

Introduction to Research

**Aboriginal and Torres Strait Islander
Health Care Master Class**



Slide 2 – Acknowledgement of Country

Acknowledgement of Country

We would like to acknowledge the traditional owners of the land on which we meet and pay particular respects to the elders past and present, as well as acknowledging the Aboriginal and Torres Strait Islander people in the room.

Slide 3 – Overview of the Master Class

Overview of the master class

This master class comprises four modules, two on the first day and two on the second.

1. In the first module we will look at what is “research” and identify how research can help to improve health outcomes for Aboriginal and Torres Strait Islander peoples. This module also provides an outline of how problems that healthcare services may be struggling with can be turned into a question which could be addressed by research.
2. The second module identifies ways in which you can identify whether your research question has already been answered to assist with grant applications.
3. If your question hasn't already been answered, the third module identifies ways in which you can develop collaborations which ensure that your question is answered. Some of the important values and ethical considerations are also discussed.
4. The final module focuses on how findings from either a review of the literature or primary research can be transferred into practical outcomes.

This master class is meant to be flexible. We hope that you will feel comfortable about sharing their own experiences and asking questions at any time.

Making use of the study guide

The study guide (sent electronically prior to the master and provided at the beginning of the master class in hardcopy) will compliment this master class in three ways:

1. It outlines the main information provided during the master class
2. It provides examples of studies which have already been conducted and highlight many of the main points described in this master class
3. It provides links to a number of resources which can be accessed free of charge

Mentors

You are also very welcome to contact staff at Wardliparingga at any time if you have any questions about any of the content or would like to discuss any aspect of research at any time after the master class. If you are interested in undertaking your own research we can also help by identifying researchers with appropriate experience, who may be able to assist you through the research process.

Overview of the Master Class

- Four modules
 - Understanding research and how to develop a research question
 - Developing an application for grant funding
 - Developing an ethics application
 - Ensuring research informs policy and practice
- Making use of the Study Guide
- Making use of the Work Book
- After the Master Class.....

Slide 4 – Module One: Introduction and Developing a Research Question

The intention of this first module is to provide broad overview of what research is and how it can assist to improve primary healthcare services. In addition, we will define some of the more common yet often confusing terms that researchers use and discuss how you can turn some of the problems you or your organisation may be grappling with into a question which could be addressed by research.

Module One

Introduction and
Developing a Research Question

Study Guide: Chapters One and Two

Slide 5 – How can research help to improve healthcare services?

There are a number of benefits which can result from collaborating with researchers, providing the research is conducted appropriately with a specific focus on the needs of Aboriginal and Torres Strait Islander peoples and/or their healthcare services. In particular, research may provide an opportunity to identify solutions and answers to questions about how to improve the delivery of care or health outcomes.

How can research help to improve healthcare services?

- providing access to novel and emerging health interventions and technologies,
- deepening the understandings about how healthcare service operate,
- affording opportunities for healthcare providers to reflect on and learn from others; and
- identifying what does not work, as well as what does.

Slide 6 – Some words of caution

Undertaking research or even participating in a research collaborative can be resource intensive and a costly undertaking, often requiring additional infrastructure, time commitment from healthcare providers as well as other often limited resources. It is therefore important to ensure that any research conducted is of real and practical benefit to your organisation.

It should also be remembered that research does not in and of itself necessarily lead to change for the better. The provision of healthcare services exist within a complex environment and therefore real and practical outcomes do not only depend on identifying opportunities for improvement. Instead the implementation of research findings will be influenced by socioeconomic factors, economic cycles and demographic trends. To add to this complexity, improving the delivery of services and/or health outcomes will always depend on relationships between the community, individual patients, available resources as well as the larger healthcare system.

Finally, in some cases research involves the implementation of new interventions which are often only funded for the study period. While this may be beneficial in the short-term, healthcare providers and community members may become disenfranchised when the study and therefore the intervention ceases. Careful consideration needs to be given about sustainability including how expectations will be managed and whether, on balance, there is a real benefit from participating in this type of research.

Some words of caution

- Resource intensive
- Improvements to healthcare services require more than research
- Short term research funding can do more harm than good

Slide 7 – What is research?

There is no single definition of research. However, many people would agree that it is primarily about a **systematic process** which is designed to **create knowledge** with a **specific purpose** or aim in mind – although at times this aim or purpose is simply to explore possibilities.

What is research?

*“Research is defined as the creation of **new knowledge** and/or the use of **existing knowledge in a new and creative way** so as to generate new concepts, methodologies and understandings.”*

(ABS 2012, [p. 7](#)).

Slide 8 – And we would add...

In terms of research conducted by or with Aboriginal Community Controlled Health Organisations and their stakeholders, we believe the emphasis should be on improving health outcomes for Aboriginal and Torres Strait Islander peoples.

And we would add.....

*“.....in order to improve health outcomes for
Aboriginal and Torres Strait Islander
communities”*

Slide 9 – A typical research process

While there are always exceptions to the rule, the majority of studies undertaken will involve:

- **Identifying a problem to solve or an aim to achieve**
- **Designing the study**

This involves working out the best way to solve the problem or meeting the study aim. Often the design of a study is written down in a research proposal or a protocol. These are documents that detail how the research will be conducted and ideally should be completed prior to starting any work.
- **Collecting the data**

Data is the information that is brought into the study in order to answer the question or meet the study aim. Most people think of collecting information from individuals either by asking questions or by collecting biological information but depending on the aim of the study, information may be obtained from existing databases within a healthcare service, the internet or even historical records.
- **Analysing that information**

Again, this will depend on the study aim and also the type of information collected but it usually involves making a judgement about the data or information that has been collected.
- **Reporting the results**

Sometime referred to as knowledge translation or knowledge dissemination. Reporting results is thought to be the most important part of research. However, it is also the part that can be neglected.

A typical research process:



Slide 10 – A not so typical research process

What often doesn't happen in research is the translation of that knowledge into meaningful change for the better. And even if this does happen, it often doesn't happen immediately.

A not so typical research process



Slide 11 – Before you start

For many years the **questions that researchers have posed** have been privileged above the particular needs and wishes of the healthcare organisations and the communities they serve. More recently it has been acknowledged that to ensure research outcomes are practical and applicable **healthcare practitioners and Aboriginal and Torres Strait Islander peoples should together drive the research** agenda.

Once the right people are determining the aim and the research questions.....

- Start out by **ensuring that a broad aim or objective** for the research is identified. Consider what problem requires a solution, or what broad issue needs to be addressed.
- Once a broad aim has been agreed upon, **a question or hypothesis should then be developed**

Before you start

Step One: Identify who should determine the aim of the study and what specific question or hypothesis should be addressed.

Step Two: Identify the aim of the study.

Step Three: Identify the question or hypothesis.

Slide 12 – Types of Research Questions

Research questions need to contain specific information. To make this easier it may be helpful to dissect the question into different parts or components.

An example of a question which seeks to compare - Is an exercise program together with standard dietary advice more effective for reducing levels of obesity (as indicated by BMI measurement) for adult Aboriginal and Torres Strait Islander people, in comparison to standard dietary advice alone?

An example of a question which seeks to quantify - How many people attending the healthcare service have been diagnosed with hypertension (as measured by health records)?

An example of a question which seeks to understand - How do Aboriginal and Torres Strait Islander people in the community believe that access to care can be improved?

Types of Research Questions

Research questions can be set up to:

- compare the effectiveness of one procedure or intervention with another,
- identify or quantify what is currently occurring; or
- understand how or why things happen.

Slide 13 – If you are interested in comparisons...

Research questions which aim to compare the effectiveness of one procedure or intervention with another are generally quantitative in nature and will comprise of the following four important components.

1. **Population of interest** – the individuals you wish to include in the study including their important characteristics such as age, sex and/or disease type.
2. **Intervention or treatment** – can be a treatment, procedure, diagnostic test and/or a risk factor.
3. **Control or comparator** – your comparison intervention treatment, placebo or standard care.
4. **Outcome** – difference between the intervention/treatment and the control. It is important to remember that this must be quantifiable, specific, valid, reproducible and appropriate.

This example including a link to a full text download can be found in chapter one of your study guide.

If you are interested in comparisons...

Example of a research question with clearly defined terms and measures:

Is an exercise program together with standard dietary advice more effective for reducing levels of obesity for adult Aboriginal and Torres Strait Islander people, in comparison to standard dietary advice alone?

1. **Population of interest:** Adult Aboriginal and Torres Strait Islander people. Adult is defined as between > 17 and < 55.
2. **Intervention or treatment:** Exercise program with dietary advice. Exercise program comprises of a 1 hour supervised exercise program three times per week.
3. **Control or comparator:** Dietary advice. Dietary advice comprises of a once only, one hour session with a dietician. This is considered to be standard care.
4. **Outcome:** Obesity which could be measured through BMI. Obesity is measured at baseline and then again 6 months after commencement of exercise program.

Slide 14 – If you are interested identifying or quantifying what is currently occurring...

Research questions which aim to identify or quantify what is currently occurring are also generally quantitative in nature and will usually have the following three important components.

1. **Population of interest** – the individuals you wish to focus on in this particular study including important characteristics such as age, sex and/or disease type.
2. **Factor of interest** – such as a treatment, a procedure, a diagnosis, a test and/or any other quantifiable factor of interest.
3. **Outcome** – the measurement of the factor of interest. Must be quantifiable, specific, valid, reproducible and appropriate.

This example including a link to a full text download can be found in chapter one of your study guide.

If you are interested in identifying or quantifying what is currently occurring...

Example of a research question with clearly defined terms and measures:

How many people attending the healthcare service have been diagnosed with hypertension?

1. **Population of interest:** people attending [name of healthcare service]
2. **Factor of Interest:** Hypertension is defined as an average ambulatory blood pressure reading exceeding the standard values for daytime BP as defined by the Heart Foundation.
3. **Outcome:** BP measure recorded in the medical records.

Slide 15 – If you want to understand how or why things happen...

Research questions which aim to better understand how or why things happen are generally qualitative in nature and will usually consist of the following three important components.

1. **Population of interest** – the individuals to be included within the study including important characteristics such as age, sex and/or disease type.
2. **Phenomena of interest** – the experience or phenomenon that you are interested in understanding.
3. **Context** – factors such as geographic location, cultural factors, and details about the setting.

This example including a link to a full text download can be found in chapter one of your study guide.

If you want to understand how or why things happen

Example of a research question with clearly defined terms and measures:

How do Aboriginal and Torres Strait Islander people in the community believe that access to care can be improved?

1. **Population of interest:** Aboriginal and Torres Strait Islander people
2. **Phenomena of interest:** Perceptions of the population of interest about how access to care could be improved.
3. **Context:** The community encompasses all people who reside in [name of community] as at 1st December 2014.

Slide 16 – Research questions should be...

In addition, research questions need to be:

- **Novel** - One of the primary questions you need to ask yourself is has the answer already been identified. If this is the case you may not need to repeat the exercise. How to find out if someone else has already found the answer to your question is covered in Chapter Two of the study guide,
- **Ethical** - Ensuring your research meets ethical standards at all times is essential. An overview of these responsibilities is provided in Chapter Three of the study guide.
- **Feasible** - Feasibility speaks to whether you have or are able to find the resources to undertake your research. How to apply for grant funding is covered in Chapter Four.
- **Relevant** - Making sure that your research makes a difference to healthcare practice is an important part of the research process. Chapter Five covers the translation of findings into practice.

Research questions should be

- Novel
- Ethical
- Feasible
- Relevant



Slide 17 – Key Messages

The key research messages from Module One are:

1. Research has been defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings
2. There are a number of benefits that can result from research providing it focuses on the specific needs of Aboriginal and Torres Strait Islander peoples and/or their healthcare services.
3. Nevertheless, undertaking research can be resource intensive and a costly undertaking.

The following three basic steps should be addressed prior to beginning any study:

Step One: Identify who should determine the aim of the study and what specific question or hypothesis should be addressed.

Step Two: Clearly define the aim of the study.

Step Three: Articulate the question or hypothesis.

4. There are a number of essential components to a research question. What components are necessary will depend on the aim of the research.
5. Research questions must also be realistic – novel, ethical, feasible and relevant.

Key Messages

- Research is defined as
- Research can be beneficial but caution is needed
- Three steps to designing -- the most important being who should determine the aim
- The components of a research question depend on what the research is trying to accomplish
- Research questions must be novel, ethical, feasible and relevant