



**Choosing Wisely
Australia**

An initiative of NPS MedicineWise

INNOVATION FUND PROJECT



**BETTER
CARE
VICTORIA**

Choosing Wisely Implementation Toolkit **Evaluation**



**NPS
MEDICINEWISE**



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EVALUATION

Peninsula Health – What they did



Clearly the aim of the Choosing Wisely Australia initiative as a whole is to reduce unnecessary tests and treatments.

So it would be reasonable that the baseline data for a Choosing Wisely project would be selected to enable measurement of a reduction in the percentage of patients receiving a particular test or treatment.

However, there is an alternative approach that was adopted by Peninsula Health.

Measuring the desired behaviour

“Our baseline data was selected to measure improvement in the behaviour we wanted them to do,” says Carla van Waart, the Choosing Wisely project officer.

“The project’s goal was to understand what influenced doctors ordering behaviour and then...select interventions that were specifically constructed to change that behaviour,” says Ms van Waart.

“Once we decided that guidelines were required to change ordering behaviour we checked our current ordering against the RANZCR [Royal Australian and New Zealand College of Radiologists] guidelines including whether the right modality was ordered for the presentation,” she says.

From this it was found that CT and x-ray were often used when MRI was the modality of choice for the clinical question.

“Ultimately this approach aims to achieve less ordering of unnecessary imaging in ED. By really understanding what influences a doctor ordering behaviour and using best practice in designing behaviour change interventions...we are able to better develop interventions that that will become sustainable change in behaviour,” says Ms van Waart.

What is evaluation?

Evaluation is defined as activities that measure and analyse information that has been gathered about the clinical problem that your Choosing Wisely project is tackling.

These activities may be divided into two categories of information gathering:

1. Qualitative; such as a survey that asks why and when a test or treatment is performed.
2. Quantitative; such as a data extract that shows how often a test or treatment is being performed.

The population being evaluated can include:

- 👤 clinicians; individual, team, unit (department), hospital or health service
- 👤 patients/consumers.

Clinical problem

Clinical problem is defined throughout this toolkit as the test or treatment that's being performed unnecessarily in your health service.



Evaluation and Design

Evaluation and Design are two separate chapters, but they overlap significantly.

They both use methods to measure and analyse. The main difference is that:

- 👤 Evaluation occurs in all three stages of a project; set up, deliver and sustain.

It has two key purposes, which are to:

1. assist with the design to identify the causes of the clinical problem to help determine which interventions (eg education, audit feedback etc.) will be implemented
2. assess the progress and measure success of a project.

- 👤 Design only occurs during the set up stage of a project.

Its purpose is to help plan and determine which interventions (eg education, audit feedback etc.) will be implemented.

Why is evaluation important?

Evaluation serves two key purposes:

Assist with design

Evaluation helps to identify the causes of the clinical problem.

Once these causes have been identified, interventions (eg education, audit feedback etc.) that are most likely to achieve success for your project are matched to these causes.

For more details on selecting interventions, see the Design chapter.

Assess progress and success

Like a research study, evaluation of your project starts with collecting baseline information.

This is used for making comparisons with information collected during and at the end of the delivery stage.

This enables you to see whether your project's interventions for the clinical problem are working in terms of:

- 👉 effectiveness
- 👉 efficiency
- 👉 appropriateness.

Furthermore, evaluation enables you to make informed decisions as to whether to:

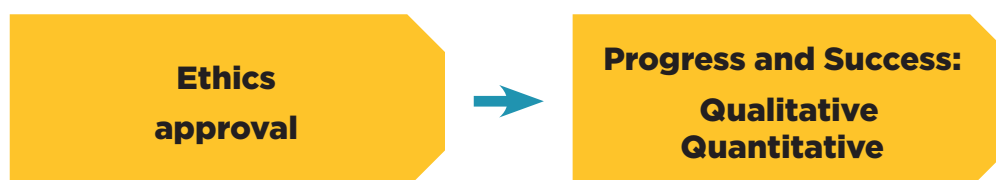
- 👉 continue the interventions
- 👉 scale the interventions up/down
- 👉 re-design the project using different interventions.

When to evaluate?



- 🟡 It's recommended that evaluation be done in all three stages of a project.
- 🟡 During the set up stage it:
 - ▷ Assists with the design to identify the causes of the clinical problem to help determine which interventions (eg education, audit feedback etc.) will be implemented.
 - ▷ Provides a baseline to measure and analyse progress and success.
- 🟡 During the deliver stage, it measures and analyses progress.
- 🟡 At the end of the deliver stage when the interventions have finished, it measures and analyses success of the project.
- 🟡 During the sustain stage it continues to measure and analyse ongoing performance, though with less intensity as during the project.

What to do



Ethics approval

The first thing you need to do is check if your project needs ethics approval.

Not every health service requires ethics approval. Also, Choosing Wisely projects tend to be assessed as low risk and hence not require it.

But if your health service does require ethics approval, it can take some time to receive it.

So it's best to get going as soon as possible. Usually this involves:

- 🟡 Meeting with the ethics officer at your health service to find out the requirements.
- 🟡 Getting help from someone who has received ethics approval before for either a research study or quality improvement project, such as from your steering committee or in your health service unit.

Design

For what to do for gathering qualitative and quantitative information during the set up stage, see the Design chapter.





Progress and Success

The activities that are required for robust evaluation may be divided into two categories; 1) qualitative and 2) quantitative. More often than not, a mixed methods approach that uses both qualitative and quantitative methods is best.

Qualitative

Qualitative information usually involves gathering non-numerical, textual data about the experiences, behaviour, perceptions, thoughts and feelings of individuals and groups of people you are trying to influence.

The recommended methods for gathering qualitative information are:

-  surveys
-  interviews
-  process mapping
-  observation
-  co-design.



Read the following for a description of the above methods:

-  [*Choosing Wisely Collaboration Implementation Toolkit Workshop 1*](#)

Methods for testing your questions – Page 19

Assessing progress and success may involve repeating the methods you conducted for the design of your project during the set up stage to collect baseline information, and comparing the changes achieved during and at the end of the deliver stage. Methods can also be employed independently of what was done for design during the set up stage. For example, a survey may be conducted just at the end of an education workshop.

Quantitative

Quantitative information explores patterns, trends and impacts through gathering numerical data. It is usually made up of data extracts from the health service medical records and test ordering systems.

Similar to qualitative methods, it may involve repeating the methods you conducted for the design of your project.

The purpose is to measure and analyse clinical activities, in particular through collecting baseline data and by making numerical comparisons and statistical inferences. For example, measuring the average number of tests performed in one month can be

the baseline data. This can be compared to the same month in the following year to measure progress and success.

The following are key tips for how to conduct numerical data extracts:

- 🟡 Have access to a health service data analyst (either through meetings or have that person be a member of one of your project groups) as early as possible.
- 🟡 Conduct a trial data extract first to identify any glitches or problems that need solving before collecting baseline information.
- 🟡 Data extracts may be used for the audit and feedback intervention, to let clinicians know how they're performing compared to colleagues or best practice.
- 🟡 Time series analysis, which involves conducting more than two snapshot measures, is the gold standard for collecting information about progress and success.
- 🟡 Population being measured and analysed needs to be truly representative of the population affected by the clinical problem.



Read the following for more detailed information:

- 🟡 [*Choosing Wisely Collaboration Implementation Toolkit Workshop 2*](#)

Data collection and measurement strategies – Pages 18–23

- 🟡 [*Program evaluation workshop; by Dr Tash Brusco for Better Care Victoria*](#)

An evaluation needs to answer a question – Pages 12–16

How to structure the key evaluation question – Page 17–18

Sustain

During the sustain stage, evaluation at a lower intensity (ie less formal or less often) can enable your health service quality improvement unit and clinicians to know what is happening with outcomes.

This may involve, for example:

- 🟡 eMRs using a data dashboard
- 🟡 ongoing monitoring, audit and feedback
- 🟡 consumer feedback through standard mechanisms
- 🟡 clinician feedback through clinical meetings
- 🟡 ensuring the outcomes are being reported through internal governance mechanisms.

Albury-Wodonga Health – What they did



The Albury-Wodonga Health (AWH) Choosing Wisely project was conducted in the Emergency Departments (EDs) at both Albury and Wodonga Hospitals.

The project objective was to reduce the number of chest x-rays undertaken in children aged 0-16 years in the ED with a diagnosis of bronchiolitis or asthma.

Data challenges

Project manager, Jennie Fisher, says “preliminary data validation was required to ensure consistent sample parameters between code sets in two separate state-based Emergency Department Information Systems.” The International Classification of Diseases (ICD) Code set for Albury Emergency Department (ED) is ICD 9 and Wodonga ED is ICD 10.

“The two code sets were extensively reviewed by a health information manager, emergency physician and paediatrician to determine which codes would be utilised,” says Ms Fisher.

A cross check between the medical record documentation and the diagnosis codes was performed to ensure a consistent sample.

Another challenge faced by the project was due to it “being conducted from June 2018 to June 2019, we weren’t able to have a baseline and post intervention data period in the winter months when the numbers of presentations of children presenting with bronchiolitis and asthma are known to be higher,” says Ms Fisher.

“The project steering committee has acknowledged that while the data is not 100% accurate primarily due to information system challenges, it is as accurate as could be expected in this emergency department setting,” she says.

Evaluation

The ED data has been reviewed weekly by the project clinical lead and project manager. The project has achieved a reduction during a 3-month post intervention data period from 12.4% to 1.4% of children aged 0-16 in ED with a diagnosis of asthma or bronchiolitis having a chest x-ray.

Interventions used to achieve this reduction have included education for clinical staff, provision of information in the patient file at triage including the AWH Bronchiolitis Clinical Pathway and the requirement that if an ED medical officer is considering ordering a chest x-ray on a child with bronchiolitis or asthma then they need to consult with the senior medical officer on duty prior to ordering the x-ray, says Ms Fisher.

“Collectively these interventions have been effective, however we do not have specific measures around the success of individual interventions,” she says.

Tools and Resources

Templates

- 📌 Evaluation graphs over time/Time series analysis

[Institute for Healthcare Improvement \(IHI\) – QI Essentials Toolkit](#)

(free access after you register)

Run Chart & Control Chart; Pages 43–46

Examples

- 📌 [Project report including evaluation of arterial blood gases \(ABGs\) testing](#); developed by St Vincent's Hospital see '2. Current state' section.

Further information

- 📌 Evaluation basics

[Program evaluation workshop; by Dr Tash Brusco for Better Care Victoria](#);

Pages 1–28

- 📌 Evaluation basics and templates

[Evaluation Toolkit for Breastfeeding Programs and Projects](#); developed by Government of Australia, Department of Health