

QUALITY IMPROVEMENT TOOLKIT FOR GENERAL PRACTICE

# Prevention

Shingles  
MODULE

Version 3  
August 2020



## ADULT VACCINATION - SHINGLES

# 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 a shingles example using the MFI 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](mailto:support@bsphn.org.au).

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.

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



## 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; Medical Director, 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, 2020**

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## VACCINATIONS – HERPES ZOSTER (SHINGLES)

### What is shingles?

Shingles (herpes zoster) is an illness caused by the varicella zoster virus. It occurs when the virus is reactivated in the nerve tissue of people who have previously had chickenpox.

People with shingles experience a painful blistering rash. Post-herpetic neuralgia, the most common complication after a bout of shingles, causes a persistent burning pain lasting over three months.

People with shingles can spread the virus to people who have not had a chickenpox infection or vaccination.

One in three people will develop shingles in their lifetime. The risk of shingles increases with age, and is most common in those aged 60 and older. People who are immunocompromised are also at increased risk.<sup>1</sup>

### Hospitalisations and deaths due to shingles

In 2016, there were 2,677 hospital admissions for shingles in Australia. The rate of admissions increases as the population age increases, and is highest among people aged 80 years and over. The impact of vaccination cannot yet be seen on shingles hospital admissions. In 2016, shingles caused 27 deaths in Australia. Between 1997 and 2016, shingles caused 438 deaths, 83% (365 deaths) of which occurred in people aged 80 years and over.<sup>2</sup>

### Who is recommended to have a shingles (zoster) vaccination?

According to the [Australian Immunisation Handbook](#), the following people are recommended to have a zoster vaccination:

- adults aged ≥ 60 years of age
- people aged ≥ 50 years of age who are household contacts of a person who is immunocompromised.

### Who is eligible for a government funded vaccine?

Shingles vaccinations are provided free under the [National Shingles Vaccination Program](#) for:

- a single dose is available for 70-year-olds
- until 31 October 2021, a single catch-up dose is also available for adults aged 71 to 79 years.

For the up to date information in relation to dosage, eligibility, administration please refer to the [Australian Immunisation Handbook](#).

The Queensland Immunisation Schedule can be found [here](#).

### Current shingles vaccination (Zostavax®) records on the Australian Immunisation Register (AIR)

Records of the Australian Immunisation Register (AIR) suggest that only a third of 70-year-olds received the shingles vaccine in the first year-and-a-half of the program. This is likely an underestimation, but emphasises the importance of ensuring the vaccine is offered to all eligible patients and that completed vaccinations are recorded on the AIR.<sup>3</sup>

<sup>1</sup> [https://www.aihw.gov.au/getmedia/759199ff-f5c8-421d-a572-aaa984a02b49/aihw-phe-236\\_Shingles.pdf.aspx](https://www.aihw.gov.au/getmedia/759199ff-f5c8-421d-a572-aaa984a02b49/aihw-phe-236_Shingles.pdf.aspx)

<sup>2</sup> [https://www.aihw.gov.au/getmedia/759199ff-f5c8-421d-a572-aaa984a02b49/aihw-phe-236\\_Shingles.pdf.aspx](https://www.aihw.gov.au/getmedia/759199ff-f5c8-421d-a572-aaa984a02b49/aihw-phe-236_Shingles.pdf.aspx) - current Aug 2020

<sup>3</sup> <https://www.nps.org.au/australian-prescriber/articles/herpes-zoster-vaccination-in-australia-whats-available-and-who-benefits>

## Assistance identifying eligibility for the shingles vaccine

The Department of Health have a checklist/consent form available for use. This [form](#) should be completed for each patient prior to vaccination. The form is also available as an appendix to this document.

## Zostavax® is contraindicated in people who are immunocompromised

The shingles vaccination is not recommended for use in people under 50 years of age and is not registered in Australia for this age group.

Zostavax® contains live attenuated varicella-zoster virus, consisting 14 times more virus than childhood varicella vaccines. People with significantly weakened immune systems must not receive Zostavax®. If uncertain about the person's level of immunocompromise and whether vaccination is safe, do not vaccinate. Seek expert advice from the treating physician or an immunisation specialist. Please refer to the [Australian Immunisation Handbook](#) for additional information on contraindications to the shingles vaccination. The shingles vaccination is contraindicated when there has been a serious reaction following a previous dose of any vaccine containing varicella.

## Aim of this QI toolkit

General practice is the ideal setting to address immunisation rates for people at higher risk of shingles. General practice is often the first point of contact for treatment coordination, access to medications, additional tests and referrals to other providers.

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*Toolkit aim - To identify who in your practice is at risk and eligible to receive a shingles vaccination.*

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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 at your own pace. There are additional activities to find any patients who may have been missed in the initial data extraction activity and to ensure they are then coded correctly. These activities will improve the accuracy of the register and maintain the system for future use.

Once you have an accurate register you will be able to easily identify your patients who would benefit from receiving the vaccination, ensuring your practice is providing optimum care.

## How to use this toolkit

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

- identify a sample group of patients by reviewing data measures from your practice population
- 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
- review your process and start again if you find your process is not working and you are not seeing improvements.

For more support



[support@bsphn.org.au](mailto:support@bsphn.org.au)



1300 467 265

## Activity 1. Understanding your patient population

### Activity 1.1 – Data collection from CAT4



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 a shingles vaccination.](#)

*The aim of this activity is to collect data to determine the number of patients eligible for a shingles vaccination and also identify any patients who have not received their shingles vaccination*

	Description	Total number of active patients as per RACGP criteria (3 visits in 2 years)	Total number of active patients
1.1a	Number of active patients aged 70 years		
1.1b	Number of active patients aged 71 years to 79 years		
1.1c	Number of active patients aged 70 years who have received their shingles vaccine		
1.1d	Number of active patients aged 70 years with NO shingles vaccine recorded		
1.1e	Number of active patients aged 71 years to 79 years who have received their shingles vaccine		
1.1f	Number of active patients aged 71 years to 79 years with NO shingles vaccine recorded		
1.1g	Number of active patients aged 60 to 69 years with NO shingles vaccine recorded		

**Please note: the RACGP defines active patients as having attended 3 visits in 2 years. This search criteria does not capture those patients who may come in for screening every 2 years, or twice in 2 years e.g. flu vaccine, hence the option to look at all active patients.**

**Important:** when looking at your patient numbers and eligibility, please be aware of those patients for whom the vaccination is contraindicated (e.g. immunosuppressed, shingles in the past 12 months etc).

**Search criteria:** you may wish to search for eligible patients aged 60 to 69 years who do not have their shingles vaccine. This population of people are not eligible for a free vaccine under the National Shingles Vaccination Program, but fall within the recommended age for a shingles vaccination.



## Activity 1.2 – Reviewing your practice population who are not up to date with shingles vaccination.



Complete the checklist below which reviews your practices patients who are not up to date with their shingles vaccination.

Description	Status	Action to be taken
After completing <b>activity 1.1</b> note how many eligible patients have NO shingles vaccination recorded? (1.1d and 1.1f).	<input type="checkbox"/> Number: _____ <input type="checkbox"/> Percentage of population: _____ (To work out %, take total number of patients from activity 1.1. Divide that number by 100 (make a note of this figure). Divide the total number of patients with NO shingles vaccination by the figure you have taken note of. e.g. If your total eligible population is 2209 divide by 100 = 22.09 and your total not recorded is 734, then 734 divide by 22.09 = 33%).	Is the percentage of not recorded patients low (less than 20%) or high (greater than 40%)?  <input type="checkbox"/> Low <input type="checkbox"/> High  How will this information be communicated to the practice team?
Is there a known explanation as to this result?	<input type="checkbox"/> Yes: continue with activity.  <input type="checkbox"/> No: <b>see action to be taken.</b>	Outline the reason (e.g. <i>loss or gain of GP/s, influx of patients, patients attend multiple practices, data entry etc.</i> )  How will this information be communicated to the practice team?
After reviewing the number of patients without a shingles vaccination, are there any changes you would like to implement in the practice, to help manage patients, over the next 12 months?	<input type="checkbox"/> Yes: <b>see action to be taken to help set your goals.</b>  <input type="checkbox"/> No: you have completed this activity.	Refer to the MFI and the <a href="#">Thinking part</a> at the end of this document.  Refer to the <a href="#">Doing part - PDSA</a> of the MFI to test and measure your ideas for success.

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*It is recommended that you meet either in your established micro-team or at a practice meeting to create a process for 'identifying eligible patients' for the shingles vaccine. This will ensure the appropriate patients receive their vaccine.*

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## Activity 2 – Building your shingles vaccination register

In your practice there may be multiple ways clinical staff enter a patient’s immunisation record in the practice software. Some type this information directly into the patient progress notes as free text. Free text is not the preferred process as it is difficult to search in any database by the clinical software or third-party software (e.g. extraction tools).

The recommended process is to use the immunisation tab and select from the drop-down boxes provided in the clinical software. This is a coded immunisation entry. If all clinical staff within the practice use the same coded entry to record an immunisation then it is easier to search for these criteria. The immunisation registers are more accurate and it is easier to generate recall and reminder lists.

### Activity 2.1 – Importance of using consistent recording in your practice software



*The aim of this activity is to review the practices processes for recording immunisation data.*

Description	Status	Action to be taken
Are relevant practice team members aware of the importance of quality immunisation data (avoiding free text)?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Communicate to relevant practice team members the importance of data quality in your clinical software.  Additional resources available from Brisbane South PHN: <ul style="list-style-type: none"> <li>• Quality Improvement via medical software Module 5.</li> <li>• Essential Clinical Data Entry using MD and Module 6.</li> <li>• Essential Clinical Data Entry using BP.</li> </ul> These modules can be accessed via <a href="#">DiscoverPHN</a> .
Are practice team members aware of how to enter immunisation records into your practice clinical software?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Refer to instructions for <a href="#">Best Practice</a> and <a href="#">MedicalDirector</a> .
After reviewing your practice’s immunisation data entry, are there any changes with the management of your patients you would like to implement over the next 12 months	<input type="checkbox"/> Yes, <b>set goals and outline in actions to be taken.</b> <input type="checkbox"/> No, continue with activity.	Refer to the MFI and the <a href="#">Thinking part</a> at the end of this document.  Refer to the <a href="#">Doing part - PDSA</a> of the MFI to test and measure your ideas for success.



Description	Status	Action to be taken
		Agree on frequency of checking for un-coded immunisations.
Do relevant team members understand the importance of using drop down lists provided within your clinical software program?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Provide training to all team members on importance of <a href="#">data entry</a> .
How many un-coded immunisations do you currently have in your clinical software package?	<input type="checkbox"/> None <input type="checkbox"/> Between 1 and 10 <input type="checkbox"/> Between 11 and 30 <input type="checkbox"/> Between 31 and 50 <input type="checkbox"/> More than 51	
After reviewing your practice’s immunisation entering processes are there any changes with the management of your patient records you would like to implement over the next 12 months	<input type="checkbox"/> Yes, <b>set goals and outline in actions to be taken.</b>  <input type="checkbox"/> No, continue with activity.	Refer to the MFI and the <a href="#">Thinking part</a> at the end of this document.  Refer to the <a href="#">Doing part - PDSA</a> of the MFI to test and measure your ideas for success.

## Activity 3 – Australian Immunisation Register (AIR)

### AIR for vaccination service providers

The [AIR](#) is a national register that records all vaccines given to all people in Australia.

The AIR includes vaccines given:

- under the National Immunisation Program (NIP)
- through school programs
- privately, such as for flu or travel.

**Please note:** Some patients may have had their shingles vaccine performed elsewhere. Always check AIR prior to providing the vaccine.

### Activity 3.1 – Using AIR in general practice



*The aim of this activity is to ensure the relevant staff in your practice know how to use AIR.*

Description	Status	Action to be taken
Are all GPs in your practice registered to use AIR?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	See fact sheet on <a href="#">How to request access to AIR.</a> See fact sheet on <a href="#">How to log onto AIR.</a>
Do relevant staff know they can search for an immunisation history for individual patients on AIR?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	See fact sheet on <a href="#">How to find and interpret immunisation records on AIR.</a>
Do relevant staff know how to record immunisation encounters on AIR?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	See fact sheet on <a href="#">How to record immunisation encounter for individuals under 20 years.</a> See fact sheet on <a href="#">How to record an immunisation encounter for individuals over 20 years.</a>
Do relevant staff know how to lodge a medical exemption on AIR?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	See fact sheet on <a href="#">How to lodge a medical exemption on AIR.</a>
Do relevant staff know how to notify AIR if a patient is immunosuppressed?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Notify AIR <a href="#">online</a> or access a form <a href="#">here.</a>

Description	Status	Action to be taken
Does your practice currently receive the Due/Overdue Practice Report from AIR?	<input type="checkbox"/> Yes, <b>see action to be taken.</b>	How often do you receive the report? <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly  Does someone in the practice review this once it arrives? <input type="checkbox"/> Yes <input type="checkbox"/> No  Who is responsible for this?  <hr/>
	<input type="checkbox"/> No, <b>see action to be taken.</b>	See fact sheet on <a href="#">How to request reports from AIR.</a>
Do you know that patients can view their immunisation history statement from AIR?	<input type="checkbox"/> Yes, continue with the activity.  <input type="checkbox"/> No, <b>see action to be taken.</b>	See fact sheet on <a href="#">Instructions for individuals wishing to obtain an immunisation history from AIR.</a>
Do you know the contact details of AIR?	<input type="checkbox"/> Yes, continue with the activity.  <input type="checkbox"/> No, <b>see action to be taken.</b>	AIR contact number is 1800 671 811.
After reviewing your processes for reporting to AIR, are there any changes you would like to implement in the practice to help manage patient records over the next 12 months?	<input type="checkbox"/> Yes, <b>set goals and outline in actions to be taken.</b>  <input type="checkbox"/> No, you have completed this activity.	Refer to the MFI and the <a href="#">Thinking part</a> at the end of this document.  Refer to the <a href="#">Doing part - PDSA</a> of the MFI to test and measure your ideas for success.

### Instructions on accessing AIR

- [Accessing AIR using HPOS information](#)
- AIR [education guide for vaccination providers.](#)
- Queensland Government – [Instructions on how to use the Australian Immunisation Register \(AIR\)](#)

### Notifying AIR of patients who are immunosuppressed

It is important to notify AIR of any patients who are immunosuppressed or do not require the shingles vaccine. To do this, you can complete this [online](#) or access the form [here](#).

## Activity 4 – Tools to assist improve immunisation rates

### Identifying areas that can assist your practice to manage and improve your shingles vaccination rates

There are options your practice can use to assist with managing your shingles vaccinations. These include:

- Topbar from PenCS
- AIR (see activity 3)
- assessing immunisation statuses when completing a 75+ health assessment
- assessing immunisation statuses when completing a driver’s licence assessment
- other vaccinations – assessing shingles vaccination statuses when completing other immunisations e.g. influenza, pneumovax etc.

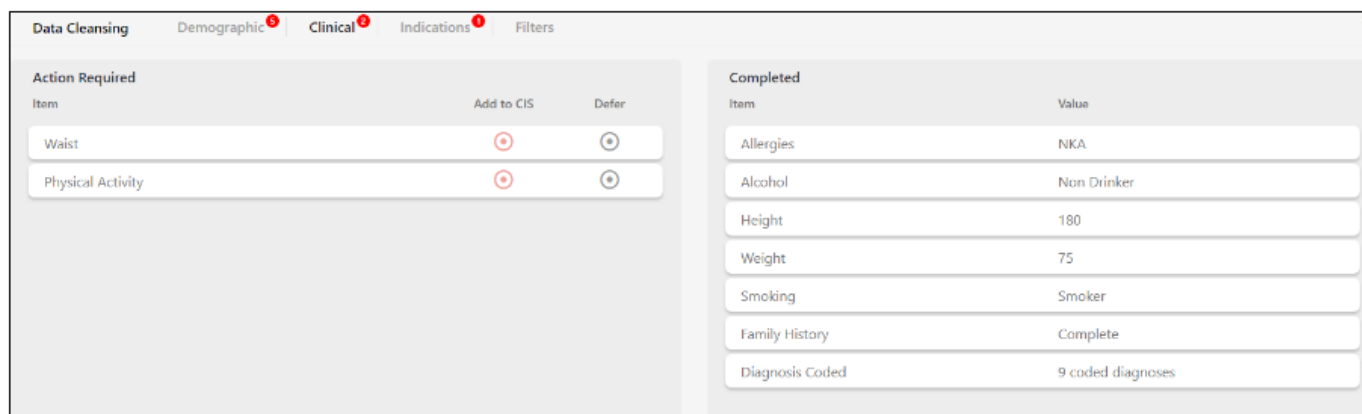
### Improving your shingles vaccination rates using Topbar

Complete and accurate patient records are a key component of primary health care. Topbar (available in Pen CS) is designed to achieve this by providing prompts and relevant information to all clinic staff based on the patients being seen and patients who are on the waiting list for the day. The user interface is minimalistic and allows the users to focus on the patient details and clinical information while providing important additional tools and other information. and Topbar assists all staff with this important aim.

Topbar can be used to help set up a prompt for any eligible patient’s missing their shingles vaccination.

#### [TOPBAR Clinical Tab cleansing app:](#)

This tab displays missing and completed items from the patient’s record related to their clinical information in their patient record in the GP application. Items that require action (missing items) are displayed on top and completed items at the bottom of the screen.



## Activity 4.1 – Using Topbar to improve your practice data



The aim of this activity is to ensure relevant team members have access to and use Topbar

Description	Status	Action to be taken
Is Topbar installed on all workstations at your practice?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Follow the <a href="#">Running Topbar</a> resource, or the <a href="#">Topbar Installation Guide</a> .
Have relevant team members been set up as a Topbar user?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Follow the <a href="#">Managing Topbar Users</a> resource.
Have relevant Topbar users been set up with appropriate access rights?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Follow the <a href="#">Topbar Access Rights</a> resource.
Do relevant team members understand all the Topbar apps?	<input type="checkbox"/> Yes, you have completed this activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Refer to <a href="#">Topbar Flip Guide</a> .
After reviewing your practice’s Topbar use, are there any changes with the management of your patient records you would like to implement over the next 12 months?	<input type="checkbox"/> Yes, <b>set goals and outline in actions to be taken.</b> <input type="checkbox"/> No, continue with activity.	Refer to the MFI and the <a href="#">Thinking part</a> at the end of this document.  Refer to the <a href="#">Doing part - PDSA</a> of the MFI to test and measure your ideas for success.

## Improving your shingles vaccination rates using health assessments

### 75+ health assessment (MBS items 701-707)

There are time-based [MBS health assessment items](#): 701 (brief), 703 (standard), 705 (long) and 707 (prolonged). These item numbers can be claimed for people aged 75 years and older. As part of the assessment it is recommended that the immunisation status of the patient is updated.



## Activity 4.2 – Data collection from CAT4



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

**Note** - Instructions on how to extract the data is available from the CAT4 website: [MBS items](#) and [Adult - Immunisations](#)

The aim of this activity is to identify the number of patients who have had a health assessment completed in the past 12 months are up to date with their shingles vaccination

	Description	Total number
4.2a	Number of patients who have had a 75+ health assessment completed in the past 12 months	
4.2b	Number of patients who have had a 75+ health assessment completed in the past 12 months who are up to date with their shingles vaccination	

## Activity 4.3 –Reflection on your practice’s use of tools to improve shingles vaccination rates



Complete the checklist below to review your practice’s use of tools to improve shingles vaccination rates.

Description	Status	Action to be taken
After reviewing the number of patients who have had a health assessment completed and received a shingles vaccination, are there any unexpected results?	<input type="checkbox"/> Yes, <b>see action to be taken.</b>  <input type="checkbox"/> No, continue with activity.	Please explain (e.g. low number of patient’s who have had a 75+ health assessment completed are up to date with their shingles vaccination).  What action will you take?  How will you use this information to increase the number of shingles vaccinations completed?
Do relevant team members know who is eligible for a shingles vaccination?	<input type="checkbox"/> Yes, continue with activity.  <input type="checkbox"/> No, <b>see action to be taken.</b>	Refer to <a href="#">Australian Immunisation Handbook</a> or <a href="#">National Shingles Vaccination Program</a> or <a href="#">Queensland Immunisation Schedule</a> .

Description	Status	Action to be taken
Do relevant team members check a patient's shingles vaccination status when completing a medical certificate for driver's assessment?	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Hold a team meeting to discuss how this may be implemented in your practice.
Do relevant team members check a patient's shingles vaccination status when completing other immunisations? (e.g. influenza, pneumococcal etc.)	<input type="checkbox"/> Yes, continue with activity. <input type="checkbox"/> No, <b>see action to be taken.</b>	Discuss with relevant team members the importance of checking immunisation status at each visit.
After reviewing the tools to improve your patient's shingles vaccination status, are there any changes you would like to implement in the practice to help manage patients over the next 12 months?	<input type="checkbox"/> Yes, see <b>action to be taken</b> to help set your goals. <input type="checkbox"/> No, you have completed this activity.	Refer to the MFI and the <a href="#">Thinking part</a> at the end of this document.  Refer to the <a href="#">Doing part - PDSA</a> of the MFI to test and measure your ideas for success.

## Activity 5 – Shingles resources

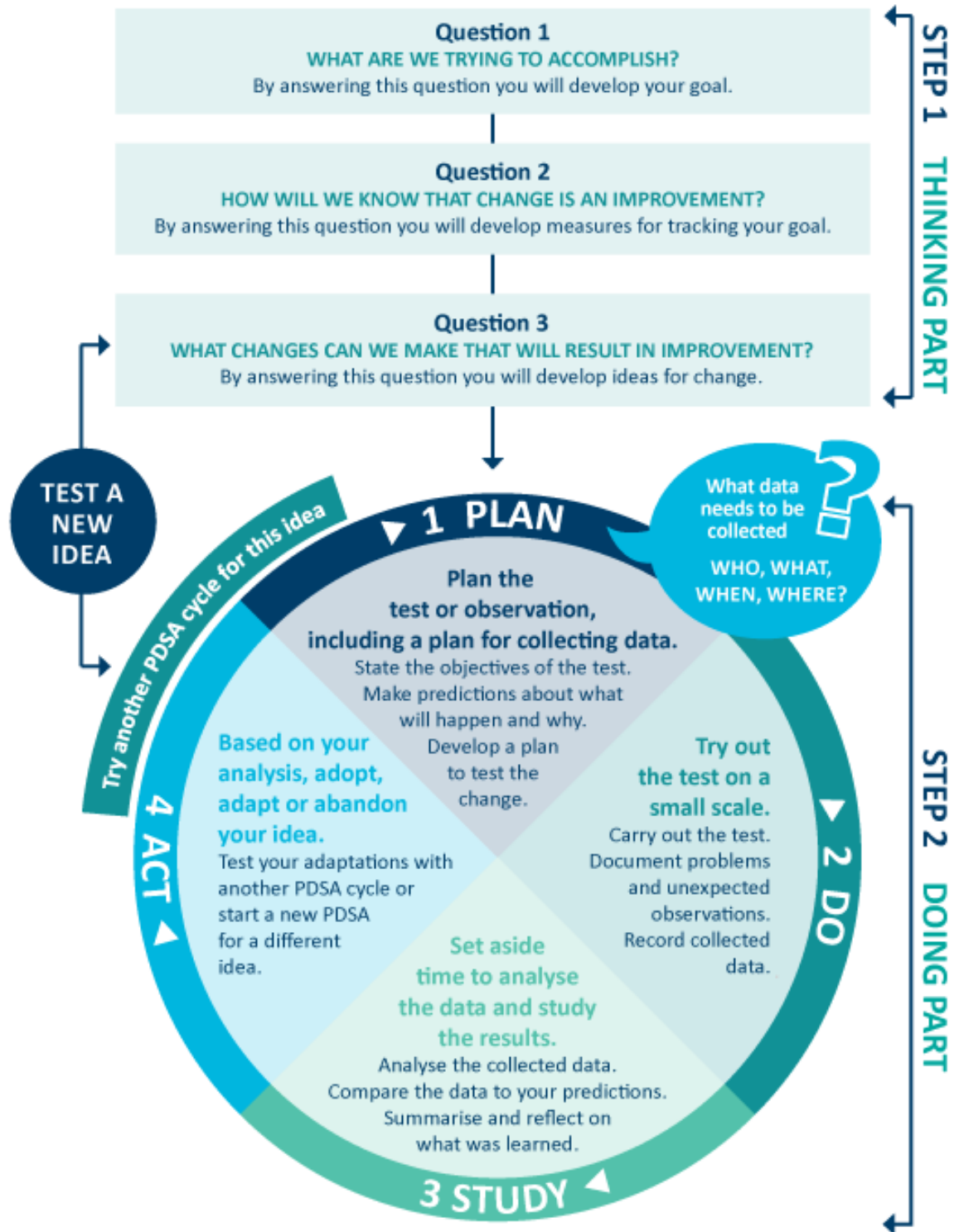
- [Australian Immunisation Handbook](#)
- Qld Health – [Immunisation Schedule Queensland](#)
- Qld Health – [Viral Infections](#)
- NPS – [Herpes zoster – treatment and prevention.](#)
- NPS – [Herpes zoster vaccination in Australia: what’s available and who benefits?](#)
- Westmead Institute – [vaccines 90% effective.](#)
- National Shingles Vaccination Program - [Zostavax fact sheet for vaccination providers.](#)
- Australian Immunisation Register – [how to report immunisations](#)
- NCIRS [Zoster vaccine for Australian adults.](#)
- [Zostavax recall guide.](#)

### **Zostavax® vaccine screening form for contraindications**

- Department of Health – [Zostavax vaccine screening form for contraindications.](#)
- [Immunisation consent form](#)

A number of other resources are available on Brisbane South PHN website under the [practice nurse support program.](#)

# Model for Improvement diagram



Source: <http://www.ihl.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx>

## MFI and PDSA template EXAMPLE

### Step 1: The thinking part - The 3 fundamental questions

<b>Practice name:</b>	<b>Date:</b>
<b>Team members:</b>	
<b>Q1. What are we trying to accomplish? (Goal)</b>	
By answering this question, you will develop your GOAL for improvement. Record this as a S.M.A.R.T. goal ( <b>S</b> pecific, <b>M</b> easurable, <b>A</b> chievable, <b>R</b> elevant, <b>T</b> ime bound).	
<p><i>Our goal is to:</i> Provide shingles vaccines to all eligible active patients for whom it is not contraindicated. 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 more specific and has a time limit. So, for this example, a better goal statement would be:</p> <p><i>Our S.M.A.R.T. goal is to</i> increase the number of our patients between the age of 70 &amp; 79 years who have a shingles vaccine recorded by 10% by 30<sup>th</sup> November.</p>	
<b>Q2. How will I know that a change is an improvement? (Measure)</b>	
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.	
<p>We will measure the percentage of active patients between 70 &amp; 79 years who have a shingles vaccine recorded. To do this we will:</p> <ul style="list-style-type: none"> <li>A) Identify the number of active patients aged 70 to 79 years old.</li> <li>B) Identify the number of active patients aged 70 to 79 years old who have shingles vaccine recorded.</li> </ul> <p>B divided by A x 100 produces the percentage of patients aged 70 to 79 years old who have a shingles vaccine recorded.</p> <p>BASELINE MEASUREMENT:        23% of active patients 70 to 79 years will have a shingles vaccine recorded.</p>	
<b>Q3. What changes could we make that will lead to an improvement? (List your IDEAS)</b>	
By answering this question, you will generate a list of IDEAS for possible changes you could implement to assist with achieving your S.M.A.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.	
<p>IDEA: Identify active patients aged 70 to 79 years old who have not had a shingles vaccine recorded.</p> <p>IDEA: Ensure all relevant staff know how to record shingles vaccines in the practice's clinical software.</p> <p>IDEA: Ensure adequate vaccination stock to meet patient demand.</p>	

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

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.

<b>IDEA</b>	<b>Record the change idea you are testing</b>
Which idea are you going to test? (Refer to Q3, step 1 above)	
Identify active patients aged 70 to 79 years who have not had a shingles vaccine recorded.	
<b>PLAN</b>	<b>Record the details of how you will test your change idea</b>
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.
<p>WHAT: Tom will set aside an hour on a Thursday afternoon to conduct a search on CAT4 of all patients aged 70 to 79 years who do not have a shingles vaccine recorded. A list will be generated for each GP. A Topbar prompt will be created for these patients for their vaccination status to be checked at their next appointment. The practice nurse will check vaccination stock and ensure enough vaccines are available to focus on improving vaccination rates.</p> <p>WHO/WHEN/WHERE: Who: Practice manager                      When: Begin 4<sup>th</sup> October.                      Where: Practice manager office.</p> <p>DATA TO BE COLLECTED: Number of active patients aged 70 to 79 years and the number of active patients aged 70 to 79 years who have had their shingles vaccination recorded.</p> <p>PREDICTION: 33% of active patients aged 70 to 79 years will have their shingles vaccination status updated.</p>	
<b>DO</b>	<b>Run the test, then record your actions, observations and data</b>
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).
Completed 30 November – The data searches were conducted in CAT4 by the Practice Manager, with the receptionist being upskilled to conduct further relevant searches. The number of patients aged 70 to 79 years old with a shingles vaccination recorded at the beginning of the focus were compared to the number of patients 70 to 79 years old with a shingles vaccination recorded at the end of the focus. A Topbar prompt was created to notify relevant team members when the patient attended the practice.	
<b>STUDY</b>	<b>Analyse the data and your observations</b>
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.
<p>A total of 40% of patients aged 70 to 79 years have had their shingles vaccination recorded. This has given the practice a 17% increase which exceeded the initial goal of 10% increase.</p> <p>Results have been shared with the whole practice team.</p> <p><i>Communicate the results of your activity with your whole team. Celebrate any achievements, big or small.</i></p>	

ACT	Record what you will do next
<p>Based on what you learned from the test, record what your next actions will be</p>	<p>Will you adopt, adapt or abandon this change idea? Record the details of your option under the relevant heading below. <i>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.</i></p>
<p>ADOPT:</p> <p>ADAPT:</p> <ul style="list-style-type: none"> <li>• The practice will continue to focus on this group of patients, however, we will focus on patients who are turning 70.</li> </ul> <p>ABANDON:</p>	

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

<b>Practice name:</b>	<b>Date:</b>
<b>Team members:</b>	
<b>Q1. What are we trying to accomplish? (Goal)</b>	
By answering this question, you will develop your GOAL for improvement. Record this as a S.M.A.R.T. goal (Specific, Measurable, Achievable, Relevant, Time bound).	
<b>Q2. How will I know that a change is an improvement? (Measure)</b>	
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:
<b>Q3. What changes could we make that will lead to an improvement? (List your IDEAS)</b>	
By answering this question, you will generate a list of IDEAS for possible changes you could implement to assist with achieving your S.M.A.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

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)	
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 ( <i>if applicable</i> ); 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).



## Appendix 1

### LIVE SHINGLES VACCINE (Zostavax®) SCREENING FOR CONTRAINDICATIONS FORM

**Name:** .....

**Date of birth:** .....

**Questions** – This section can be completed by the health care provider/patient/guardian

**Note for patient/guardian:** If you are unsure about an answer, please leave it blank and discuss with your health care provider

1. Have you ever had a shingles vaccine before?  Yes  No

When:

2. Do you feel unwell today?  Yes  No

Details:

3. Have you had shingles or post herpetic neuralgia (nerve pain following shingles) in the past year?

Yes  No

Details:

4. Have you had a serious allergic reaction (anaphylaxis) to a previous dose of shingles or varicella (chickenpox) vaccine or any vaccine components including neomycin or gelatin?  Yes  No

Details:

5. Have you ever had cancer, leukaemia, lymphoma, an organ, bone marrow transplant, stem cell therapy, or another health condition that weakens your immune system, including blood disorders, graft versus host disease or HIV/AIDS?  Yes  No

Details:

6. In the past 12 months, have you been on any treatment for rheumatoid arthritis, multiple sclerosis, psoriasis, polymyositis, sarcoidosis, inflammatory bowel disease or other inflammatory conditions?

Yes  No

Details:

7. In the last 12 months have you taken medicine that weakens your immune system such as oral prednisolone, or other steroids, anti-cancer drugs, biological therapy, radiotherapy or chemotherapy?

Yes  No

Details:

8. Have you been treated recently with oral antiviral medication such as Aciclovir for conditions such as herpes?

Yes  No

9. Details:

**Outcome** – This section is to be completed by health care providers ONLY (check relevant boxes)

There are no contraindications to Zostavax vaccination. Discussion of side effects of vaccination has occurred and informed consent for vaccination obtained.

Zostavax is contraindicated.

Zostavax should be delayed - until recovery from acute illness

- until treatment is completed and for \_\_\_\_ months afterwards

- until current episode of shingles has resolved and for a minimum of one year.

Specialist advice regarding immune status is required. Not for vaccination at this time.

Date: \_\_\_\_\_

Provider: \_\_\_\_\_

## Notes for health care providers

### Shingles vaccine is a live attenuated vaccine

If there is any doubt to the person's suitability then do not vaccinate and seek further advice.

#### 1. Have you ever had a shingles vaccine before?

Currently in Australia, Zostavax® is recommended as a single dose only vaccine. It is provided free for people aged 70 years under the National Immunisation Program. There is also a five-year catch-up program for people aged 71-79 years until 31 October 2021. Revaccination with Zostavax® is not recommended for people who have received a shingles vaccination at this time.

#### 2. Do you feel unwell today?

Minor illnesses without fever or systemic upset are not valid reasons to postpone immunisation. Immunisation of individuals who are acutely unwell should be postponed until they have fully recovered. This is to avoid confusing the diagnosis of any acute illness by wrongly attributing any sign or symptoms to the adverse effects of the vaccine.

#### 3. Have you had shingles or post herpetic neuralgia (nerve pain following shingles) in the past year?

Zostavax® is not recommended for the treatment of shingles or post-herpetic neuralgia (PHN). Individuals with shingles or PHN should wait until symptoms have ceased before being considered for vaccination. If the individual has had shingles in the last year and they have a fully functioning immune system (i.e. the individual does not have any of the conditions listed below), vaccination should be delayed for one year. Patients who have two or more episodes of shingles in one year should be investigated for an underlying cause of immune suppression prior to vaccination. Investigations performed will depend on findings from history and examination.

#### 4. Have you had a serious allergic reaction (anaphylaxis) to a previous dose of shingles or varicella (chickenpox) vaccine or any vaccine components including neomycin or gelatin?

Anaphylaxis following vaccination is rare. The vaccine should not be given to an individual who has had a confirmed anaphylactic reaction to a previous dose of shingles or varicella vaccine or any of the vaccine components, including neomycin or gelatin.

#### 5. Have you ever had cancer, leukaemia, lymphoma, an organ or bone marrow transplant, stem cell therapy, or another health condition that weakens your immune system, including blood disorders, graft versus host disease or HIV/AIDS?

#### 6. In the past 12 months, have you been on any treatment for rheumatoid arthritis, multiple sclerosis, psoriasis, polymyositis, sarcoidosis, inflammatory bowel disease or other inflammatory conditions?

#### 7. In the last 12 months have you taken medicine that weakens your immune system such as oral prednisolone, or other steroids, anti-cancer drugs, biological therapy, radiotherapy or chemotherapy?

Zostavax® is a live vaccine. The decision to administer Zostavax® to immunosuppressed individuals should be based on a clinical risk assessment. If the individual is under specialist care, and it is not possible to obtain full information on that individual's treatment history, vaccination should not proceed until the advice of the specialist or a local immunologist/haematologist has been sought. If health care professionals administering the vaccine have concerns about the nature of therapies (including biologicals) or the degree of immunosuppression they should contact the relevant specialist for advice.

Immunocompromising conditions that would contraindicate Zostavax® include:

- primary or acquired immunodeficiency
  - haematologic neoplasms: leukaemia's, lymphomas, myelodysplastic syndromes (including: those who remain under follow up for chronic lymphoproliferative disorders; and individuals who are currently not receiving treatment or who have never received treatment)

- post-transplant: certain solid organs (on immunosuppressive therapy or who have used immunosuppressive therapy within last six months), haematopoietic stem cell transplant (within 24 months, or longer if immunosuppression or graft versus host disease is present) and only if in remission.
- immunocompromised due to primary or acquired (e.g. HIV/AIDS) immunodeficiency
- other significantly immunocompromising conditions.
- immunosuppressive therapy (current or recent)
  - chemotherapy or radiotherapy - within the last six months, even if for a condition other than cancer
  - corticosteroids (short-term high dose, long-term lower dose) – see below
  - all biologics and most disease-modifying anti-rheumatic drugs (DMARDs) – see below.

**Guide to safe doses of immunosuppressive therapy for Zostavax administration.**

Mechanism of action	Examples*	Safe dose**	Comments
Anti-TNF	Etanercept Infliximab Adalimumab	NONE	Vaccinate one month before treatment initiation <b>OR</b> 12 months after treatment cessation
IL-1 inhibition	Anakinra	NONE	Vaccinate one month before treatment initiation <b>OR</b> 12 months after treatment cessation
Costimulation blockade	Abatacept	NONE	Vaccinate one month before treatment initiation <b>OR</b> 12 months after treatment cessation
B-cell depletion/inhibition	Rituximab	NONE	Vaccinate one month before treatment initiation <b>OR</b> 12 months after treatment cessation
Immunomodulators (antimetabolites)	Azathioprine 6-Mercaptopurine Methotrexate	≤3.0 mg/kg/day ≤1.5 mg/kg/day ≤0.4 mg/kg/week	Vaccinate one month before treatment initiation <b>OR</b> three months after treatment cessation
Corticosteroids	Prednisone	Any dose when duration <14 days <b>OR</b> <20 mg/day when duration ≥14 days	If ≥20mg/day for ≥14 days, vaccinate One month before treatment initiation <b>OR</b> One month after treatment cessation

Mechanism of action	Examples*	Safe dose**	Comments
T-cell activation/inhibition	Tacrolimus Cyclosporine	NONE	Vaccinate one month before treatment initiation <b>OR</b> three months after treatment cessation
Others	Cyclophosphamide Mycophenolate	NONE	Vaccinate one month before treatment initiation <b>OR</b> 12 months after treatment cessation

\* **NOTE:** This is not a complete list of all licensed biologics, or medications within each class, but serves as a guide only.

\*\* Refer to The Australian Immunisation Handbook 10th edition, Chapters 3.3.3 and 4.24.

Individuals on long term stable low dose corticosteroid therapy (defined as  $\leq 20\text{mg}$  prednisone per day for  $\geq 14$  days) either alone or in combination with low dose non-biological oral immune modulating drugs (e.g. methotrexate  $\leq 0.4\text{ mg/kg/week}$ , azathioprine  $\leq 3.0\text{mg/kg/day}$  or 6-mercaptopurine  $\leq 1.5\text{mg/kg/day}$ ) can receive the vaccine. Specialist advice should be sought for other treatment regimes. Zostavax<sup>®</sup> is not contraindicated for use in individuals who are receiving topical/inhaled corticosteroids or corticosteroid replacement therapy.

**8. Have you been treated recently with oral antiviral medication such as Aciclovir for conditions such as herpes?**

Zostavax<sup>®</sup> may have a lower effectiveness if given while an individual is being treated with oral or intravenous antivirals (such as Aciclovir) or within 48 hours of such treatment. Delay vaccination until after this time. The use of topical Aciclovir is not a contraindication to vaccination.

**Adapted from:**

- [Health Protection Scotland](#)
- *Zostavax and individuals who are immunocompromised* at [Immunise Australia Program website](#)
- National Centre for Immunisation Research and Surveillance fact sheets: [Zoster Vaccine - Frequently asked questions: Information for immunisation providers](#), and [Herpes Zoster - Zoster vaccine for Australian Adults: Information for Immunisation Providers](#).

