

Introduction to

Health Economics

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NSW Regional
Health Partners



NSW Regional Health Partners

Email: HNELHD-NSWRegionalHealthPartners@health.nsw.gov.au

Location: Wisteria Lodge, James Fletcher Hospital, Newcastle NSW 2300

nswregionalhealthpartners.org.au

Authors

Olivia Wynne ^{1,2}

Anthea Bill ¹

Lisa McFayden ^{1,2,3}

Penny Reeves ^{1,2}

Victoria McCreanor ^{1,2}

1. Hunter Medical Research Institute, Lot 1, Kookaburra Circuit, New Lambton Heights, NSW, 2305, Australia

2. College of Health, Medicine and Wellbeing, University of Newcastle, University Drive, Callaghan, NSW, 2308, Australia.

3. NSW Regional Health Partners.

Corresponding author: Olivia Wynne

Email: Olivia.wynne@hmri.org.au

Phone: +61 2 4055 3270

Web: www.hmri.org.au

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1. Introduction to this guide

Health economics helps us understand the best way to allocate resources in the health system. Most resources are finite, so decisions must be made every day about how scarce resources are allocated; this includes time, money, technology, and space. Any change in the way a health service is delivered will involve some sort of change in the distribution of resources. Decision makers will, therefore, want evidence that the new approach will lead to better outcomes for patients or staff, or offer better value for money. An economic evaluation is a way of gathering that evidence.

If your research study involves a new Model of Care, we recommend you consult a health economist about incorporating an economic evaluation into your study design. Far from being just number crunchers, health economists play a key strategic role in shaping research decisions and enhance clinical relevance. Engaging them early in a project allows for the development of robust evaluation frameworks, the design of practical and targeted data collection tools, and meaningful interpretation of results. Their input ensures that research not only meets methodological standards but delivers insights that can inform clinical practice and policy.

This document provides an overview of the different types of economic evaluations. It will help you get familiar with the basic concepts of health economics and (hopefully) encourage you to include an economic evaluation in your study.

Throughout this document we use the term “Model of Care” to describe the ‘thing’ being evaluated. That is, the intervention, technology, resources or procedures. Even if your study does not relate to a clinical service, the “Model of Care” will be whatever it is you are studying, what is different from the existing way of doing things.



Recommended Reading

Several respected sources were used to help develop this document. If you want more information, these are a great place to start.

Methods for the Economic Evaluation of Health Care Programmes - A key textbook for health economics.¹

NSW Ministry of Health guide - **Commissioning Economic Evaluations: A Guide**. While the document is specifically about 'commissioning' economic evaluations, the information will help you decide if an economic evaluation is right for your project and what type of evaluation will suit your project.²

NSW Health **Evaluation Planning Checklist**. This will help with your evaluation planning.³

Reviewing Economic Evaluations: A Checklist. This is designed as a checklist for reviewing the quality and relevance of economic evaluations but can be used as a planning guide.⁴

The **CHEERS checklist** for reporting health economic evaluations for publication. This is also a good resource for planning evaluations. It lists all the information needed to satisfy reporting standards.⁵

The Local Level Evaluation of Healthcare in Australia. A 2019 report on health care evaluation in local contexts by NSW Regional Health Partners and the Australian Health Research Alliance.⁶

1. Drummond MF, Sculpher MJ, Torrance GW, et al. *Methods for the Economic Evaluation of Health Care Programmes*, Oxford University Press, 2015.

2. Centre for Epidemiology and Evidence. *Commissioning Economic Evaluations: A Guide*. Evidence and Evaluation Guidance Series, Population and Public Health Division. Sydney: NSW Ministry of Health, 2017.

3. Centre for Epidemiology and Evidence. *Planning Economic Evaluations: A Checklist*. Evidence and Evaluation Guidance Series, Population and Public Health Division. Sydney: NSW Ministry of Health; 2023.

4. Centre for Epidemiology and Evidence. *Reviewing Economic Evaluations: A Checklist*. Evidence and Evaluation Guidance Series, Population and Public Health Division. Sydney: NSW Ministry of Health; 2023.

5. Husereau, D., Drummond, M., Augustovski, F. et al. *Consolidated Health Economic Evaluation Reporting Standards 2022 (CHEERS 2022) statement: updated reporting guidance for health economic evaluations*. BMC Med 20, 23 (2022).

6. Searles A, Gleeson M, Reeves P, Jorm C, Leeder S, Karnon J, Hiscock H, Skouteris H, Daly M, NSW Regional Health Partners. *The Local Level Evaluation of Healthcare in Australia: Health Systems Improvement and Sustainability (HSIS) National Initiative*. Australian Health Research Alliance; 2019.

1.1 What is health economics?

Economics is about the allocation of resources. The term 'resources' refers to the inputs used in the production of goods and services to fulfill needs. It does not always mean things that have a direct dollar value or monetary cost. Resources can include people's time, money, technology, consumable items and physical space. Most resources in health services are limited so decisions need to be made about how they are allocated. There isn't usually one right answer, it will depend on the circumstances and priorities of the decision makers at that point in time.

Health economics is a way to help answer the question - "Is this thing good value compared with other things that could be done with the same resources?"

1.2 Why is health economics important?

With increasingly scarce resources and increasing demands, decision makers need to know that healthcare paid for by taxpayers is good value for money, in terms of the health gains it provides. Equally, health services want to ensure they are delivering high quality and appropriate care within their available budget.

Health economics is the way we determine if different Models of Care are cost-effective – i.e. achieving the desired outcome as efficiently as possible. By comparing the costs and outcomes of different Models of Care, decision makers can prioritise those that are high value and affordable.

To read more about the importance of health economics in local contexts take a look at the [2019 report on health care evaluation](#) by the Australian Health Research Alliance.⁷

1.3 Why is health economics important to my research?

The goal of health research is to improve health outcomes and/or improve the efficiency of health services. This may be at the individual patient level or from a broader public health approach. There may be evidence that a new Model of Care improves patient outcomes, but a key question decision makers will ask is "how much does it cost?" Decision makers in healthcare have budget constraints and therefore need to understand the costs involved when considering whether a Model of Care or other recommendations can be translated into practice.

Sometimes 'business as usual' may be the easiest decision for a health service, despite growing evidence that improvements are warranted. For your Model of Care to be implemented, or even considered for implementation, you will need to convince decision makers that your Model of Care makes sense from an economic standpoint as well as a clinical and service viewpoint.

Gathering credible economic evidence should be part of research design from the outset. This includes determining the type of evaluation needed, the data to collect, the cost of the evaluation and the time available. Where feasible, an economic evaluation should be a core component of all health services research.

1.4 Key questions when planning an economic evaluation

Key questions to consider when determining the scope of an economic evaluation are:

- What is the economic question you want to answer?
- Who is the evaluation for? Who is your audience?
- What evidence will you need to support a recommendation that a new Model of Care should be adopted?
- Is it possible to collect the data you will need?

7. Searles A, Gleeson M, Reeves P, Jorm C, Leeder S, Karnon J, Hiscock H, Skouteris H, Daly M, NSW Regional Health Partners. *The Local Level Evaluation of Healthcare in Australia: Health Systems Improvement and Sustainability (HSIS) National Initiative*. Australian Health Research Alliance; 2019.

1.5 Types of economic evaluation

The optimal type of economic evaluation will depend on the design of the study. If we consider the translation pathway, evidence of feasibility and acceptability is generally needed before testing the effectiveness of a Model of Care. Similarly, different types of evaluations are more appropriate at different points on the translation pathway. In general, as study designs progress along the translation pathway, economic evaluations tend to become more sophisticated. For more information on the translation pathway, take a look at the Sax Institute [Translational Research Framework](#) guide.⁸

Economic evaluations consist of two elements; resource use (costs) and outcomes (what has changed). We discuss costs in our companion document, [Introduction to Costing for Health Economic Evaluation](#).

In health economics, outcomes can be measured as natural units, health utility or both.

- **Natural unit** refers to a health outcome measured in its natural, non-monetary term. These are tangible, measurable outcomes such as days out of hospital, changes in blood pressure, or per life saved.
- **Health utility** is a way to measure how good or bad a person's health is, using a number between 0 and 1.
 - 1 means perfect health.
 - 0 means a health state that is considered as bad as being dead.
 - Sometimes, a health state can even be rated below 0, meaning it's considered worse than death.

Including a measure of health utility in a study design means you can calculate a standard outcome value. The key benefit of a generic (rather than disease-specific) outcome is that it enables comparisons both within and across diseases/conditions.

- Health utility can be estimated using publicly available validated surveys, for example the [EQ-5D](#) which asks participants to rate their mobility, self-care, usual activities, pain/discomfort and anxiety/depression.
- Health utility is commonly used to calculate **QALYs (quality-adjusted life-years)** which account for both the quality and length of life.

The main types of economic evaluations are described in Table 1.

Table 1 Types of economic evaluation

Evaluation	Description	Purpose	Measures outcome?	Measures cost?	Comments
Costing study	Details the costs involved in the delivery of a defined Model of Care.	To estimate the cost to deliver a defined Model of Care.	No	Yes	Descriptive study. Reports costs rather than an analysis.
Cost effectiveness analysis (CEA)	Compares the costs and outcomes of a Model of Care against the costs and outcomes of one or more alternative models. It is appropriate for studies with a single health outcome that can be measured in natural units.	To determine the option that provides the best value for money (which may not be the lowest cost option).	Yes	Yes	

8. Sax Institute, NSW Ministry of Health. (2013). *Translational Research Framework: Testing innovation in policy, programs and service delivery*. Retrieved from <https://www.saxinstitute.org.au/wp-content/uploads/Translational-Research-Framework.pdf> August 2025.

Table 1 Types of economic evaluation (cont.)

Evaluation	Description	Purpose	Measures outcome?	Measures cost?	Comments
Cost utility analysis (CUA)	Compares the costs and outcomes of a Model of Care against the costs and outcomes of one or more alternative models. It is appropriate for studies with a health utility outcome that can be converted to quality-adjusted life-years (QALYs).	To determine the option that provides the best value for money (which may not be the lowest cost option). CUA enables comparison across different diseases and conditions.	Yes	Yes	Methods are similar to CEA, but CUA is used where outcomes are measured as health utility.
Cost consequence analysis (CCA)	Compares the costs and outcomes of a Model of Care against the costs and outcomes of one or more alternative models. Costs are compared alongside multiple outcomes. These outcomes can be different or measured in different units, for example blood pressure, weight, and minutes of exercise.	To determine the costs and consequences of the different components of the Models of Care being compared. All costs and outcomes are listed separately.	Yes	Yes	Often used where CEA is not feasible, due to the study design (e.g. it doesn't have a comparator, or the study assesses multiple outcomes).
Budget impact analysis	Estimates how much a new healthcare intervention will cost the health service over a defined period.	To determine the financial implications of adopting a Model of Care, if rolled out to a real-world target population beyond the initial trial/pilot.	Yes	Yes	
Cost benefit analysis (CBA)	Compares the costs and outcomes of a Model of Care against the costs and outcomes of one or more alternative models. Multiple outcomes are turned into one value expressed as a standard unit of measurement (e.g. all in dollar values).	To determine the option that delivers the best outcome for a given cost. It aims to make a case for an investment by applying a dollar value to the social, health and economic benefits of a Model of Care relative to alternative(s). It focuses on the net benefit (benefit less costs) or Return on Investment. CBA can facilitate comparison with non-health interventions but may not be appropriate to capture non-monetary benefits or costs.	Yes	Yes	Appropriate where health outcomes can be expressed in monetary terms. CBA is the preferred method of economic evaluation for government agencies such as NSW Treasury.
Cost minimisation analysis	Compares the costs of two or more Models of Care with equivalent outcomes.	To determine the least expensive option.	No	Yes	Assumes that outcomes of each Model of Care are equally effective.

1.6 What type of economic evaluation is best for my research?

The best type of economic evaluation for your research will depend on:

- the scale and scope of your study
- the way you are measuring the outcomes
- the data you will be able to collect
- the resources (time and/or funds) available to complete the economic evaluation

Full economic evaluations can be expensive and time consuming. They require comprehensive data to be collected (ideally prospectively) for both the Model of Care being studied and at least one comparator. We encourage you to include sufficient time and funds for an appropriate economic evaluation in your research budget.

1.7 Summary and next steps

A health economic evaluation is a way to help answer the question - "Is this Model of Care good value compared with other things that could be done with the same resources?"

There are several different types of health economic evaluations. The most suitable method will depend on your research question and study design.

To learn a bit more about health economic evaluations, read our companion document [**Introduction to Costing for Health Economic Evaluation**](#). This will walk you through the steps in costing a Model of Care.

Armed with the knowledge from these resources, we encourage you to reach out to a health economist for more specific advice and to help you plan your economic evaluation. Health economists can be hard to find so feel free to contact NSW Regional Health Partners for assistance.



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Newcastle NSW 2300

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