QUALITY IMPROVEMENT TOOLKIT FOR GENERAL PRACTICE

CONDITIONS

Osteoporosis
MODULE

Version 2

January 2021

Introduction

The Quality Improvement (QI) toolkit

This QI toolkit is made up of modules that are **designed to support your practice to make easy, measurable and sustainable improvements to provide best practice care for your patients.** The toolkit will help your practice complete QI activities using the Model For Improvement (MFI).

Throughout the modules you will be guided to explore your data to understand more about your patient population and the pathways of care being provided in your practice. Reflections from the module activities and the related data will inform improvement ideas for you to action using the MFI.

The MFI uses the Plan-Do-Study-Act (PDSA) cycle, a tried and tested approach to achieving successful change. It offers the following benefits:

- A simple approach that anyone can apply
- Reduced risk by starting small
- It can be used to help plan, develop and implement change that is highly effective.

The MFI helps you break down your change implementation into manageable pieces, which are then tested to ensure that the change results in measurable improvements and minimal effort is wasted.

There is an example of using the MFI to improve GP management plans for patients with osteoporosis and a blank template for you to complete at the end of this module.

If you would like additional support in relation to quality improvement in your practice please contact Brisbane South PHN on support@bsphn.org.au.

This icon indicates that the information relates to the ten Practice Incentive Program (PIP) Quality Improvement (QI) measures.

Due to constant developments in research and health guidelines, the information in this document will need to be updated regularly. Please contact Brisbane South PHN if you have any feedback regarding the content of this document.

Acknowledgements

We would like to acknowledge that some material contained in this toolkit has been extracted from organisations including the Institute for Healthcare Improvement; the Royal Australian College of General Practitioners (RACGP); the Australian Government Department of Health; Best Practice; MedicalDirector, CAT4 and Train IT. These organisations retain copyright over their original work and we have abided by licence terms. Referencing of material is provided throughout.

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Brisbane South PHN would like to acknowledge the contribution of Healthy Bones Australia (formerly Osteoporosis Australia) in the production of this QI toolkit.

Brisbane South PHN, 2021

CONTENTS

OSTEOPOROSIS

It was estimated in 2012, 4.74 million Australians who were older than 50 years of age (66% of the population) had poor bone health, including more than one million with osteoporosis.

A burden of disease analysis published by Healthy Bones Australia (formerly Osteoporosis Australia) estimates that by 2022, 6.2 million Australians who are older than 50 years of age will have osteoporosis or osteopenia, an increase of 31% from 2012. A similar increase in the rate of fracture, from 140,882 in 2012 to 183,105 in 2022, is anticipated if action is not taken to improve the diagnosis and management of osteoporosis.[1]

Early detection in general practice can prevent a first fracture. For patients who have already experienced a fracture, investigation and initiation of osteoporosis medication is crucial to reduce the very high risk of subsequent fractures.

Osteoporosis risk factors/indications

Major risk factors include:

- a history of minimal trauma fracture
- height loss ≥3 cm and/or back pain suggestive of vertebral fracture
- gender - females are at higher risk than males
- age - ≥70 years of age are at higher risk
- a history of falls
- parental history of hip fracture
- premature menopause or hypogonadism
- prolonged use of glucocorticoids (at least three months cumulative prednisone or equivalent ≥7.5 mg per day)
- use of other medications that cause bone loss
- conditions or diseases that lead to bone loss
- low body weight
- low muscle mass and strength
- low physical activity or prolonged immobility
- poor balance.

Other risk factors include:

- smoking
- high alcohol intake
- energy, protein or calcium undernutrition
- vitamin D deficiency.

[1] https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/osteoporosis

Aim of this QI toolkit

General practice is the ideal setting to address identified care gaps for the treatment of osteoporosis. General practice is often the first point of contact for treatment coordination, access to medications, additional tests and referrals to other providers can facilitate primary and secondary prevention.

Toolkit aim - To identify who in your practice has osteoporosis and identify those patients at high risk of developing osteoporosis.

To achieve this, you will need to extract patient data and establish a valid patient list or register.

The following activities will help guide you through the process. There are additional activities to find any patients who may have been missed in the initial data extraction activity and to then ensure they are coded correctly. These activities will improve the accuracy of the register and maintain the system for future use and reference.

Once you have an accurate register you will be able to easily identify how your patients are being managed for their disease and what needs to happen within the practice to optimise patient care.

How to use this toolkit

There are checklists included below that will guide you and your practice.

- use this toolkit to guide you along the journey
- set yourselves timelines to achieve your goals
- consider potential internal or external factors that could impact the activity and factor these into your planning e.g. accreditation preparation, staff leave (planned or unplanned), global pandemic, influenza vaccination season
- review your progress regularly
- if you find your process is not working and you are not seeing improvements, then review your process and start again.

For more support

support@bsphn.org.au

1300 467 265

RACGP osteoporosis algorithm

Osteoporosis risk assessment, diagnosis and management

Recommendations restricted to postmenopausal women and men aged >50 years

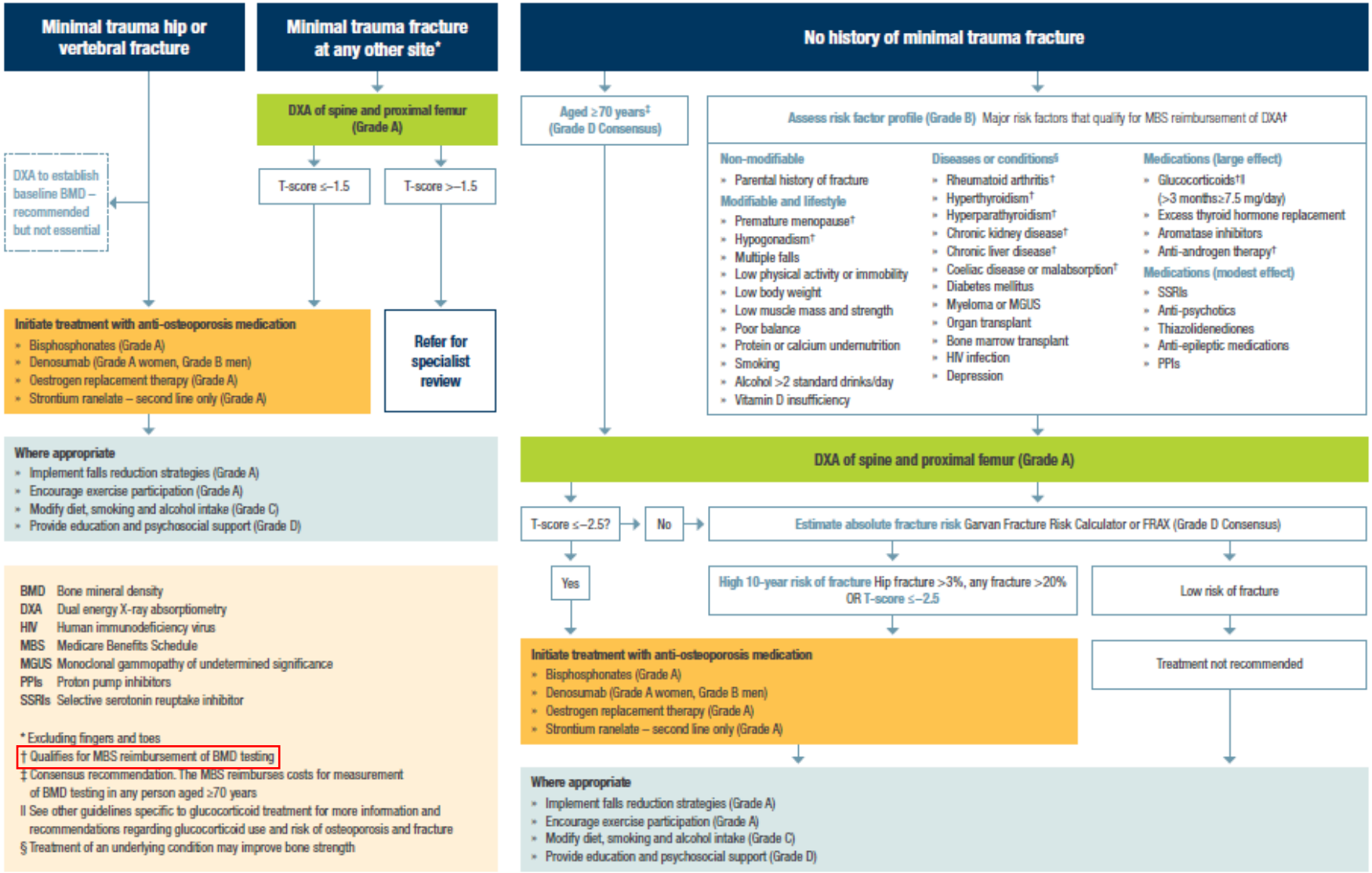
Practice tips	
Diagnosis	A minimal trauma fracture of the hip or spine in a person older than 50 years of age is presumptive of osteoporosis **(Recommendation 1 A)**. Treatment may be initiated without confirmation of low bone mineral density (BMD). Use BMD to guide management after fracture at other sites.
Suspected vertebral fracture	Perform a standard spine X-ray if height loss of ≥3 cm, kyphosis or unexplained episodes of back pain. If vertebral wedge or crush fractures are detected, perform BMD testing at the hip and spine.
Assessing absolute fracture risk	Use the Garvan Fracture Risk Calculator (www.garvan.org.au/bone-fracture-risk) or Fracture Risk Assessment Tool (FRAX) (www.shef.ac.uk/FRAX) to assess the need for treatment in individuals who do not clearly fit established criteria **(Recommendation 6 D)**. Calculator estimations assist, but do not replace clinical judgement.
Falls prevention	A full falls risk assessment should be conducted in any person who has fallen twice or more in the previous 12 months or is having difficulty with walking or balance. A multifaceted fall prevention program should be tailored to individual needs **(Recommendation 10 A)**.
Calcium and vitamin D supplementation	Routine supplementation in non-institutionalised individuals is not recommended. Those at risk of deficiency may benefit from 500–600 mg/day of elemental calcium. Calcium supplements are recommended for people taking osteoporosis treatments if dietary calcium intake is below 1300 mg/day **(Recommendation 14 C)** and vitamin D if serum 25(OH)D is below 50 nmol/L.
Exercise	Leisure walking, swimming and cycling do not improve bone density. Prescribe regular, varied, high-intensity resistance training and progressive balance training **(Recommendation 11 A)**. High-impact activities should be avoided by individuals at high risk of fracture. Avoid forward flexion and twisting in vertebral osteoporosis. Programs should be individualised and may require supervision.
Duration of therapy	If T-score remains below –2.5, and/or there are incident vertebral fractures, continue treatment. Reconsider therapy after 5–10 years in individuals with T-score ≥–2.5 and no recent fractures. Treatment should be restarted if there is continued bone loss or a further minimal trauma fracture **(Recommendation 17 D)**.
Repeat BMD testing	Repeat testing is generally not required for confirmed osteoporosis, unless a medication change or interruption is planned. Test a minimum of two years apart, less frequently in low-risk individuals. Annual scans may be needed in high-risk individuals (eg those on glucocorticoid therapy).
Medication-related osteonecrosis of the jaw (MRONJ)	The benefits of osteoporosis treatment for those at high risk of fracture far outweigh the risk of MRONJ (between <1 and 10 cases per 10,000 patients). Optimise oral hygiene and treat dental disease prior to therapy. There is insufficient evidence to interrupt therapy for minor oral surgery, or to measure bone turnover markers to predict onset of MRONJ.

This guide is based on *Osteoporosis prevention, diagnosis and management in postmenopausal women and men over 50 years of age, 2nd edition.* [2]

[2] https://www.racgp.org.au/download/Documents/Guidelines/Musculoskeletal/osteoporosis-algorithm.pdf

Osteoporosis risk assessment, diagnosis and management

Recommendations restricted to postmenopausal women and men aged >50 years



Activity 1. Understanding your osteoporosis patient population

REFRAME osteoporosis app details

The Amgen REFRAME app (REFRAME) provides free easy access to patient reporting, targeting those who have osteoporosis risk factors. It gives users a simple view of the patient's risk and other relevant factors in one table. When a patient record meeting one of the relevant criteria above is opened in your clinical system, the app will become active and show a notification in a red circle.

The app will apply to the following patients:

- Patients 70 years of age and older and never had a DXA, or bone mineral density (BMD) test, or have not had a DXA within the last 2 years, OR
- Patients that have experienced a fracture since the age of 50.

Activity 1.1 – Data collection from CAT4

The aim of this activity is to collect data to identify patients at risk of osteoporosis, and to assist with management of patients with osteoporosis.

Complete the below table by collecting data from your CAT4 Data Extraction Tool.

Note - Instructions on how to extract the data is available from the CAT4 website. Identify patients eligible for Bone Mineral Test OR Number of patients with indicated osteoporosis but no diagnosis OR Disease OR REFRAME.

	Description	Total number of active patients as per RACGP criteria (3 visits in 2 years)	Total number of active patients
1.1a	Identify patient population (Active 3 visits in 2 years) See instructions in link below. Identify active patients with at least 3 visits in the last 2 years		
1.1b	Number of active patients eligible for a BMD test		
1.1c	Number of active patients with indicated osteoporosis but no diagnosis		
1.1d	Number of active patients with osteoporosis		
1.1e	Number of active patients with osteoporosis not on medications for osteoporosis (e.g. minimal trauma fracture)		

Activity 1.2– Reviewing your practice osteoporosis profile

Complete the checklist below which reviews your practices osteoporosis patients 'at risk' and diagnosed.

Description	Status	Action to be taken
After completing **activity 1.1** are there any unexpected results with your practice's osteoporosis patients?	☐ Yes: **see action to be taken.** ☐ No: continue with activity.	Please explain: (*e.g. higher number of patients with indications of osteoporosis but no diagnosis than expected).* How will this information be communicated to the practice team?
Is your practice osteoporosis profile similar to other practices in the Brisbane south region (*compare with information from your latest Benchmark report*)?	☐ Yes: continue with activity. ☐ No: **see action to be taken.**	Outline the differences – (*is it patients with osteoporosis or % of patient population*). How will this information be communicated to the practice team?
Do relevant staff know how to use the REFRAME app to identify patients with osteoporosis not on appropriate medications?	☐ Yes: continue with activity. ☐ No: **see action to be taken.**	Refer to the instructions.
After reviewing your practice's osteoporosis profile, are there any changes you would like to implement in the practice to help manage patients over the next 12 months?	☐ Yes: **see action to be taken to help set your goals**. ☐ No: you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

Activity 2. Building your practices osteoporosis register

Coding is simply a process of using an agreed standardised descriptor, stored as a series of numbers or letters. You may have identified that there are multiple ways clinical staff may enter a patient's diagnosis in practice software. Some will type this information directly into the patient progress notes or enter this information as free text in the 'reason for encounter' or 'diagnosis field'. This process is called free texting or un-coded diagnosis. Free text is not easily searchable in any database by the clinical software or third-party software (e.g. extraction tools) and is therefore not the preferred process.

The recommended process is to use a diagnosis from the drop-down boxes provided in the clinical software. This is a coded diagnosis. If all clinical staff within the practice use the same codes to identify a diagnosis then it is easier to search for particular conditions. It also allows the practice software to create automatic prompts e.g. reminders and warnings.

It is important to ensure your coding is consistent and agreed upon by all clinical staff in the practice, and diagnostic criteria for osteoporosis are uniform.

Activity 2.1 – Determine terms of consistent coding

The aim of this activity is for the clinical team to agree on consistent osteoporosis coding to be used within the practice.

Description	Status	Action to be taken
Are relevant practice team members aware of the importance of quality data including using consistent coding (i.e. avoiding free text)?	☐ Yes: continue with this activity. ☐ No, **see action to be taken.**	Organise a practice team meeting to discuss how to develop a clinical coding policy for your practice.
Have you agreed on accepted terminology of bone disease codes from the drop-down lists in your practice software?	☐ Yes: continue with this activity. ☐ No, **see action to be taken.**	Source list of clinical codes already available in current clinical software. Develop and agree on clinical codes for osteoporosis to be used within practice.

Description	Status	Action to be taken
Are practice team members aware of how to enter diagnosis in clinical software using agreed bone diseases terminology?	☐ Yes: continue with this activity. ☐ No, **see action to be taken.**	Refer to instructions from Best Practice or MedicalDirector.
After reviewing your practice's clinical coding guidelines, are there any changes you would like to implement in the practice, to help manage patients, over the next 12 months?	☐ Yes, **see action to be taken to help set your goals**. ☐ No, you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

Activity 2.2 – Cleaning up un-coded conditions in your practice software

The aim of this activity is to identify and clean up any un-coded osteoporosis conditions in your practice software.

Cleaning up un-coded items makes it easier to perform database searches and manage third-party clinical audit tools.

Identify

Follow the instructions for Best Practice or MedicalDirector to identify the number of un-coded osteoporosis conditions.

Date data collected	Number of un-coded bone disease conditions

What is a reasonable timeframe to complete this activity: _____

Who will be completing this activity: _____

Results

After you have actioned any un-coded bone disease conditions, perform another database search in your practice software and record the number of un-coded conditions to track your results.

Date data collected	Number of un-coded bone disease conditions

Activity 2.3 – Confirming the right patients are on the register

As osteoporosis diagnoses are central to the patient register, the aim of this activity is to look at patients with indicated osteoporosis with no diagnosis reported.

This activity will require you to access the indicated osteoporosis with no diagnosis report which displays patients who are aged 50 years and over with a history of trauma fracture and on medication with no diagnosis.

Description	Status	Action to be taken
After completing **activity 1.1c** note how many active patients have indicated osteoporosis with no diagnosis.	Number: _____	
Is there an explanation as to this result?	☐ Yes: continue with activity. ☐ No: **see action to be taken.**	Provide information (*e.g. GPs unsure where to enter diagnosis, coding issue, information inconclusive, etc.).* How will this information be communicated to the practice team?
Have you distributed lists to individual GPs for review and update of their diagnosis?	☐ Yes: continue with activity. ☐ No: **see action to be taken.**	Ensure you follow up in a week's time to receive the reviewed reports back from the GP. Refer to instructions.
After reviewing your patients with indicated osteoporosis with no diagnosis, are there any changes you would like to implement in the practice to help manage patients over the next 12 months?	☐ Yes: **see action to be taken to help set your goals**. ☐ No: you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

Practice decision point

It is recommended that you have a practice meeting to review the data collection table results and determine any action that needs to be taken.

Activity 3. Risk factors associated with osteoporosis

Both men and women may have certain risk factors that can make them more likely to develop osteoporosis. Anyone over 50 with risk factors may require a bone density scan, however women are at a greater risk of developing osteoporosis because of the rapid decline in oestrogen levels during menopause.

Certain conditions and medications can impact bone health including:

- low calcium intake
- low vitamin D levels
- corticosteroids
- low hormone levels - in women: early menopause; in men: low testosterone
- thyroid conditions – over-active thyroid or parathyroid
- conditions leading to malabsorption (e.g. coeliac disease, inflammatory bowel disease)
- some chronic diseases (e.g. rheumatoid arthritis, chronic liver or kidney disease)
- some medicines for breast cancer, prostate cancer, epilepsy and some antidepressants.

Lifestyle factors that can impact bone health include:

- low levels of physical activity
- smoking
- excessive alcohol intake
- weight - thin body build or excessive weight (recent studies suggest that hormones associated with obesity may impact bones).[3]

More information about risk factor assessment, diagnosis and referral can be found in the RACGP osteoporosis guidelines.

Activity 3.1 – Data collection from CAT4

The aim of this activity is to collect data to identify patients with risk factors associated with osteoporosis.

Complete the below table by collecting data from your CAT4 Data Extraction Tool.

Note - Instructions on how to extract the data is available from the CAT4 website. Musculoskeletal graphs.

	Description	Total number of active patients as per RACGP criteria (3 visits in 2 years)	Total number of active patients
3.1a	Number of patients with a low BMI		
3.1b	Number of patients with vitamin D deficiency		

[3] https://www.osteoporosis.org.au/risk-factors

	Description	Total number of active patients as per RACGP criteria (3 visits in 2 years)	Total number of active patients
3.1c	Number of patients who are smokers		
3.1d	Number of patients with a high alcohol intake		
3.1e	Number of patients with calcium deficiency		
3.1f	Number of patients with chronic kidney disease		
3.1g	Number of patients with multiple myeloma		

Activity 3.2– Reviewing your practice patients with risk factors associated with osteoporosis

Complete the checklist below which reviews your practices patients with risk factors associated with osteoporosis.

Description	Status	Action to be taken
After completing **activity 3.1** are there any unexpected results in your patients with risk factors associated with osteoporosis?	☐ Yes: **see action to be taken.** ☐ No: continue with activity.	Please explain: (*e.g. higher number of patients with vitamin D deficiency than expected).* How will this information be communicated to the practice team?
After reviewing your patients with risk factors associated with osteoporosis, are there any changes you would like to implement in the practice to help manage patients over the next 12 months?	☐ Yes: **see action to be taken to help set your goals**. ☐ No: you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

BMD test to confirm osteoporosis diagnosis

Osteoporosis is diagnosed with a bone density scan.[4] The T-score is the primary tool for the diagnosis of osteoporosis or osteopenia in patients who have not sustained a minimal trauma fracture (MTF).

MTF in a post-menopausal woman or man over 50 indicates that osteoporosis is probably present, regardless of the T-score. MTFs most commonly occur in people with T-scores in the osteopenic range (-1.0 to -2.5). In these patients, the T-score can be used to confirm low bone density and to establish a baseline BMD for treatment.[5]

T-score	Minimal trauma fracture	Risk factors	Recommendation
≤ -2.5	Yes	One or more	**Initiate treatment with osteoporosis medication immediately.** Adequate calcium, vitamin D and weight-bearing exercise are important. Investigate secondary causes of bone loss. Review falls risk in elderly. Repeat DXA in ≥ 2 years.
-1.0 to -2.5	Yes	One or more	**Initiate treatment in most cases.** In younger patients (< 55), or where T-score is normal or mildly osteopenic (-1.0 to -1.5), treatment may be reconsidered. Adequate calcium, vitamin D and weight-bearing exercise are important. Investigate secondary causes of bone loss. Review falls risk in elderly. Repeat DXA in ≥ 2 years.
≤ -2.5	No	One or more	**Treatment recommended.** Treatment may not be necessary in women under 55 and men under 60, or if modifiable risk factors only (lower absolute fracture risk). Adequate calcium, vitamin D and weight-bearing exercise are important. Investigate secondary causes of bone loss. Review falls risk in elderly. Repeat DXA in ≥ 2 years.
-1.0 to -2.5	No	One or more	**Treatment not necessary in most cases.** Consider treatment for post-menopausal women and men over 65 if T-score is in the lower part of the osteopenic range (-2.0 to -2.5). Adequate calcium, vitamin D and weight-bearing exercise are important. Investigate secondary causes of bone loss. Review falls risk in elderly. Repeat DXA in 2-5 years, depending on severity of bone loss.
≤ -1.5*	No	**Commencing glucocorticoids** 7.5mg/day prednisolone or equivalent for at least 3 months	**Preventative treatment with osteoporosis medication for the duration of glucocorticoid therapy.** *T-score ≤ -1.0 applies under RPB (Repatriation Pharmaceutical Benefits Scheme for veterans).

Identify patients eligible for a BMD test

Currently, the Royal Australian College of General Practitioners (RACGP) advises that women over the age of 45 and men over the age of 50 should discuss their risk of osteoporosis with their doctor.

Corticosteroid treatment for longer than 3 months is considered a risk factor for developing osteoporosis. Smoking is also considered a risk factor.

Medicare Benefit Scheme (MBS) eligibility for BMD

There are restrictions to patient rebates available from Medicare for BMD testing. To understand the eligibility, refer to the fact sheet from Healthy Bones Australia.

[4] https://healthybonesaustralia.org.au/osteoporosis-you/diagnosis/
[5] https://healthybonesaustralia.org.au/osteoporosis-you/diagnosis/

Activity 3.3 – Data collection from CAT4

The aim of this activity is to collect data to identify patients who could benefit from a BMD test.

Complete the below table by collecting data from your CAT4 Data Extraction Tool.

Note - Instructions on how to extract the data is available from the CAT4 website. Identify patient's eligible for a BMD.

	Description	Total number of active patients as per RACGP criteria (3 visits in 2 years)	Total number of active patients
3.3a	Number of patients who could benefit from a BMD		

Activity 3.4– Reviewing your practice patients who could benefit from a BMD

Complete the checklist below which reviews your practice's patients who could benefit from a BMD.

Description	Status	Action to be taken
After completing **activity 3.3** are there any unexpected results with your patients who could benefit from a BMD?	☐ Yes: **see action to be taken.** ☐ No: continue with activity.	Please explain: (*e.g. higher number of patients than expected).* How will this information be communicated to the practice team?
Have you created a Topbar prompt for all active patients eligible for a BMD test?	☐ Yes: continue with activity. ☐ No: **see action to be taken.**	Refer to the instructions.
After reviewing your patients who would benefit from a BMD, are there any changes you would like to implement in the practice to help manage patients over the next 12 months?	☐ Yes **see action to be taken to help set your goals**. ☐ No: you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

Fracture Risk Calculators (FRC)

A number of absolute fracture risk calculators are now available. These calculators aim to better estimate an individual's fracture risk by taking into account age, clinical risk factors as well as BMD, and have the potential to allow more effective targeting of therapy for osteoporosis. In Australia, the most common absolute fracture risk calculators include[6]:

- Garvan Fracture Risk Calculator (GFRC)
- Fracture Risk Assessment Tool (FRAX).

Activity 3.5 – Osteoporosis assessment and diagnosis

The aim of this activity is to identify access to relevant assessment tools.

Description	Status	Action to be taken
Are you using either the GFRC or FRAX in your general practice?	☐ Yes: continue with activity. ☐ No: **see action to be taken**.	Refer to GFRC or FRAX assessment tools.
Do all GPs and practice nurses know where to find these guidelines and feel confident in utilising their contents?	☐ Yes: continue with activity. ☐ No: **see action to be taken**.	Refer to GFRC or FRAX assessment tools.
Are GPs and nurses aware of who would be at higher risk of osteoporosis?	☐ Yes: continue with activity. ☐ No: **see action to be taken**.	Refer to osteoporosis risk factors.
After reviewing your practice use of assessment tools, are there any changes you would like to implement in the practice to help manage patients over the next 12 months?	☐ Yes: **see action to be taken to help set your goals**. ☐ No: you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

[6] https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/osteoporosis/recommendations/risk-factor-assessment,-diagnosis-and-referral/assessment-of-absolute-fracture-risk

Activity 4 – MBS item numbers for people with osteoporosis

The aim of this activity is to outline some of the Medicare item numbers that you may use in general practice for eligible patients.

Patients with osteoporosis ***may be eligible*** to access item numbers within the Medicare Benefit Schedule (MBS). These are dependent on patient age, ethnicity and co-morbidities. Conditions apply to each item number, please ensure the GP understands these prior to claiming the item number/s. Brisbane South PHN has a comprehensive toolkit looking at MBS items, however, a summary of the item numbers include:

MBS items

- GP Management Plans (GPMP)
- Team Care Arrangements (TCA)
- Nurse chronic disease item number
- Health assessment
- Aboriginal and Torres Strait Islander health assessment
- Home medication review
- MBS telehealth fact sheet

TIP: GPs are required to make sure each patient meets the MBS criteria prior to claiming each item number.

Activity 4.1 – Data collection from CAT4

The aim of this activity is to collect data to determine the number of MBS claims made for patients with osteoporosis over the past 12 months.

Complete the below table by collecting data from your CAT4 Data Extraction Tool.

Instructions on how to extract the data are available from: Number of people eligible for a Home Medication Review OR Number of people eligible for GPMP/TCA OR Number of patients eligible for Health Assessment OR Number of people eligible for an Aboriginal and Torres Strait Islander health assessment

Item	Description	Total number of active patients
4.1a	Number of active patients with osteoporosis who may be eligible for a GPMP and/or TCA plan (*ensure you select osteoporosis under disease tab*).	
4.1b	Number of active patients with osteoporosis who may be eligible for a health assessment (*ensure you select osteoporosis under disease tab*).	

Item	Description	Total number of active patients
4.1c	Number of active patients with osteoporosis who may be eligible for an HMR (*ensure you select osteoporosis under disease tab*).	
4.1d	Number of active patients with osteoporosis who may be eligible for an Aboriginal and Torres Strait Islander assessment (*ensure you select osteoporosis under disease tab*).	

Activity 4.2 – Checklist for reflection on MBS claiming

Complete the checklist below to review your practice's MBS claiming for patients with osteoporosis.

Questions to consider	Status	Action to be taken
Take note of how many patients with osteoporosis without an HMR completed in the past 12 months. Would any of these patients benefit from having this completed? (*Note: not all patients with osteoporosis will be eligible for an HMR, refer to MBS criteria).*	☐ Yes, **see action to be taken.** ☐ No, continue with the activity.	Please explain: *(e.g. MBS eligibility, age, previous MTF)* What action will you take? How will you use this information to increase the number of HMRs completed?
Take note of how many patients with osteoporosis without a GPMP and/or TCA plan completed in the past 12 months. Would any of these patients benefit from having this completed? (*Note: not all patients identified in the search will be eligible for a GPMP or TCA e.g. not regular GP, refer to MBS criteria*).	☐ Yes, **see action to be taken.** ☐ No, continue with the activity.	Please explain: What action will you take? How will you use this information to increase the number of management plans completed?

Questions to consider	Status	Action to be taken
Do relevant staff know what the criteria is for completing HMRs, health assessments and management plans through Medicare?	☐ Yes, continue with the activity. ☐ No, **see action to be taken.**	Refer to MBS criteria at: • HMR criteria • Health assessment criteria • Management plan criteria
Have you created a Topbar prompt on all patients with osteoporosis who may be eligible for a specific MBS item number?	☐ Yes: continue with activity. ☐ No: **see action to be taken.**	Follow the instructions to complete this.
Do you know the contact details for any MBS related questions?	☐ Yes, continue with the activity. ☐ No, **see action to be taken.**	Email: askMBS@health.gov.au Provider Enquiry Line - 13 21 50.
Do relevant staff know that Medicare provides online training modules?	☐ Yes, continue with the activity. ☐ No, **see action to be taken.**	More information can be obtained from Medicare Australia e-learning modules.
After reviewing the MBS claiming for patients with osteoporosis, are there any changes you would like to implement in the practice to help manage patients over the next 12 months?	☐ Yes, **see action to be taken to help set your goals**. ☐ No, you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

Activity 5 – Establishing appropriate care pathways using evidence-based guidelines

Activity 5.1 – Identify roles for managing osteoporosis patients within your practice

The aim of this activity is to identify roles for managing patients with osteoporosis in your practice.

Consider how best to use your practice staff to provide optimum care and the impact this will have on the staff workload and the appointment system. This involves systematically determining if your practice is set-up and equipped to provide evidence-based osteoporosis assessment and management.

Activity	Nurse	GP	Admin
Organise BMD test			
Monitor patient reminders for BMD tests and osteoporosis medications			
Measure height, weight, BMI			
Review diet/healthy eating			
Review physical activity and exercise tolerance			
Review smoking and alcohol intake			
Check mental health status and offer support services			
Provide self-care education			
GPMP			
Consider co-morbidities (diabetes, anxiety, depression, cardiovascular disease,)			
Review medications			
Monitor reminders for medications e.g. Prolia injection, bisphosphonate infusion.			
HMR			
Assess need for specialist referral			
Consider advanced care planning			

Activity 6 – Osteoporosis and recall and reminders

As part of the RACGP accreditation standards, it is a requirement that practices provide health promotion, illness prevention, preventive care and a reminder system based on patient need and best available evidence.
Brisbane South PHN have a comprehensive toolkit to assist you to review your practice recall and reminder systems, however, the aim of this activity is to assist with osteoporosis specific recall and reminders. You can also access other QI tools via medical software modules that will assist your practice to merge duplicate recall/reminder lists in your practice's clinical software. These modules are:

- Module 7 – Recalls, Reminders and Screening using MedicalDirector
- Module 8 – Recalls, Reminders and Screening using Best Practice

You can access these modules via DiscoverPHN**.**

Activity 6.1 – Reminder system

The aim of this activity is to review your practices reminder system in relation to patients with osteoporosis.

Question	Status	Action to be taken
Does your practice have a routine reminder for BMD tests?	☐ Yes, continue with activity. ☐ No, **see action to be taken.**	Refer to instructions from Best Practice or MedicalDirector.
Does your practice have a routine reminder for osteoporosis medications (*e.g. Denosumab injections and bisphosphonate infusions)?*	☐ Yes, continue with activity. ☐ No, **see action to be taken.**	Refer to instructions from Best Practice or MedicalDirector.
Do clinicians know how to initiate a patient reminder within clinical software?	☐ Yes, continue with activity. ☐ No, **see action to be taken.**	Clinician education on setting up patient reminders.
Is there a system for ensuring patients recently eligible for screening are incorporated into the reminder system (*e.g. please refer to the MBS criteria for BMD).*	☐ Yes, policy is working. ☐ Yes, policy is not working, see action to be taken. ☐ No policy, **see action to be taken.**	Revise policy. Practice policy on reminders to be implemented.
After reviewing your practice recall and reminder system, are there any changes you would like to implement in the practice, to help manage patients, over the next 12 months?	☐ Yes, **see action to be taken to help set your goals**. ☐ No, you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

Activity 7 – Referral pathways

The aim of this activity is to ensure that practice staff have access to the relevant information and understand pathways for referring patients to specialists and allied health staff as deemed clinically appropriate.

Engaging other medical services (e.g. diagnostic services, hospitals, consultants, allied health, social, disability and community services) assists the practice in providing optimal care to patients whose health needs require integration with other services.

The following conditions might require a referral to a specialist or a specialist bone centre, depending on individual circumstances:

- Lack of access to appropriate bone densitometry services
- Osteoporosis is unexpectedly severe or has unusual features at the time of initial assessment
- Inadequate response to therapy, despite good adherence
- Contraindications to standard therapies
- Presence of other complex medical conditions
- Experiencing serious or unacceptable adverse effects with treatment
- Continuing to fracture despite normal BMD
- Secondary cause is identified or suspected (e.g. Z-score ≤–2.0).[7]

SpotOnHealth HealthPathways

SpotOnHealth HealthPathways provides clinicians in the greater Brisbane south catchment with web-based information outlining the assessment, management and referral to other clinicians for over 550 conditions.

It is designed to be used at point of care primarily by general practitioners but is also available to specialists, nurses, allied health and other health professionals.

Health Services Directory

Health Services Directory is a joint initiative of all Australian governments, delivered by Healthdirect Australia, to enable health professionals and consumers access to reliable and consistent information about health services.

My Community Directory

My Community Directory lists organisations that provide services that are free or subsidised to the public in thousands of locations across Australia. These services are organised into various Community Directories.

Refer Your Patient

Metro South Health is the major provider of public health services, and health education and research in the Brisbane south side, Logan, Redlands and Scenic Rim regions. The Refer your patient website provides information to assist health professionals access public health services for patients. It provides a single point of entry for all new referrals.

[7] https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/osteoporosis

On the website, it outlines criteria to access appointments with health professionals and their availability, expected wait times plus all the information that is required in the referral.

Onero Academy

Onero Academy is a high intensity resistance and impact exercise program to strengthen bone and muscle. The program is especially designed for people with low bone mass

Activity 7.1 – Referral pathways

Complete the checklist below in relation to referral pathways.
This activity is designed to raise your awareness of local referral options available for you and your patients to facilitate co-ordinated and therefore optimal care.

Question	Status	Action to be taken
Do all GPs and Nurses have login details for SpotOnHealth HealthPathways?	☐ Yes, continue with the activity. ☐ No, see **action to be taken.**	Refer to instructions to obtain access.
Do all GPs and nurses know how to access SpotOnHealth HealthPathways via Topbar?	☐ Yes, continue with the activity. ☐ No, see **action to be taken.**	Refer to instructions from PenCS. Or contact BSPHN Digital Health Team via email: support@bsphn.org.au.
How will you communicate information so clinicians know where to access details on referring a patient to specialist services?	What is the practice plan for communicating referral information?	
After reviewing your practice referral system, are there any changes you would like to implement in the practice, to help manage patients, over the next 12 months?	☐ Yes, **see action to be taken to help set your goals**. ☐ No, you have completed this activity.	Refer to the MFI and the Thinking part at the end of this document. Refer to the Doing part - PDSA of the MFI to test and measure your ideas for success.

Activity 8 – Osteoporosis resources

Best practice guidelines

Clinical guidelines recommend how healthcare professionals should care for people with specific conditions.

They can cover any aspect of a condition and may include recommendations about providing information and advice, prevention, diagnosis, treatment and longer-term management.

GPs and practice nurses should be following the latest best practice guidelines for osteoporosis management. These include:

- RACGP - Osteoporosis prevention, diagnosis and management in postmenopausal women and men over 50 years of age
- RACGP Osteoporosis Summary Guideline
- Healthy Bones Australia: Guidelines for health care professionals
- SpotOnHealth HealthPathways
- Falls prevention in older people
- Smoking and bone health
- Therapeutic guidelines

Tools

- The Change Program – GP Weight management toolkit

Training and information:

- Osteoporosis - REFRAME - this chronic disease management program, supported by Amgen, provides healthcare professionals with a comprehensive range of education resources and tools to assist in identifying and diagnosing patients at risk of osteoporotic fractures. You may wish to watch an osteoporosis webinar from PenCS on the REFRAME program.
- Clinical audit Preventing fractures: where to start with osteoporosis

Other resources:

- NPS MedicineWise
- Know Your Bones
- Healthy Bones Australia

QI activities using the MFI and PDSA

After completing any of the workbook activities above you may identify areas for improvement in the management of patients with osteoporosis. Follow these steps to conduct a QI activity using the MFI and PDSA model. The model consists of two parts that are of equal importance.

Step 1: The **'thinking'** part consists of three fundamental questions that are essential for guiding improvement work:

- What are we trying to accomplish?
- How will we know that the proposed change will be an improvement?
- What changes can we make that will lead to an improvement?

Step 2: The **'doing'** part is made up of Plan, Do, Study, Act (PDSA) cycles that will help to bring about rapid change. This includes:

- helping you test the ideas
- helping you assess whether you are achieving your desired objectives
- enabling you to confirm which changes you want to adopt permanently.

Example PDSA for osteoporosis

See below for suggested goals related to osteoporosis you may wish to achieve within your practice:

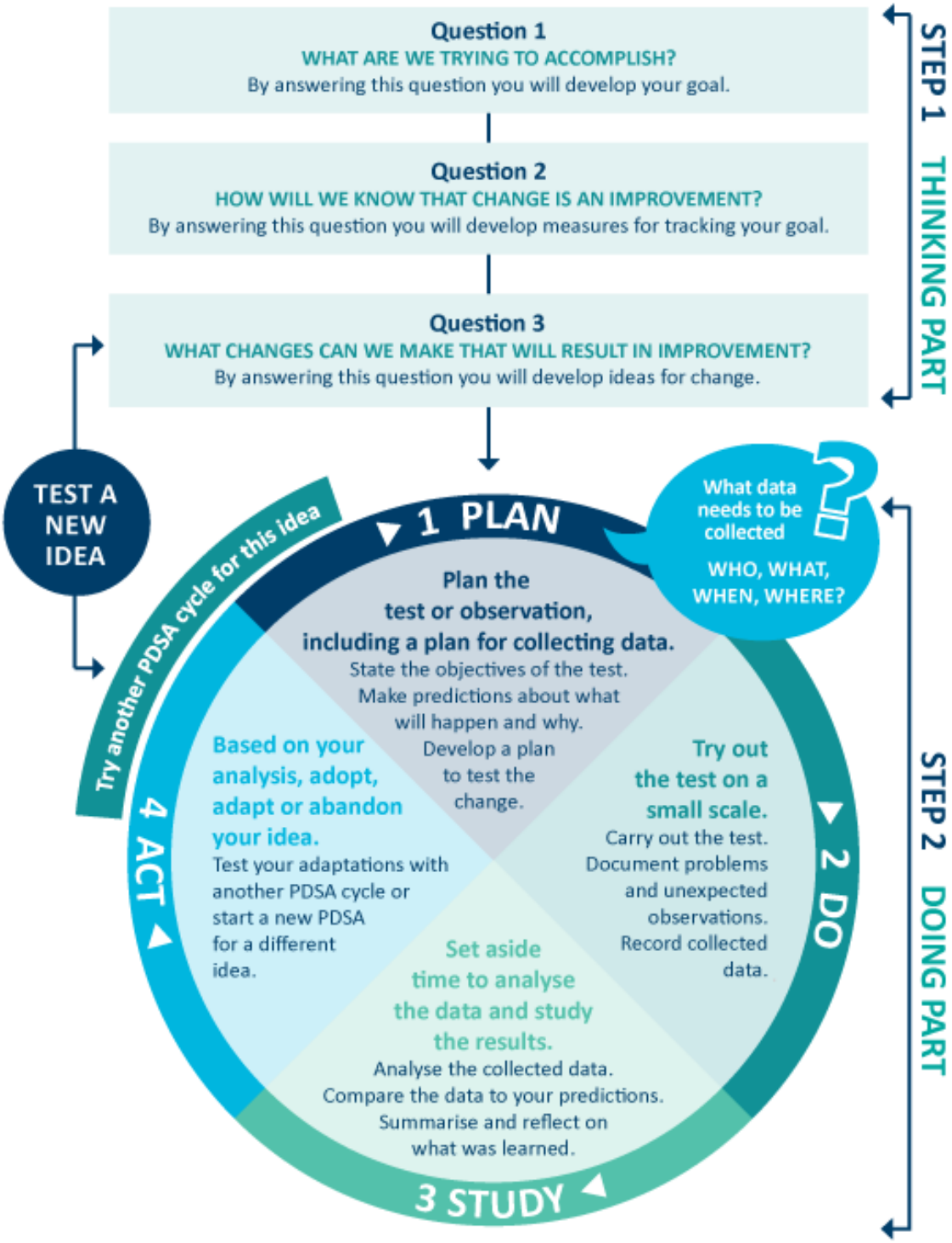
GOAL	HOW YOU MAY ACHIEVE THE GOAL
Ensure 90% of active patients aged 15 years and older have a smoking status recorded as current smoker, ex-smoker or never smoked.	Refer to CAT4 recipe: identifying patients with no allergy or smoking status recorded.
Ensure 75% of active patients aged 15 years and older have their BMI classified as obese, overweight, healthy or underweight within the previous 12 months	Refer to CAT4 recipe: adding, height, weight and waist measurements to patients records.
Ensure 90% of active patients aged 15 years and older have their alcohol status recorded	Refer to CAT4 data to identify the list of patients who do not have their alcohol status recorded.
Increase the percentage of eligible patients who have a BMD test recorded by 10%.	Refer to CAT4 data to identify the patients eligible for BMD test.

Other ideas for improving osteoporosis

It is suggested that you meet in your practice team to discuss how at your practice you can assist to improve health outcomes for patients with osteoporosis. Some suggestions you may consider include:

- asking the practice nurse to opportunistically see patients prior to their GP appointment to obtain height, weight, waist measurements, BMI, BP, physical activity, smoking and alcohol status
- ensuring team members have access to FRCs
- actively reviewing patients who have indications of osteoporosis, but no diagnosis recorded
- ensuring Topbar is installed on every workstation and fully operational, including the REFRAME osteoporosis app.

Model for Improvement diagram



Source: http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx

MFI and PDSA template EXAMPLE

Step 1: The thinking part - The 3 fundamental questions

Practice name:	**Date:**
Team members:	

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

By answering this question, you will develop your GOAL for improvement.
Record this as a S.M.A.R.T. goal (**S**pecific, **M**easurable, **A**chievable, **R**elevant, **T**ime bound).

Our goal is to:
Increase the number of GPMPs completed on patients with osteoporosis.

This is a good start, but how will you measure whether you have achieved this goal? The team will be more likely to embrace change if the goal is a S.M.A.R.T goal:

So, for this example, a better goal statement would be:

Our S.M.A.R.T. goal is to: Increase the number of GPMPs completed on patients with osteoporosis by 10% by 30th November.

Q2. How will I know that a change is an improvement? (Measure)

By answering this question, you will determine what you need to MEASURE in order to monitor the achievement of your goal. Include how you will collect your data (e.g. CAT4 reports, patient surveys etc). Record and track your baseline measurement to allow for later comparison.

We will measure the percentage of active patients with osteoporosis who have a GPMP completed in the past 12 months. To do this we will:

A) Identify the number of active patients with osteoporosis.
B) Identify the number of active patients with osteoporosis and a GPMP completed.

B divided by A x 100 produces the percentage of patients with osteoporosis and a GPMP completed.

BASELINE MEASUREMENT: 26% pf active patients with osteoporosis have a GPMP completed. DATE:

Q3. What changes could we make that will lead to an improvement? (List your IDEAS)

By answering this question, you will generate a list of IDEAS for possible changes you could implement to assist with achieving your S.MA.R.T. goal. You will test these ideas using part 2 of this template, the 'Plan, Do, Study, Act (PDSA)' cycle. Your team could use brainstorming or a driver diagram to develop this list of change ideas.

IDEA: Using CAT4, identify active patients with osteoporosis with no GPMP completed in the past 12 months.

IDEA: Identify patients from list exported from CAT4 and send SMS recall to encourage participation.

IDEA: Review practice GPMP templates to ensure there is consistency for all patients with osteoporosis.

IDEA: Source and provide endorsed patient education resources on osteoporosis and GPMP (in waiting rooms, etc).

Note: Each new GOAL (1st Fundamental Question) will require a new MFI plan.

Source: Langley, G., Nolan, K., Nolan, T., Norman, C. & Provost, L. 1996, The Improvement Guide, Jossey-Bass, San Francisco, USA.

MFI and PDSA template EXAMPLE

Step 2: The doing part - Plan, Do, Study, Act

You will have noted your IDEAS for testing when you answered the 3rd fundamental question in step 1. You will use this template to test an idea. Ensure you communicate the details of the plan to the entire practice team.

IDEA	Record the change idea you are testing
Which idea are you going to test? *(Refer to Q3, step 1 above)*	
Using CAT4, identify active patients with osteoporosis with no GPMP completed in the past 12 months.	
PLAN	**Record the details of how you will test your change idea**
Plan the test, including a plan for collecting data	What exactly do you plan to do? Record who will do what; when they will do it (day, time etc) and for how long (1 week, 2 weeks etc); and where (*if applicable);* the data to be collected; and predictions about the outcome.
WHAT: Sarah will conduct a search on CAT4 and identify active patients with osteoporosis who have not had a GPMP recorded in the past 12 months. WHO: Receptionist (Sarah). WHEN: Begin 20 October. Sarah will be allocated time every week for the next 4 weeks to create list of eligible patients. WHERE: at the practice in Dr Browns room (on his day off) DATA TO BE COLLECTED: Number of active osteoporosis patients and number of active osteoporosis patients who have not had a GPMP completed in the past 12 months. PREDICTIONS: 35% of the active osteoporosis patient population will have had a GPMP completed in the past 12 months.	
DO	**Run the test, then record your actions, observations and data**
Run the test on a small scale	What did you do? Were there any deviations from the original plan? Record exactly what you did, the data collected and any observations. Include any unexpected consequences (positive or negative).
The number of active patients with osteoporosis and a GPMP completed at the beginning of the test will be compared to the number of active patients with osteoporosis and a GPMP recorded at the end of the test.	

STUDY	Analyse the data and your observations
Analyse the results and compare them to your predictions	Was the plan executed successfully? Did you encounter any problems or difficulties? What worked/didn't work? What did you learn on the way? Compare the data to your predictions. Summarise and reflect on what was learned.

Completed 30 Nov – the receptionist contacted Brisbane South PHN for support with the Pen CS CAT4 search and the export function. The data search was conducted very quickly, with the receptionist being upskilled to conduct further relevant searches.

At the end of the focus on GPMP for active patients with osteoporosis, a total of 62 active patients (31%) with osteoporosis have had a GPMP completed in the past 12 months = 4% lower than predicted, but a 5% increase from the beginning of the cycle.

Communicate the results of your activity with your whole team. Celebrate any achievements, big or small.

ACT	Record what you will do next
Based on what you learned from the test, record what your next actions will be	Will you adopt, adapt or abandon this change idea? Record the details of your option under the relevant heading below. *ADOPT: record what you will do next to support making this change business as usual*; ADAPT: *record your changes and re-test with another PDSA cycle; or ABANDON: record which change idea you will test next and start a new PDSA.*

ADOPT:

ADAPT:

ABANDON: Whilst the practice made an improvement in the number of active patients with osteoporosis and a current GPMP, the team decided to create a Pen CS Topbar prompt to ensure all patients with osteoporosis have a prompt for GPMP. CAT4 reports will be created on a monthly basis to monitor progress with GPMPs for these patients.

Repeat step 2 to re-test your adapted plan or to test a new change idea

MFI and PDSA template

Step 1: The thinking part - The 3 fundamental questions

Practice name:	**Date:**
Team members:	

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

By answering this question, you will develop your GOAL for improvement.

Record this as a S.M.A.R.T. goal (**S**pecific, **M**easurable, **A**chievable, **R**elevant, **T**ime bound).

Q2. How will I know that a change is an improvement? (Measure)

By answering this question, you will determine what you need to MEASURE in order to monitor the achievement of your goal. Include how you will collect your data (e.g. CAT4 reports, patient surveys etc). Record and track your baseline measurement to allow for later comparison.

BASELINE MEASUREMENT: DATE:

Q3. What changes could we make that will lead to an improvement? (List your IDEAS)

By answering this question, you will generate a list of IDEAS for possible changes you could implement to assist with achieving your S.MA.R.T. goal. You will test these ideas using part 2 of this template, the 'Plan, Do, Study, Act (PDSA)' cycle. Your team could use brainstorming or a driver diagram to develop this list of change ideas.

IDEA:

IDEA:

IDEA:

IDEA:

Note: Each new GOAL (1st Fundamental Question) will require a new MFI plan.

Source: Langley, G., Nolan, K., Nolan, T., Norman, C. & Provost, L. 1996, The Improvement Guide, Jossey-Bass, San Francisco, USA.

MFI and PDSA template

Step 2: The doing part - Plan, Do, Study, Act

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IDEA	**Record the change idea you are testing**
Which idea are you going to test? *(Refer to Q3, step 1 above)*	
PLAN	**Record the details of how you will test your change idea**
Plan the test, including a plan for collecting data	What exactly do you plan to do? Record who will do what; when they will do it (day, time etc) and for how long (1 week, 2 weeks etc); and where (*if applicable);* the data to be collected; and predictions about the outcome.
WHAT: WHO/WHEN/WHERE: DATA TO BE COLLECTED: PREDICTIONS:	
DO	**Run the test, then record your actions, observations and data**
Run the test on a small scale	What did you do? Were there any deviations from the original plan? Record exactly what you did, the data collected and any observations. Include any unexpected consequences (positive or negative).

STUDY	Analyse the data and your observations
Analyse the results and compare them to your predictions	Was the plan executed successfully? Did you encounter any problems or difficulties? What worked/didn't work? What did you learn on the way? Compare the data to your predictions. Summarise and reflect on what was learned.

Communicate the results of your activity with your whole team. Celebrate any achievements, big or small.

ACT	Record what you will do next
Based on what you learned from the test, record what your next actions will be	Will you adopt, adapt or abandon this change idea? Record the details of your option under the relevant heading below. *ADOPT: record what you will do next to support making this change, business as usual*; ADAPT: *record your changes and re-test with another PDSA cycle; or ABANDON: record which change idea you will test next and start a new PDSA.*

ADOPT:

ADAPT:

ABANDON:

Repeat step 2 to re-test your adapted plan or to test a new change idea

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