

An initiative of NPS MedicineWise



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Acknowledgments

Royal Perth Bentley Group Austin Health

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Choosing Wisely Australia

Choosing Wisely Australia® is part of a global initiative. What began in the United States in 2012 with nine medical societies is now an international movement, with more than 20 countries around the world involved. It enables clinicians, consumers and healthcare stakeholders to start important conversations about tests, treatments and procedures where evidence shows they provide no benefit, or in some cases, lead to harm.

Facilitated by NPS MedicineWise, Choosing Wisely Australia challenges the way we think about healthcare, questioning the notion 'more is always better'. The initiative was launched in 2015 with just 6 health professional colleges publishing 26 recommendations. It is now a network of over 100 health organisations comprising Champion Health Services, specialist colleges and consumer organisations. There are now over 200 recommendations and a range of implementation activities to put the recommendations into practice.

Health services are leading the implementation of Choosing Wisely Australia through clinician-led initiatives and playing a key role in delivering quality evidence-based care for the benefit of all Australians.

Choosing Wisely core principles



health profession-led



clear emphasis on improving quality of care and on harm prevention



multidisciplinary



consumer-focused communication between health professionals and consumers



evidence-based



transparency in process and supporting evidence

Toolkit objectives

This toolkit has been specifically developed to help Junior Medical Officers (JMOs) and students with implementing projects aligned with Choosing Wisely principles. It contains support material to help guide each stage of a Choosing Wisely project. Additionally, this toolkit is an excellent resource to embed into existing orientation programs for new team members as it provides an essential introduction to Choosing Wisely and how they can be involved in the initiative at your health service.

Objectives

- Provide essential steps to JMOs/students to undertake a quality improvement project aligned with Choosing Wisely principles in their own individual setting.
- Support Champion Health Services to enable implementation of Choosing Wisely projects by providing a useful resource for JMOs/students.
- Motivate JMOs/students to undertake Choosing Wisely projects by showcasing their project findings to a national audience of like-minded individuals.

Resource stewardship

Resource stewardship is the appropriate and responsible use of resources to achieve high-value, effective care. There are three types of quality and safety problems related to stewardship: underuse, misuse and overuse. Terms and concepts that are synonymous with overuse include over diagnosis; over testing; overtreatment; low-value care. Reducing resource wastage associated with low-value care will allow redirection of resources towards high-value and effective care.

The role of health professionals in stewardship

Health professionals play a number of different roles in stewardship:

- Reduce wasteful expenditure in healthcare.
- Maximise quality of care and protect patients from harm while ensuring affordable care in the future.
- Doctors must balance their obligation to minimise wastage of resources with their primary obligation to care for, and protect the healthcare interests of, the individual patient.
- Reduce diagnostic error, unnecessary or inappropriate tests, treatments and procedures.
- Ensure the care they provide to patients is evidence based.

Influences on test ordering and prescribing

There are five influences on test ordering and prescribing including: clinician, patient, clinical, systems and test/treatment.

Clinician factors

- Knowledge and experience
- Tolerance of uncertainty
- Confidence
- Fear of litigation

Patient factors

- Past experiences
- Patient expectations real or perceived
- Patient health/medical literacy

Clinical factors

- Disease presentation (acute vs chronic)
- Clinical training (ie specialist or generalist)
- Understanding of choices available to patient

System factors

- Time pressure
- Clinical information resources
- Access to previous investigations
- Billing practice (private, WorkCover)

Test and treatment factors

- Sensitivity and specificity See Appendix for a more technical explanation.
- Pre-test probability proportion of patients with target disorder in the population at risk at a specific time point or time interval. Prevalence may depend on how a disorder is diagnosed.
- Efficacy an effective treatments' worth depends on its cost to individuals or society. The most efficacious treatment, based on the best evidence, may not be the most cost-effective option.
- Cost financial (full/gap fees), time (getting off work, childcare etc.), opportunity (what else could you do), and emotional stress.





Consequences of low-value care

Consequences of unnecessary and inappropriate use of healthcare resources could be categorised into health care costs, doctor and patient impact.

Healthcare costs

- **Direct costs** For example, a 2019 study found that the cost of low-value care for 27 procedures (including endoscopy in adults < 55 years, percutaneous coronary intervention, spinal fusion) was up to \$99 million in 2016–17 in NSW public health hospitals alone.
- Opportunity costs Performing an unnecessary test on someone reduces that person's chance of doing work or personal activity. It may also mean that someone else who might need medical care may experience a delay. Similarly, a health professional spends time on providing unnecessary care instead of providing evidence-based care.

Doctor

Test interpretation - Time taken by the doctor to review and chase up false positives.

Patient

- Financial Monetary costs, including direct medical (treatment expenses), direct non-medical (non-medical expenses incurred while obtaining treatment), and indirect (loss of productivity) costs.
- "Incidentaloma" Something unexpected that shows up when a medical test is performed.
- Anxiety over results that may not be clinically significant.
- Overdiagnosis and overtreatment Where people without symptoms are diagnosed with a disease that ultimately will not cause them to experience symptoms or early death.
- Harm and adverse events Direct harm of tests such as radiation from CT scans or unnecessary interventions.

Key steps to patient conversation

The Choosing Wisely Australia initiative is helping the healthcare community and consumers to start important conversations about unnecessary and sometimes harmful tests, treatments and procedures. The following section will provide information on how to support consumers to make informed decisions in partnership with their healthcare professionals.

- Elicit patient and/or their families' concerns
 - Incorporate the patient's values "What is most important when it comes to your health?"

- Include your patient in the decision-making process "Which option seems like the best fit for you?"
- Elicit your patient's concerns "What are you most concerned about today?"
- Demonstrate empathy and acknowledge patient/family concerns
- Engage in shared decision-making
 - Discuss risks and benefits
 - Provide reassurance using health information/decision aids. For example see <u>www.safetyandquality.gov.au/our-work/partnering-consumers/shared-decision-making/decision-support-tools-consumers</u>
 - Reinforce key points with written information
- Provide clear recommendation(s)
 - Incorporating health information and patient preferences
- Agree on a plan of action and document
 - Have an action plan for the future that the patient agrees with.

Choosing Wisely 5 questions is a useful resource for patients to ask their doctor or other healthcare provider to make sure they end up with the right amount of care — not too much and not too little.



Do I really need this test, treatment or procedure?

Tests may help you and your doctor or other healthcare provider determine the problem. Treatments, such as medicines, and procedures may help to treat it.



What are the risks?

Will there be side effects to the test or treatment? What are the chances of getting results that aren't accurate? Could that lead to more testing, additional treatments or another procedure?



Are there simpler, safer options?

Are there alternative options to treatment that could work? Lifestyle changes, such as eating healthier foods or exercising more, can be safe and effective options.



What happens if I don't do anything?

Ask if your condition might get worse — or better — if you don't have the test, treatment or procedure right away.



What are the costs?

Costs can be financial, emotional or a cost of your time. Where there is a cost to the community, is the cost reasonable or is there a cheaper alternative?

Click here to access the 5 Questions in 22 different languages.

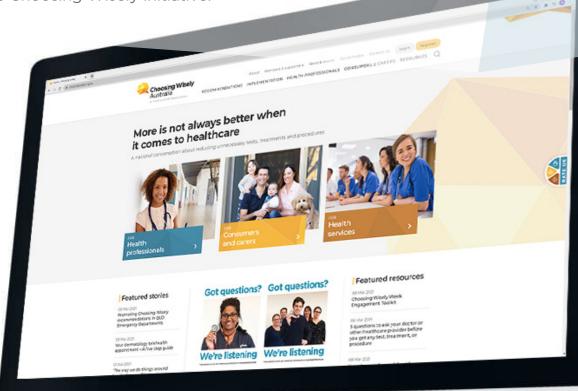


Why consider a Choosing Wisely project?

Benefits of undertaking a Choosing Wisely project

- Opportunity to be involved with an internationally recognised initiative that brings together like-minded clinicians who are actively looking to reduce low-value care.
- Play a key role in making a concerted contribution to reducing unnecessary care and improving healthcare outcomes in your health service.
- Opportunity to showcase the findings of the project to a national audience of champion health services and clinicians at monthly Choosing Wisely webinars and/ or publication on the Choosing Wisely website and annual report.
- Opportunity to present the findings at the annual Choosing Wisely Australia National Meeting.
- Opportunity to share your Choosing Wisely project findings during grand rounds at your local health service.
- Acknowledgment by peers by being nominated for National Choices Awards.
- Ability to promote local activities as part of the Choosing Wisely project.

Your project can motivate and encourage other people to become involved in the Choosing Wisely initiative.





Guide to completing a Choosing Wisely project

Resource stewardship and quality improvement are growing domains of research and many JMOs now choose to undertake projects in these fields. This section provides information on how to conduct a Choosing Wisely project. A Choosing Wisely project allows you to question daily practices and challenge if "what we have always done" is based on evidence and delivers high-value care to patients.

Project initiation

Before initiating a project, ask yourself the following questions:

- Ooes the project "fit"? That is, does it align with one of the following:
 - Six Choosing Wisely Australia principles
 - A Choosing Wisely area of interest in your setting eg, pathology, imaging etc.
- Is there a clinical audit area of interest to you?
 - An audit project aims to assess, evaluate and improve the quality of healthcare through the systematic review of practice.
 - A specific component of practice to be reviewed is identified and local performance is assessed against specific criteria in relation to the gold standard. This assessment will identify substandard areas and specific recommendations should be made to implement improvements, based on a succinct review of the literature.
 - The audit should then be repeated to assess the success of the interventions. If this is not possible due to time constraints, then a plan for implementing, measuring and sustaining improvements should be generated.
- Choosing Wisely projects often are a combination of clinical audit methodology and clinical service redesign.

Eastern Health No Unnecessary Tests (NUTS) program engages young doctors to help drive change. https://youtu.be/wld97nlegP4

Project supervision

You will need a consultant/supervisor to formally supervise your project/audit. Ensure that you let them know about your project prior to starting it. If your health service is a Choosing Wisely champion health service - make sure the team leading that work is aware of your project. They may be able to give you some tips.

Evidence gathering

<u>For Choosing Wisely recommendations</u> – Australia's peak colleges, societies and associations have developed lists of recommendations of the tests, treatments, and procedures that healthcare providers and consumers should question. Each recommendation is based on the best available evidence. See Appendix for a flowchart from Austin Health on how to prioritise a recommendation which can be a focus of a project.

Projects do not have to be based on a specific Choosing Wisely recommendation, as long as they align with a Choosing Wisely principle and are evidence based.

Standards

Once you have your idea, check for any standards that are already published – ask the senior staff member or the head of department, check the Choosing Wisely website and the internet (college-specific sites).

- Check for evidence around your idea. Do your own literature search through the medical school/hospital library site or submit a request for a literature search to the librarians.
- If you download any articles, do so in PDF format in the first instance this will save you time in the long run when trying to identify exact pages/sources.
- Develop audit criteria that will measure performance against the agreed standard.
 - You will need to discuss this with your supervisor.

Scope

"Don't bite off more than you can chew"

- The size of the project/audit will be dependent on the topic and nature of the audit undertaken.
- e It is worth checking whether this topic has already been audited at your setting.

Pathway

- If your project idea is to improve a patient pathway, start by considering what the current pathway/process looks like.
- We suggest contacting the Choosing Wisely Support Team/Choosing Wisely Champion/Choosing Wisely Representative in your hospital for help with defining and measuring elements of a clinical pathway.

What is DMAIC?

Define, Measure, Analyse, Improve, and Control (DMAIC) are five steps representing an iterative improvement cycle that is meant to be repeated frequently to enhance clinical practices. The process discourages teams from jumping over important steps and reaching a premature conclusion.

Define

- The process starts with defining the scope of the intended improvements akin to inclusion and exclusion criteria, what work is in or out of scope.
- Identifying stakeholders, from those that are crucial to project success, to those individuals/teams that just need to be kept in the loop.
- In this stage you work out what the current state is and your intended area(s) of improvement.

Measure

- The key to DMAIC is data! It is the evidence base through which conversations can start.
- You need to collect baseline measurements to figure out what the current state is, and then to work out, post-improvement, what measurable changes can be seen.
- This is the data collection stage.
- This is often done using a process mapping session with all your key stakeholders.

Analyse

- Post data collection, a root-cause analysis is performed to determine the underlying reason(s) for the problem.
- Often, we jump to conclusions on what the root causes are, but often these perceived root causes are actually symptoms of a different underlying root cause.
- There are multiple analysis tools such as the 5 whys or affinity maps that can be used.

Improve

- This is the chance to implement solutions, but only solutions that address your root causes.
- A hierarchy of solution development is needed to determine the impact of the solution(s) and if it will be sustainable.
- Any risks associated with the improvement should be identified and communicated, along with the steps taken to mitigate those risks.
- The improve phase should be rolled out with strategies on how you will measure the effects of the changes implemented.

Control

- Verify measurable improvement and determine if the implemented improvements have achieved the project goals.
- Control is the most essential segment of the improvement cycle, as it often spawns other project areas to look at based on re-analysis of your data.
- eq It's a chance to share with others any "lessons learnt" during the process too.

Project execution

Collecting and analysing data

This is a key phase, as clinical engagement requires discussion surrounding validated data. Consider how you will collect your data, manually or electronically.

Electronic data collection

- Extract/download data from existing electronic databases.
- Consider the following, when looking for data to measure:
 - Does your data "live" within a dashboard?
 - Are there elements of coded data, for example: diagnosis, procedure codes, length of stay, discharge destinations or hospital-acquired complications?
 - Is data already measured by an electronic system, for example: theatre related (start times, procedures, surgical urgency categories), radiology tests or pathology tests?

IF the answer is yes to any of the above, the business operations can help you with getting the data.

Manual data collection

This is always more time-consuming than obtaining electronic data directly. The key is to realise that you need to turn manual data into electronic data, so it is worth investing time in creating an electronic data collection too.

- Consider using Microsoft Excel to develop a simple data collection tool that can be easily analysed.
- If you have created your own data collection tool, think about putting it directly into an electronic database/spreadsheet.
- Use web-based surveys such as Survey Monkey you will need to use a paid plan to export your results to Excel if required.
- Formulate a written survey and input data into a spreadsheet later.

Data analysis

- Try to keep this simple.
- Consider presenting in graph form if appropriate.
- Contact the Choosing Wisely Support Team/Choosing Wisely Champion/Choosing Wisely Representative in your hospital if you require further assistance with data analysis, or meet with your statistician for support in conducting your analysis.

Presenting data

- Remember to label all axes and give a descriptive title.
- Remember to provide the data source and date ranges of data collected.
- Line graphs: Consider adjusting the scale to make trends easier to see.
- Bar graphs: Change direction of bars to accommodate long label names (change column to bar graphs).
- Pie charts: If using proportional data, remember to still quote (n).
- When individual data matters, leave things in tables or consider conditional formatting to highlight data trends within tables.

It is recommended that you discuss the results and analysis of your data with your clinical supervisor and other team members who have helped with your project. After they have had a chance to review your analysis, we suggest initially, presenting it locally at departmental meetings.

The 'Project on a page' document provides a consistent way of presenting project status, which can be used by all personnel involved in a project. Additionally, it can be used to share with your health service and wider network. See Appendix for a prototype.

Develop recommendations

To achieve success in your project, define your recommendations within a "SMART" framework:

- Specific. Goals that are too vague and general are hard to achieve, for example 'be a better clinician'. Goals that work include specifics such as 'who, where, when, why and what'.
- Measurable. Ideally, goals should include a quantity of 'how much' or 'how many', for example 'drinking 2 litres of water per day'. This makes it easy to know when the goal has been reached.
- Achievable. Goals should be challenging, but achievable. Goals work best when they are neither too easy, nor too difficult. In many cases setting harder goals can lead to better outcomes, but only if there is an ability to achieve them. Setting goals which are too difficult can be discouraging and lead to an unsuccessful project.
- Relevant. The goal should seem important and beneficial to everyone implicated in the goal.
- **Time-related**. 'You don't need more time; you just need a deadline.' Deadlines can motivate efforts and prioritise the task above other distractions.

Sustainability

Prior to writing your report, think about how you will measure how the recommendations have changed clinical practice. How will the project be sustainable as it becomes the new way of doing things? What data will you measure?

- Metrics must be directly linked to your aim.
- Metrics or key performance indicators must also follow the SMART principles.
- Try and ensure that the data collected can be electronically monitored.
- Formal reviews should be scheduled at specified intervals after implementation of recommendations.

Writing your report

The following are suggested headings for Choosing Wisely project reporting:

- Introduction: discussion of the literature and placement of the study in context.
- Aims: be clear as this sets the scene for the rest of the project.
- Methodological approach: sufficient detail to allow the study to be replicated.
- Statistical analysis: quantitative or qualitative analysis for the study (if relevant).
- **Results** of the study
 - Import graphs and charts from Microsoft Excel pivot tables to illustrate the results.
- Discussion
 - Interpretation of results and findings
 - Results in context of the available literature
 - Limitations of the study
- Conclusion
- References: cite the evidence already collated and acknowledge other members of the team who have helped.

The Appendix provides links to implementation resources (Australian and international), clinical resources and recommended readings.

Featured stories

Our members, and supporters' network is comprised of health professional colleges, societies and associations, champion health services and consumer organisations. These featured stories showcase how Choosing Wisely principles are implemented by our members and supporters to improve the safety and quality of healthcare for Australians.

Choosing Preoperative Pathology Wisely

An audit at the Sunshine Coast University Hospital found that 41% of all preoperative pathology tests ordered before elective surgery were unnecessary. A Choosing Wisely program introduced at the hospital to address this issue has seen significant improvements.

www.choosingwisely.org.au/featured-stories/choosing-pre-operative-pathology-wisely

Choosing Blood Cultures Wisely

The Sir Charles Gairdner Hospital in Perth looked at its use of blood cultures and developed guidelines for their staff, applying the Choosing Wisely principle of ensuring the right amount of care – not too much and not too little – to blood cultures.

www.choosingwisely.org.au/featured-stories/choosing-blood-cultures-wisely

Supporting JMOs to Choose Blood Tests Wisely

As part of their Choosing Wisely work, Shellharbour Hospital has introduced an education program to support JMOs to choose blood tests wisely.

www.choosingwisely.org.au/featured-stories/shellharbour-hospital-supporting-jmos-to-choose-blood-tests-wisely

Improving opioid prescribing

The Sunshine Coast Hospital and Health Service has applied a Choosing Wisely approach in the Emergency Department to address the problem of unintentional deaths due to opioids.

www.choosingwisely.org.au/featured-stories/a-choosing-wisely-approach-to-growing-opioid-prescribing

Reducing unnecessary IV cannulas

A nurse- and medical-led quality project at the Sunshine Coast University Hospital Emergency Department to reduce antecubital fossa-inserted cannulas is delivering big benefits for patients.

www.choosingwisely.org.au/featured-stories/reducing-risks-for-patients-with-intravenous-cannulas-at-sunshine-coast-university-hospital

Appendix: Key concepts in interpreting studies

Sensitivity and specificity of tests

Sensitivity

Sensitivity is defined as the proportion of people with a disease who have a positive test.

- A test that is very sensitive will rarely miss people with the disease (ie, it is useful to rule out differentials as there are few false negatives).
- It is important to choose a sensitive test if there are serious consequences of missing the disease.

Specificity

The specificity of a test is the proportion of people without the disease who have a negative test.

- A specific test will have few false-positive results it will rarely misclassify people without the disease as having the disease (ie, it is useful to rule in differentials as there are few false positives).
- If a test is not specific, it may be necessary to order additional tests to rule in a diagnosis.

Remember:

- Sensitivity = used to rule out
- Specificity = used to rule in

Predictive value of tests

Predictive values enable the clinician to estimate the probability of disease given the test result.

Positive predictive value

Positive predictive value (PPV) is the proportion of people with a positive test who truly have the disease.

True positive results/all positive results.

Negative predictive value

Negative predictive value (NPV) is the proportion of people with a negative test who do not have the disease.



True negative results/all negative results.

One important clinical issue is that the predictive values of a test vary with the underlying prevalence of the disease in the target population.

Importantly, clinical judgment and examination increase the prevalence of disease.

In a simple example, if we targeted middle-aged males who smoked and were hypertensive, then the yield from an exercise electrocardiogram would be much higher.

The same principle should be applied for all investigations.

Quality use of medical tests is a core skill for healthcare professionals, as not all tests add value. Develop your skills with the online course on medical tests developed by NPS MedicineWise.

The number needed to treat

The number needed to treat (NNT) is the number of patients you need to treat to prevent one additional bad outcome (death, stroke, etc.).

For example, if a medicine has an NNT of 5, it means you have to treat 5 people with the medicine to prevent one additional bad outcome.

Calculation

To calculate the NNT, you need to know the absolute risk reduction (ARR); the NNT is the inverse of the ARR:

Where, the ARR = absolute risk in the control group — absolute risk in experimental group.

Example

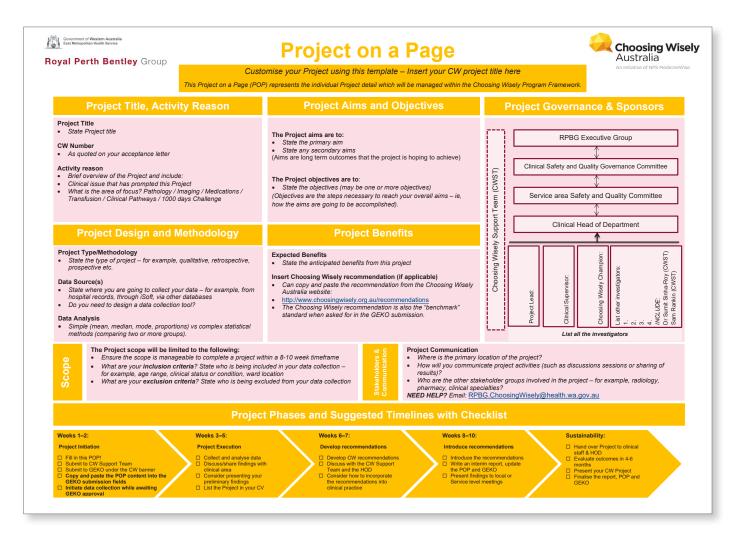
For example, if a medicine reduces the risk of a bad outcome from 50% to 30%, the ARR is:

$$ARR = 0.5 - 0.3 = 0.2$$

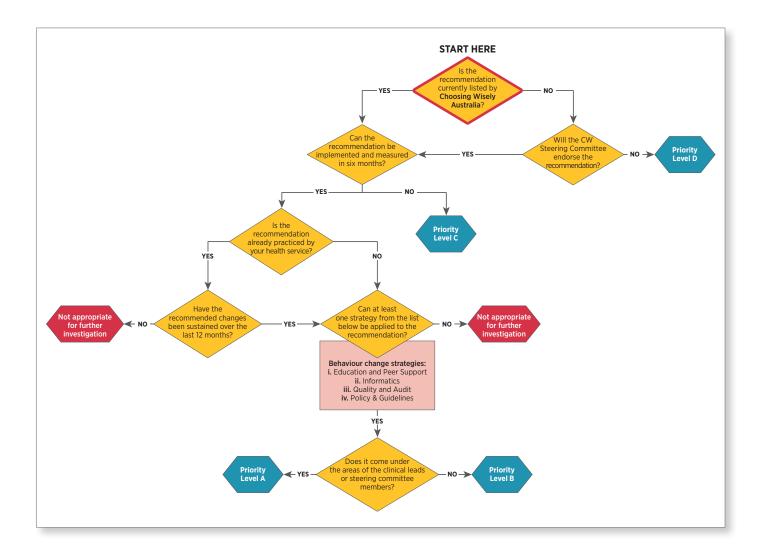
Therefore NNT =
$$1/0.2 = 5$$

Appendix: Project on a page

The 'Project on a Page' document has a dual use, providing an accessible summary of objectives and status to the project team, while also forming a simple, high-level project status report. Below is a prototype developed by Royal Perth Bentley Group.



Appendix: Identification of areas of prioritisation



Appendix: Implementation resources

Choosing Wisely Australia resources

- <u>Health Resource Stewardship Toolkit for Clinical Educators</u>
 Contains educational material about the Choosing Wisely initiative for use in universities, hospitals and health professional colleges.
- <u>Hospital implementation toolkit</u>
 Provides guidance on planning and carrying out an effective Choosing Wisely program.
- Choosing Wisely Week Engagement Toolkit
 Assist members and supporters, particularly Champion Health Services, to promote local projects.
- Slide deck for Choosing Wisely Australia
 A slide deck for Choosing Wisely Australia advocates who are presenting on the initiative at meetings or events.

International Choosing Wisely resources

CanMEDS

- Foundations toolkit
 - Provides student/trainees with a foundational knowledge of resource stewardship principles and the ability to recognise opportunities in daily practice to apply resource stewardship concepts through clinical care, teaching and assessment.
- Communication toolkit
 Provides a framework that student/trainees can use to communicate with patients and families that request a medically unnecessary test/treatment.
- *Choosing Wisely talks* Back to School Students & Trainees Choosing Wisely.
- <u>Project Green Healthcare</u> The module enables learning about the environmental impact of healthcare, and how to promote environmental sustainability.

Choosing Wisely NZ

How to write up your Choosing Wisely project?
A brief guide to effectively record your successful implementation of a Choosing Wisely recommendation.

Appendix: Readings

- Six Things Medical Students and Trainees Should Question recommendations that target behaviours medical students should question during their training. Choosing Wisely Canada
- Five Things Medical Residents and Patients Should Question Resident Doctors of Canada (RDoC) established its Choosing Wisely Canada Top 5 recommendations.
- <u>Empowering Learners to Choose Wisely</u> Medical students' reflection on Choosing Wisely. Canadian Family Physician.
- <u>Tests, treatments and procedures medical students and trainee interns should</u> <u>question</u> - created by the New Zealand Medical Students' Association (NZMSA).
- <u>Choosing Wisely: rational test ordering</u> how to reduce unnecessary test ordering and clinical decision-making in healthcare.
- Training future healthcare sustainability leaders: Lessons learned from a Canadian-wide medical student community of practice community of practice of seven Canadian medical student teams leading sustainability-oriented projects in their local healthcare systems and medical schools.

Appendix: Clinical resources

Diagnosis

- Royal College of Pathologists of Australasia (RCPA) Manual
- Pathology Tests Explained
- Diagnostic Imaging Pathways (WA)
- HealthPathways
- Common Sense Pathology <u>www.rcpa.edu.au/Publications/</u> CommonSensePathology.htm
- NPS MedicineWise CPD for health professionals www.nps.org.au/cpd

Treatment

- Australian Medicines Handbook
- Therapeutic Guidelines
- HealthPathways
- Cochrane Reviews
- RACGP Handbook of Non-Drug Interventions (HANDI)

NPS MedicineWise

- National Prescribing Curriculum for students
- Case studies
- Educational visits
- Online course Medical tests
- Online course Medico-legal risks and low-value care



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