

Kate recovered quickly on treatment and was told she had experienced a life-threatening anaphylactic reaction. She was counselled as to the importance of never taking aspirin again. Kate was advised to wear an allergy alert bracelet at all times. The doctor added the aspirin allergy into the coded allergy section of her medical record and also doctor added detail of the reaction and severity. She also uploaded a shared health summary as Kate was soon to be travelling and this information would be accessible electronically via her My Health Record.

Adding a coded diagnosis, past history

Diagnoses are added using the **Past history** screen in Bp Premier. The diagnosis should always be chosen from a coded list rather than using free text.

The Past history section of the electronic medical record is used to record only:

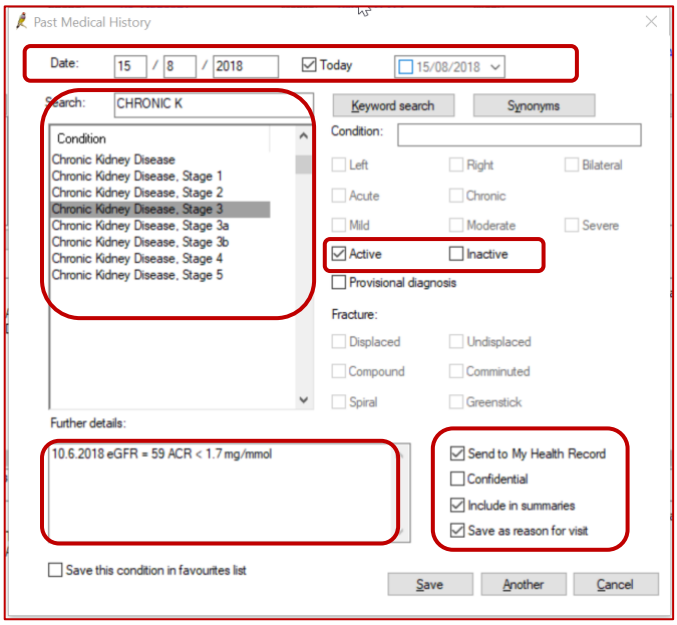
- Chronic conditions
- Significant events in the patient's medical history

Adding a coded diagnosis in the patient record / consultation:

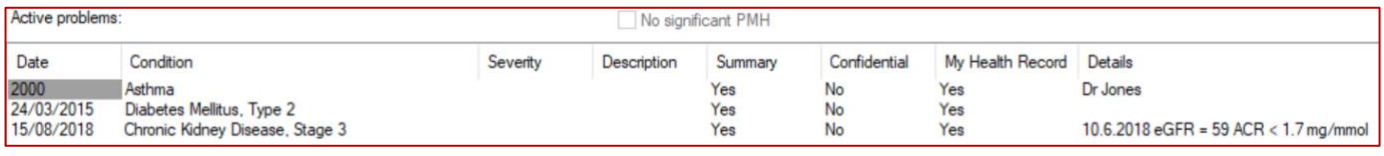
1. Open the patient record **'F2'.**

2. Select the '**Past history'** tab.

3. Select the **'Add'** button in the top left of the window.

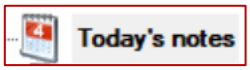


4. **Enter the date** the condition was first diagnosed in the date field. If a specific date is not known, enter the Year it was first diagnosed.
5. **Enter the first few characters** of the condition in the '**Search**' field then **double click** on the relevant diagnosis to select.
6. Tick '**Active'** to indicate the condition is current.
7. Tick '**Send to My Health Record'** as appropriate.
8. Tick **'Include in Summaries'** to include the diagnosis on health summaries.
9. Tick '**Confidential**' to indicate that the diagnosis is not to be shared.
10. Tick '**Save as Reason for Visit'** if applicable.
11. Enter any relevant comments in the **Further Details** section as required.
12. **Save**.



Note: Tick 'No significant PMH' if there is no past medical history to record.

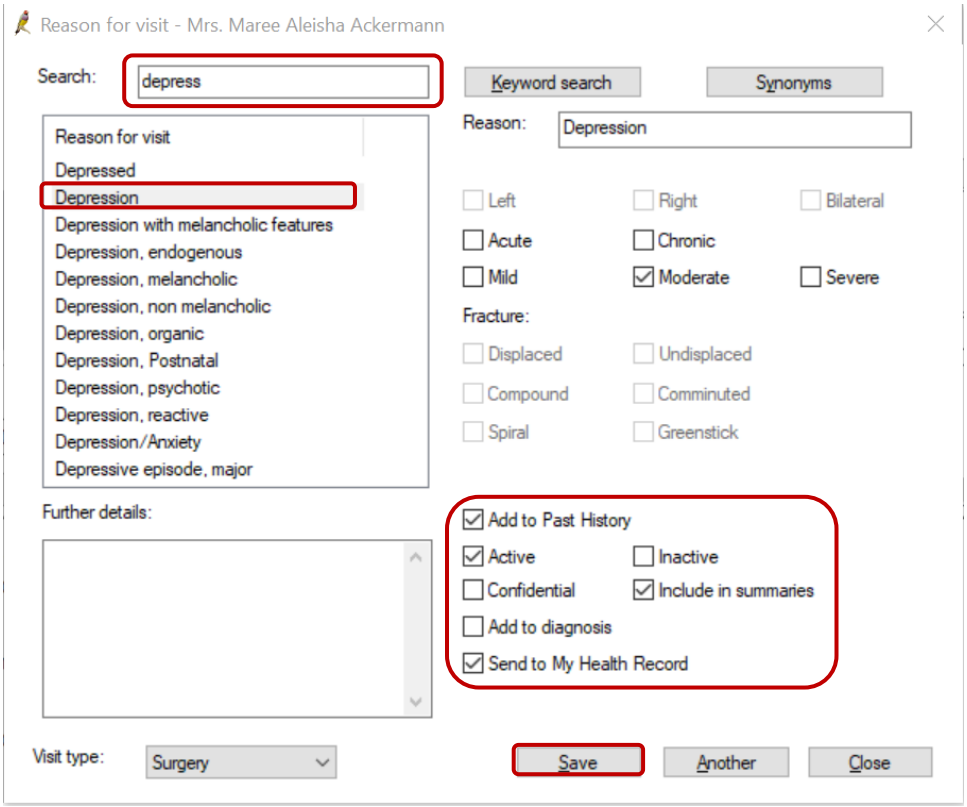
Adding a coded diagnosis from the reason for visit window:



1. Select **Todays Notes** tab.
2. Select the **Reason for Visit** button.
3. If the diagnosis is already in the Reason for Visit items to the left of the window, select it by double clicking on the condition.

4. If the condition is not in this list, enter the first few characters of the condition in the '**Search**' field then double click on the relevant diagnosis to select.
5. Tick '**Active'** to indicate the condition is current.
6. Tick '**Include in Summaries'** to include the diagnosis on health summaries.
7. Tick '**Confidential**' to exclude the diagnosis from health summaries etc.
8. **Enter a Comment** as required.
9. Select the '**Add to Past History'** tickbox. This will add the condition to the existing history list.

   Note: This box should only be ticked if the condition is not already recorded in the patient's medical history otherwise the entry will be duplicated.
10. **Save.**



Activity – Adding a coded diagnosis to the patient record

Maree Ackerman is visiting about a skin condition today that has yet to be diagnosed.

1. **Login to Bp Premier Samples database** as Dr Findacure (password = 'samples').
2. Open Maree Ackerman's patient record (F2).
3. Select the **Past History** tab
4. Enter the **date** of diagnosis
5. Select **Add.**
6. Add **ECZEMA** as an **Active** condition to the past history list.
7. **Save**.

Case Study: Coding Past Medical History

Scenario: Jack, aged 63 is an active patient who has seen the same GP for many years. He experienced a heart attack when he was 55 years old and was successfully treated with the insertion of a stent. When his then paper records were converted to electronic medical records in 2005 details of this important diagnosis in Jack's medical history was entered using free text rather than coding a diagnosis of 'Coronary Heart Disease' in the patient electronic medical record.

In 2018, Jack's GP was participating in a research program aimed at improving medication adherence for people at high risk of a cardiovascular event. This meant that any patients with a past history of cardiovascular disease would be included in the study and potentially benefit from the use of a new combination medication to improve adherence to preventative medication. However, since Jack's disease was not entered into his file as a coded diagnosis, it meant that his medical record was not included in the group of patients considered high risk when a database search was done.

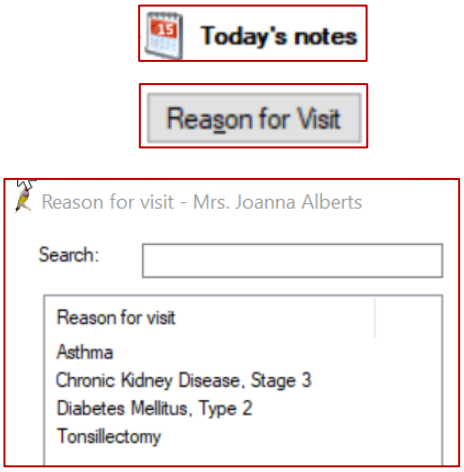
Outcome: Jack was overlooked for the purposes of inclusion in the study. This meant he was not flagged as being at high risk of a cardiovascular event and was not offered the opportunity of being prescribed the new combination medication to improve medication adherence & reduce the risk of further cardiovascular events.

Adding a reason for visit

The reason for visit is added in the Today's Notes screen and is chosen from a list of available codes rather than using free text. It is possible to enter multiple reasons for the current presentation within a single visit note.

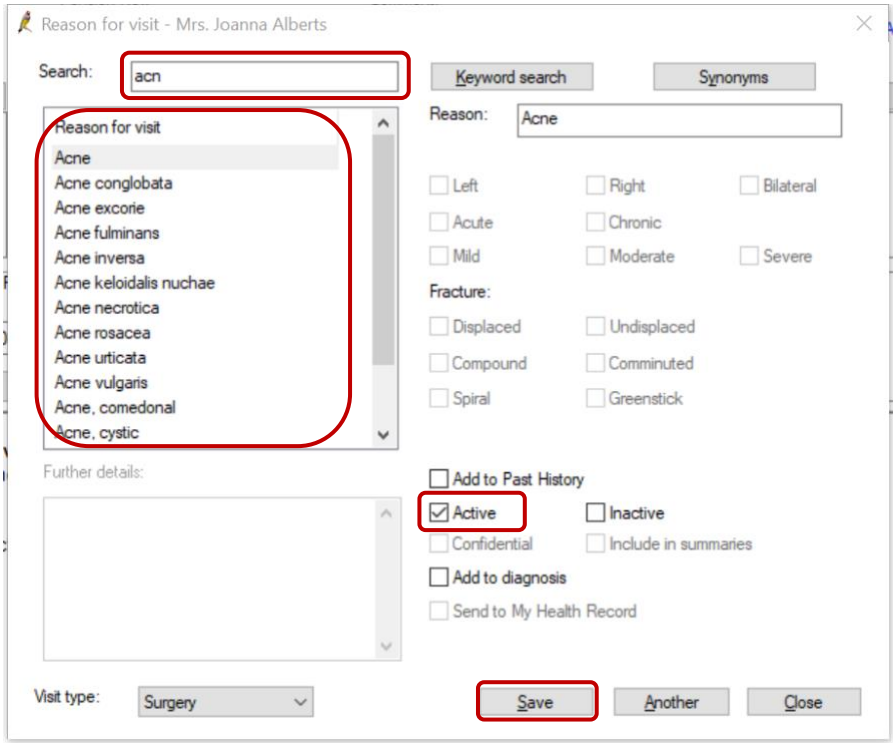
Adding a coded reason for visit in Today's notes:

1. Select the **Today's Notes** tab.
2. Select the **Reason for Visit** button.
3. If the reason for the current visit is already in the list displayed on the screen, select it by double clicking on the condition.
4. If the reason is not in this list, **enter the first few characters of the reason** in the '**Search**' field then **double click on the relevant reason to select it**.
5. Tick '**Active**' to indicate the condition is current.



Note: the '**Add to Past History'** tickbox. This should only be used if you are **diagnosing a new condition**. This box may be ticked by default and you can accidentally end up with 'reasons' such as 'Diabetes Review', 'Diabetes Assessment', 'Care Plan' etc on your patient's medical history if you don't untick it.

6. **Save.**



Note: Multiple reasons for visit can be added to the current visit note by using the 'Another' button.

Activity – Adding a coded reason for visit to the patient record

Maree Ackerman is visiting about her pre-existing asthma condition today.

1. Login to Bp Premier Samples database as Dr Findacure (password = 'samples').
2. Open Maree Ackerman's patient record (F2).
3. Select **Todays Notes** tab.
4. Select the **Reason for Visit** button.
5. Select **Asthma as the reason for visit** from the existing Past History list to the right of the window.
6. Tick **Active.**
7. **Save.**

Case Study: Coding Reason for Visit

Scenario: 17-year-old Sally was in her final year of high school and presented to her local GP with an acute sore throat and temperature on a number of occasions during the past year. In fact on two occasions Sally was sent by her GP to the local hospital Accident & Emergency Department to receive treatment for her condition as her GP was concerned about how sick Sally was and thought intravenous antibiotics were necessary.

On each occasion, the GP entered a reason for visit in the Progress Notes by choosing a coded condition of 'tonsillitis'.

Several months before her final exams Sally became so unwell, she was hospitalised again and upon discussion with an ENT specialist was asked how many times Sally had experienced tonsillitis in the past 12 month period. Sally was not 100% sure of the answer but knew it was at least 4-5 times. However, on checking with her GP, she was able to provide the specialist with more accurate information, and she had in fact experienced 6 episodes of acute tonsillitis during the period.

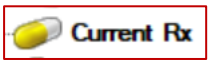
Outcome: The ENT specialist was satisfied that Sally met the criteria for a tonsillectomy based on the frequency and severity of her tonsillitis and this was evidenced by the accuracy of the notes kept by her GP and the fact that he had entered a coded Reason for Visit of 'Tonsillitis' on each occasion.

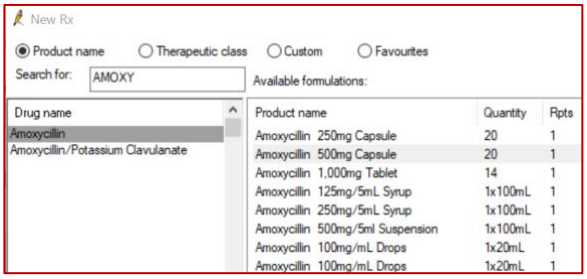
Adding a reason for medication when prescribing

It is useful to be able to view the reason for prescription (ie the condition under treatment) appearing in a patient's medical record. The reason is added in the final step of the prescribing process and helps to reduce medication errors as it provides additional contextual information.

Adding a reason for prescription:

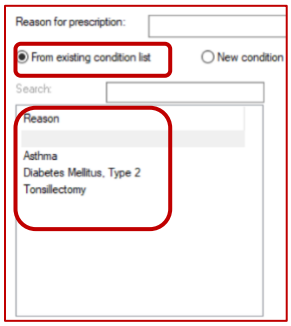
1. Open a patient record **(F2).**
2. Select the **Current Rx** tab
3. Select the **Add** button.
4. **Enter the first few characters of the drug** then select the formulation from the list displayed.
5. Select the '**Next**' button.



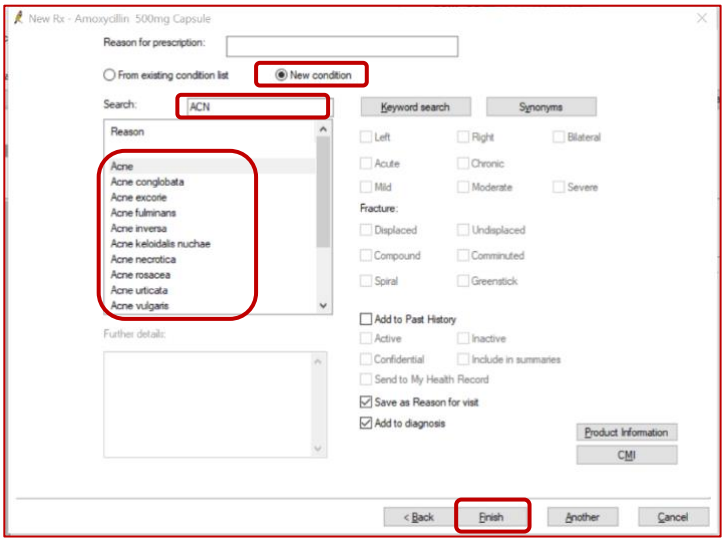


6. Enter the dose, frequency and any special instructions then **Next**.
7. Check quantities, enter repeats (if required) and choose from either **Once only prescription** or **long term medication**, then **Next**.

8. If the reason for prescription is already in the existing condition list to the left of the window, select it by double clicking on the condition.



9. If the reason for medication is not in this list, select **New Condition**, then **enter the first few characters of the condition** in the '**Search**' field and double click on the reason in the list to select it.
10. **Finish**.



Activity – Adding a reason for medication when prescribing

Maree Ackerman is presenting about a bronchitis condition today for which an antibiotic will be prescribed.

1. Login to Bp Premier Samples database as Dr Findacure (password = 'samples').
2. Open Maree Ackerman's record **(F2).**
3. Select the **Current Rx** tab
4. Select **Add**
5. Follow steps 4-10 above to prescribe Amoxycillin for this patient.
6. Enter 'Bronchitis' as a New Condition in the Reason for prescription step.
7. **Save**.
8. Review the detail in the Current Rx screen to see the reason for prescription.

Case Study: Adding a reason for medication

Scenario:

Alessandro is a 76 year old man who immigrated to Australia from Italy approximately 30 years ago. He was transferred to hospital from his general practice due to acute pneumonia. The GP practice sent a printed medication list (without reasons for medication listed) with Alessandro to be given to his treating doctors. Alessandro was taking Xarelto 15mg daily for his atrial fibrillation.

English is a second language for Alessandro, and he was not able to adequately explain his medical history or reasons for medication. When he was admitted to hospital, because there was no listed reason for medication, the doctors assumed he was taking Xarelto for DVT and doubled the dose.

Outcome:

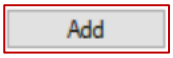
Alessandro's son, who is a Pharmacist, arrived shortly after and quickly assessed the severity of the change of medication, communicated with treating clinicians and helped resolve the error. The hospital discussed the case in their 'critical incident' meeting and discussed strategies around the importance of listing a reason for medication. They decided that all discharge summaries should include a medication profile that includes that actual indication for medications prescribed and where possible this should be requested from the patient's usual GP.

Adding an immunisation

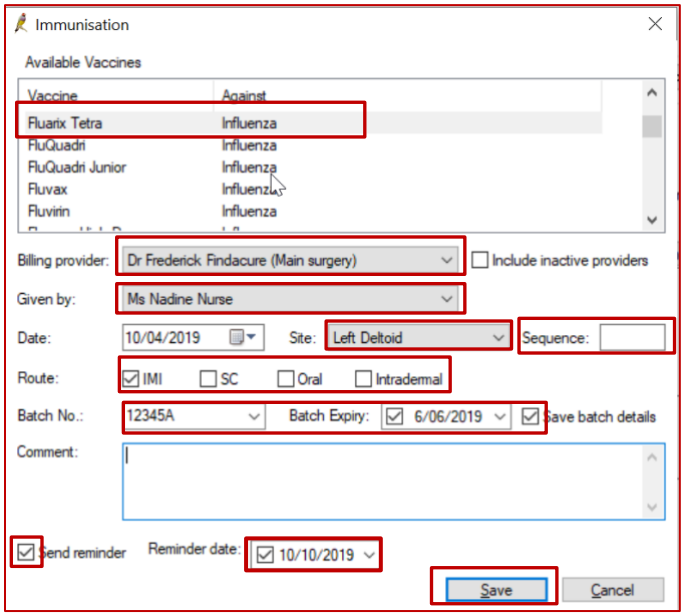
Immunisations can be entered on the patient record using the Immunisations tab. The option to add immunisations given at other clinics is available to improve the completeness and accuracy of the data recorded in Bp Premier.

Adding an immunisation:

1. **Open** a patient record **(F2).**
2. Click on the **Immunisations** tab.
3. Select the **Add** button.



4. Select a **Vaccine**
5. Select a **Billing provider** (select **'Not given here'** if recording an immunisation provided by another healthcare service).
6. Select **Given by:** to indicate who administered the vaccination.
7. **Date:** Will default to the current date. Edit if required.
8. Select **Site.** Click on the drop-down arrow and select the location of the the vaccination.



9. Enter the **Sequence** number (if the vaccination requires multiple doses).
10. Tick the **Route** of administration.
11. Enter **Batch No**. and **Batch Expiry** and save the batch details if they are to be re-used.
12. Enter a **comment** (if applicable).
13. Tick **Send Reminder** and select the **Reminder due date** (if the patient is to be recalled for another immunisation in the future).
14. **Save.**

Note: *Immunisation records will automatically be ticked to send to the Australian Immunisation Register (AIR) if the vaccine is approved for submission by AIR and it is administered at the surgery (not marked as 'Not Given Here').*

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Activity – Adding a coded Immunisation to the patient record.

Maree Ackerman is presenting for a flu vaccination today

1. Open Maree Ackerman's patient record **(F2).**
2. Click on the **Immunisations** tab.
3. Select **Add.**
4. Select a **Vaccine** = Fluarix Tetra
5. Select a **Billing Provider.**
6. Select **Given by**.
7. Select the **Site**
8. Select the **Route**
9. **Save**

Case Study: Adding an Immunisation

Scenario: Ethan is a 19 year old 2nd year apprentice plumber. While working on a job site when he fell down a sewerage ditch trying to retrieve his shovel. He sustained a 5cm laceration to his leg when falling awkwardly on the shovel. He was taken to a nearby general practice and Ethan was asked when he last had a tetanus injection. Ethan said he does not have one usual doctor but did go to a medical centre recently and received vaccines in preparation for his Bali holiday. He was unsure of which vaccines were administered or the name of the medical centre.

The GP decided to look on Ethan's My Health Record and noted tetanus vaccine details uploaded from the Australian Immunisation Register. He also noted Ethan's significant antibiotic allergies, which Ethan had not remembered to disclose. He discussed and confirmed details with Ethan then altered his treatment plan based on this relevant new clinical detail.

The GP uploaded an Event Summary explaining the treatment provided on the day and communicated to Ethan recommendations for follow-up care.

Outcome:

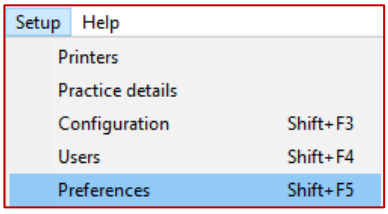
Due to coded information electronically available, Ethan did not receive another tetanus immunisation and was prescribed the correct antibiotics to minimise potential allergic or adverse reactions. He knew also that in future he could access information regarding his current immunisation status and wound treatment via his My Health Record. He was pleased he could access this via an app on his phone.

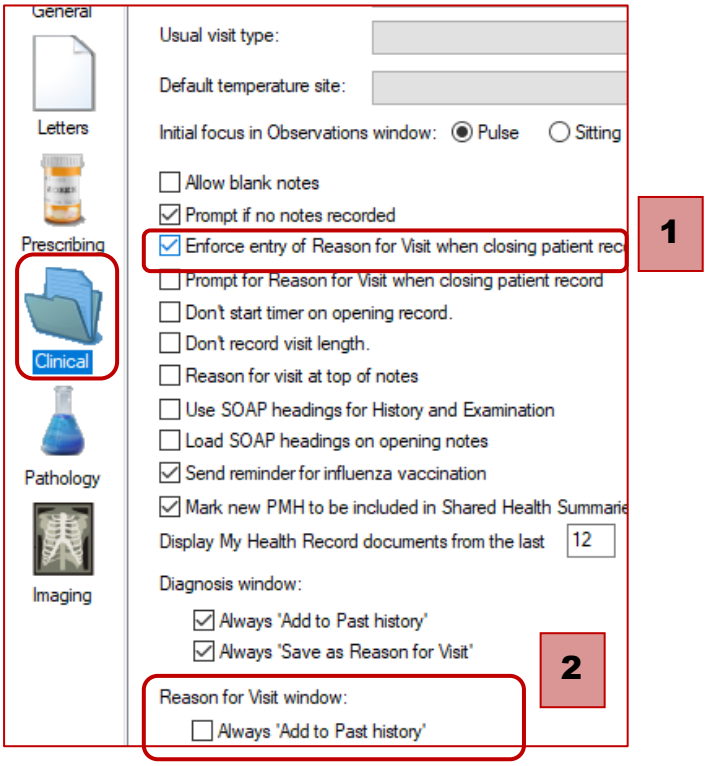
Configuring user options to help maintain data quality

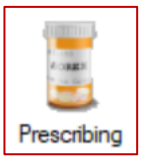
Individual users can change their default setting 'preferences' in Bp Premier to assist with data collection & quality.

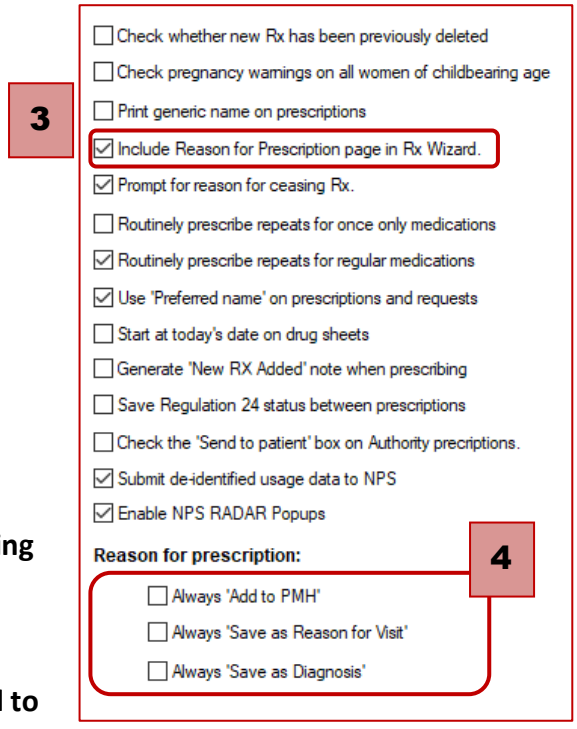
Changing default option to mandate an entry of 'Reason for Visit' that does not automatically add to 'Past History':

1. From the **main screen** select the **Setup** menu
2. Select **Preferences** from the drop-down list.
3. Select **Clinical** from the icons on the left
4. Tick '**Enforce entry of Reason for Visit when closing patient record'**
5. Under 'Reason for Visit window:' **untick 'Always Add to Past History'** & **Save.**
   (NB. If reason for visit is a new diagnosis it will need to be added to the Past History list).









Mandate Entering a Reason for Prescription

1. From within Setup>Preferences select the **Prescribing icon.**
2. **Tick 'Include Reason for Prescription page in Rx Wizard'.**
3. Under 'Reason for prescription' **untick 'Always Add to PMH'**

Activity – Modifying the default configuration settings on a user account

Modify the default configuration settings for Dr Findacure.

1. Login to Bp Premier Samples database as Dr Findacure (Password = 'samples').
2. From the **main screen** select the **Setup** menu
3. Select **Preferences** from the drop-down list.
4. Select **Clinical** from the icons on the left
5. Tick '**Enforce entry of Reason for Visit when closing patient record'**
6. Under 'Reason for Visit window:' **untick 'Always Add to Past History'**
7. **Save.**
8. **S**elect the **Prescribing icon.**
9. **Tick 'Include Reason for Prescription page in Rx Wizard'.**
10. Under 'Reason for prescription' **untick 'Always Add to PMH'**
11. **Save & Close**

Further Learning

The following links can be used to supplement learning on this topic:

Bp Premier
Bp Learning

RACGP
RACGP Standards for General Practices 5th edition
Using Data for Better Health Outcomes
Improving Health Record Quality in General Practice
PIP eHealth Incentive

Australian Digital Health Agency:
Importance of Data Quality
Data Cleansing & Clinical Coding
Data Quality Checklist

Train IT Medical
5 Steps to Data Quality Success (blog)

APPENDIX A- PDSA / Quality Improvement Activity Template

What is our GOAL? **(what are we trying to accomplish)**	**Description of GOAL** ▪			
What measures will we use? (i.e. data)				
What ideas can we use? **(how are we going to achieve our goal)**	*List ideas here to work on in table below* •			
IDEAS	**PLAN** **How will we do it – who, what, where and when?**	**DO** **Did we do it?**	**STUDY** **What happened?**	**ACT** **What is our next step?**
1.				
2.				
3.				
4.				