



HSYP8101

Introduction to Epidemiology and Biostatistics

Session 1, In person-scheduled-weekday, North Ryde 2025

Department of Health Sciences

Contents

| | |
|--------------------------------|---|
| <u>General Information</u> | 2 |
| <u>Learning Outcomes</u> | 2 |
| <u>Assessment Tasks</u> | 3 |
| <u>Delivery and Resources</u> | 5 |
| <u>Policies and Procedures</u> | 6 |
| <u>Inclusion and diversity</u> | 7 |
| <u>Professionalism</u> | 8 |

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General Information

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Credit points

10

Prerequisites

Admission to MPH or MPH(Res)

Corequisites

Co-badged status

Unit description

This unit introduces you to the skills of scientific inquiry and appraising evidence which are fundamental to public health research and practice. You will engage in integrated learning about reporting data, study design, data analysis and interpretation, and critical appraisal of research papers in public health. By completing this unit, you will gain knowledge and skills which will enable you to locate, produce and appraise evidence in the field of public health.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Identify and explain data commonly used to report on health at a population level.

(Scientist & Scholar)

ULO2: Calculate and interpret the epidemiologic measures of occurrence and association in order to assess public health impact. (Scientist & Scholar)

ULO3: Characterise study designs used in public health and evaluate their strengths and limitations. (Practitioner)

ULO4: Critically appraise public health research papers using an epidemiological framework. (Practitioner)

Assessment Tasks

| Name | Weighting | Hurdle | Due |
|---------------------------------|-----------|--------|------------------------------|
| <u>Foundational concepts</u> | 10% | No | 21/03/2025 |
| <u>Critical appraisal</u> | 40% | No | 11/05/2025 |
| <u>Application of learnings</u> | 50% | No | TBA MQ Exam period 10/6-27/6 |
| <u>Unit reflection</u> | 0% | No | Week 14 |

Foundational concepts

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 10 hours

Due: **21/03/2025**

Weighting: **10%**

Quiz to examine understanding and application of learnings from weeks 1-4

On successful completion you will be able to:

- Identify and explain data commonly used to report on health at a population level.
(Scientist & Scholar)
- Calculate and interpret the epidemiologic measures of occurrence and association in order to assess public health impact. (Scientist & Scholar)
- Characterise study designs used in public health and evaluate their strengths and limitations. (Practitioner)

Critical appraisal

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 40 hours

Due: **11/05/2025**

Weighting: **40%**

Critical appraisal of an epidemiological paper

On successful completion you will be able to:

- Calculate and interpret the epidemiologic measures of occurrence and association in order to assess public health impact. (Scientist & Scholar)
- Characterise study designs used in public health and evaluate their strengths and limitations. (Practitioner)
- Critically appraise public health research papers using an epidemiological framework. (Practitioner)

Application of learnings

Assessment Type ¹: Examination

Indicative Time on Task ²: 25 hours

Due: **TBA MQ Exam period 10/6-27/6**

Weighting: **50%**

Examination: application of learnings from across the course.

On successful completion you will be able to:

- Identify and explain data commonly used to report on health at a population level. (Scientist & Scholar)
- Calculate and interpret the epidemiologic measures of occurrence and association in order to assess public health impact. (Scientist & Scholar)
- Characterise study designs used in public health and evaluate their strengths and limitations. (Practitioner)
- Critically appraise public health research papers using an epidemiological framework. (Practitioner)

Unit reflection

Assessment Type ¹: Reflective Writing

Indicative Time on Task ²: 1 hours

Due: **Week 14**

Weighting: **0%**

Reflection on experience in the unit with consideration of expectations on entry and outcomes at completion of the unit. This reflection may contribute to course based assessment in the capstone unit.

On successful completion you will be able to:

- Calculate and interpret the epidemiologic measures of occurrence and association in order to assess public health impact. (Scientist & Scholar)
- Characterise study designs used in public health and evaluate their strengths and limitations. (Practitioner)
- Critically appraise public health research papers using an epidemiological framework. (Practitioner)

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

The primary mode of delivery for this unit is through in class (face to face) lectures and tutorials. You will also engage in a range of online learning activities, including and completion of reading materials. Details can be found on the iLearn site for this unit.

Required text book

You are expected to have access to the the text book Webb, Bain and Page: Essential epidemiology

5th edition will be used in class, earlier editions will suffice.

Technology Used

Active participation in the learning activities throughout the unit will require students to have access to a tablet, laptop or similar device. Students who do not own their own laptop computer may borrow one from the university library. You will frequently be required to bring a laptop to your tutorial class.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Inclusion and diversity

Social inclusion at Macquarie University is about giving everyone who has the potential to benefit from higher education the opportunity to study at university, participate in campus life and flourish in their chosen field. The University has made significant moves to promote an equitable,

diverse and exciting campus community for the benefit of staff and students. It is your responsibility to contribute towards the development of an inclusive culture and practice in the areas of learning and teaching, research, and service orientation and delivery. As a member of the Macquarie University community, you must not discriminate against or harass others based on their sex, gender, race, marital status, carers' responsibilities, disability, sexual orientation, age, political conviction or religious belief. All staff and students are expected to display appropriate behaviour that is conducive to a healthy learning environment for everyone.

Professionalism

In the Faculty of Medicine, Health and Human Sciences, professionalism is a key capability embedded in all our courses.

As part of developing professionalism, students are expected to attend all small group interactive sessions including clinical, practical, laboratory, work-integrated learning (e.g., PACE placements), and team-based learning activities. Some learning activities are recorded (e.g., face-to-face lectures), however you are encouraged to avoid relying upon such material as they do not recreate the whole learning experience and technical issues can and do occur. As an adult learner, we respect your decision to choose how you engage with your learning, but we would remind you that the learning opportunities we create for you have been done so to enable your success, and that by not engaging you may impact your ability to successfully complete this unit. We equally expect that you show respect for the academic staff who have worked hard to develop meaningful activities and prioritise your learning by communicating with them in advance if you are unable to attend a small group interactive session.

Another dimension of professionalism is having respect for your peers. It is the right of every student to learn in an environment that is free of disruption and distraction. Please arrive to all learning activities on time, and if you are unavoidably detained, please join activity as quietly as possible to minimise disruption. Phones and other electronic devices that produce noise and other distractions must be turned off prior to entering class. Where your own device (e.g., laptop) is being used for class-related activities, you are asked to close down all other applications to avoid distraction to you and others. Please treat your fellow students with the utmost respect. If you are uncomfortable participating in any specific activity, please let the relevant academic know.

Unit information based on version 2025.03 of the [Handbook](#)