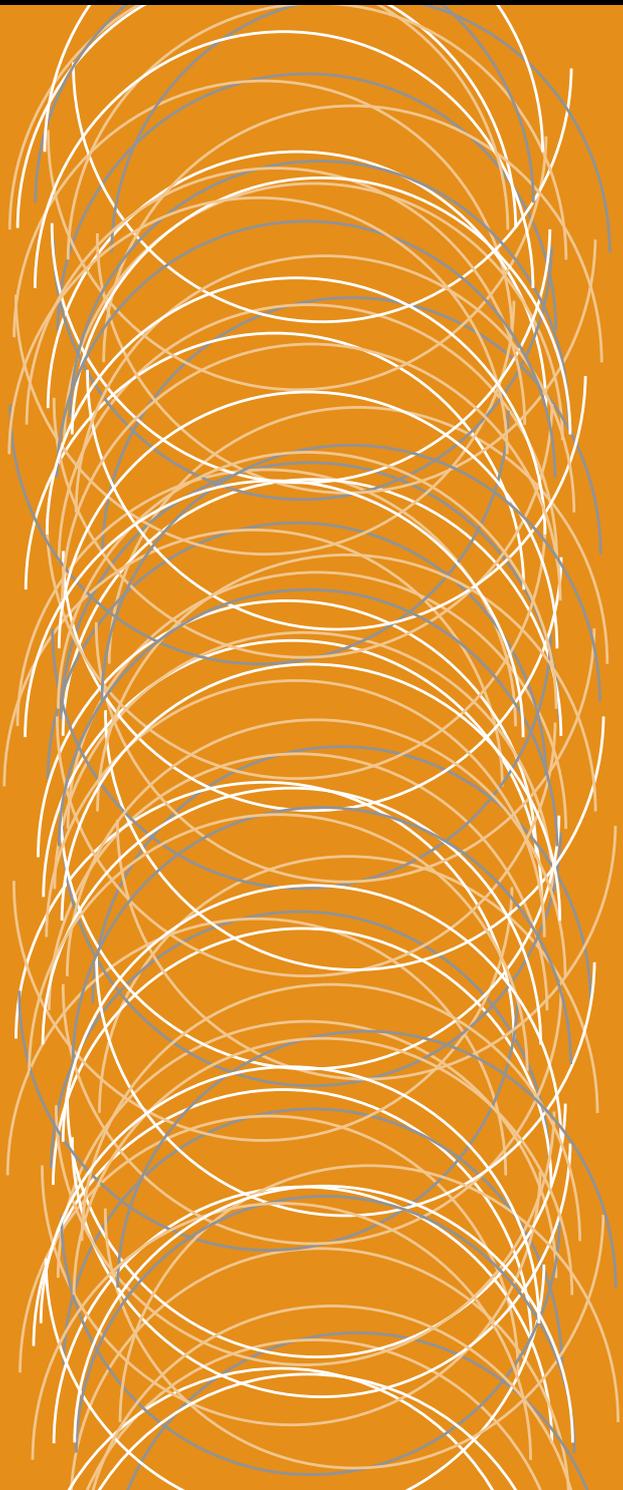


Australian Medical Council Limited

Accreditation of  
Medical Program of the Faculty of Medicine  
and Health Sciences Macquarie University

AMC



Medical School Accreditation Committee  
June 2017

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## **Executive summary 2017**

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Macquarie University's proposed medical program will reside in the Faculty of Medicine and Health Sciences. It will be a four-year graduate-entry Masters Degree (Extended) leading to a Doctor of Medicine (MD). The program proposes an intake of 60 fee-paying students (40 domestic and 20 international), commencing in 2018.

The medical program is distinctive in Australia as a significant component of learning occurs in a university-owned and operated teaching hospital and academic health sciences centre. The program aims to provide medical students with a quality assured international education, recognising the value of learning experiences outside Australia. To that end, the program plans to offer core clinical placements at the Apollo Hospital in Hyderabad, India.

### **Accreditation process**

The AMC's *Procedures for Assessment and Accreditation of Medical Schools by the Australian Medical Council 2017* provide for education providers to seek assessment of proposed new medical programs.

The *Procedures* state at section 3.2.1 that institutions contemplating the establishment of a primary medical program should conduct independent negotiations with the appropriate state/territory and national authorities concerning student places and clinical facilities. If a decision is made by the relevant authorities to support the establishment of a new medical program, the AMC undertakes the assessment against the approved accreditation standards.

In establishing a new school, the education provider must submit a Stage 1 submission to the AMC. The AMC assesses the Stage 1 submission to determine if the planned program of study is likely to comply with the approved accreditation standards and if the education provider has demonstrated that it is able to implement the program.

The Macquarie University proposal is the first submission received by the AMC where the higher education provider proposing an offshore program component did not have an accredited medical program in Australia or New Zealand. Given the proposed program contains an offshore component, the AMC assessed the Stage 1 submission against the accreditation standards, along with the requirements for consideration of a medical program conducted offshore contained in the AMC policy *Primary medical programs provided offshore by Australian and/or New Zealand education providers*.

The AMC considered Macquarie's Stage 1 proposal in September 2016, and invited the Faculty to proceed to a Stage 2 assessment of the medical program.

When conducting a Stage 2 assessment, the AMC assesses the proposed program against the approved accreditation standards for primary medical education. An AMC team reviewed the Faculty's submission, and a written report from students enrolled in the Bachelor of Clinical Science and Doctor of Physiotherapy programs of the Faculty of Medicine and Health Sciences.

An AMC team visited Macquarie University and associated future clinical teaching sites the week of 3 April 2017.

A sub-team travelled to Apollo Hospital, Hyderabad, India to undertake a site visit from 20 – 23 March 2017.

This report presents the AMC's findings against the *Standards for Assessment and Accreditation of Primary Medical Programs by the Australian Medical Council 2012*.

## **Decision on accreditation**

Under the *Health Practitioner Regulation National Law*, the AMC may grant accreditation if it is reasonably satisfied that a program of study and the education provider meet the accreditation standards. The AMC may also grant accreditation if the program of study and the education provider substantially meet the accreditation standards, and imposing accreditation conditions will lead to the program meeting the standards within a reasonable time.

Having made a decision, the AMC reports its accreditation decision to the Medical Board of Australia to enable the Board to make a decision on the approval of the program of study for registration purposes.

## **Accreditation of new education providers and / or programs**

In accordance with the *Procedures for Assessment and Accreditation of Medical Schools by the Australian Medical Council 2017*, section 5.2, the accreditation options are:

- (i) Accreditation for a period up to one year after the full program has been implemented, subject to conditions being addressed within a specific period and depending on satisfactory annual progress reports. The conditions may include a requirement for follow-up assessments to review progress in implementing the program. In the year the accreditation ends, the education provider will submit a comprehensive report for extension of accreditation. Subject to a satisfactory report, the AMC may grant a further period of accreditation, up to the maximum possible period, before a new accreditation assessment.
- (ii) Accreditation will be refused where the education provider has not satisfied the AMC that it can implement and deliver the study at a level consistent with the accreditation standards. The AMC will give the education provider written notice of the decision and its reasons, and the procedures available for review of the decision within the AMC.

The AMC Medical School Accreditation Committee considered the draft report at its meeting of 2 June 2017. The Committee requested further information from the Faculty, expressed as a response to the proposed conditions listed below, prior to making an accreditation recommendation to the AMC Directors. The Faculty provided information on the points below to the AMC on 13 June 2017.

- Provide a detailed agreement with Apollo Hospital which outlines respective roles and responsibilities concerning the delivery of the 20 week core clinical placement at Apollo Hospital, Hyderabad.
- Confirm a formal agreement with Northern Sydney Local Health District (NSLHD) to support effective partnerships for delivery of the program, specifically clinical placements. (Standard 1.6)
- Provide a curriculum map outlining the Indigenous Health content. (Standard 3.5)

The Committee considered the program's progress on these items, and integrated the information provided into the findings of the accreditation report. The Committee then finalised its accreditation recommendations and conditions.

**The AMC is satisfied that the medical program of Macquarie University, Faculty of Medicine and Health Sciences meets the approved accreditation standards.**

The 23 June 2017 meeting of the AMC Directors agreed:

- (i) That the four-year graduate-entry Masters Degree (Extended) (MD) medical program of the Macquarie University, Faculty of Medicine and Health Sciences **be granted accreditation to 31 March 2023**; and
- (ii) That accreditation of the program is subject to meeting the monitoring requirements of the AMC, including satisfactory progress reports; a follow-up assessment in 2019 to assess the implementation of Years 1 and 2 and plans for Years 3 to 4; and to the following conditions:

*By 6 October 2017*

- Provide the finalised MD Program Handbook. (Standard 3.4)
- Provide specific learning objectives for Year 1. (Standard 3.4)
- Provide an update on the implementation of Entrustable Professional Activities (EPAs) in capability-based assessment in the medical program. (Standard 5.2)
- Provide evidence that work is progressing on the Stage 2 assessment strategy. (Standard 5.2)
- Provide information on the implementation of monitoring and evaluation, specifically plans for the evaluation of the first year cohort. (Standard 6.1)
- Provide evidence that the draft fitness to practice policy has been approved through the appropriate University processes. (Standard 7.4)
- Provide further detail on student indemnification and insurance agreements, particularly for the Apollo Hospital and elective rotations. (Standard 7.6)

*2018 conditions*

- Develop a structure for the Apollo clinical school which details the interface with the Australian-based governance structures, and specifies the teaching, training and assessment expectations, funding, student indemnification and services commitment. (Standard 1.1)
- Confirm a formal agreement with Northern Sydney Local Health District (NSLHD) to support effective partnerships for delivery of the program, specifically clinical placements. (Standard 1.6)
- Provide the structure of clinical leads for each discipline in the Apollo clinical school, as well as at Royal North Shore Hospital to illustrate the interaction of clinical school leads with Macquarie University. (Standard 1.8)
- Provide an update on Year 3 placements in Paediatrics, and Obstetrics and Gynaecology. (Standard 3.2)
- Provide specific learning objectives for Year 2. (Standard 3.4)
- Provide a curriculum map for the Indigenous Health content. (Standard 3.5)
- Provide further detail on the selective and elective terms in Year 4. (Standard 3.6)
- Provide the Stage 2 assessment blueprint. (Standard 5.2)
- Provide updates on the operational aspects of monitoring and evaluation of the program. (Standard 6.1)
- Confirm the availability of appropriate accommodation for students while undertaking placements at Apollo Hospital. (Standard 8.1)
- Confirm the physical facilities available to medical students at Apollo Hospital. (Standard 8.1)

- Develop opportunities beyond Macquarie University Health Sciences Centre (MQ Health) for general practice experience. (Standard 8.3)
- Confirm opportunities for rural clinical experiences. (Standard 8.3)
- Develop opportunities for students to have experience in the provision of culturally competent health care to Aboriginal and Torres Strait Islander peoples. (Standard 8.3)
- Provide the plans to ensure well trained clinical teachers and supervisors at Apollo Hospital for the first cohort of students in 2020. (Standard 8.4)

### Key findings

Under the *Health Practitioner Regulation National Law* (the National Law), the AMC can accredit a program of study if it is reasonably satisfied that: (a) the program of study, and the education provider that provides the program of study, meet the accreditation standard; or (b) the program of study, and the education provider that provides the program of study, substantially meet the accreditation standard and the imposition of conditions will ensure the program meets the standard within a reasonable time.

The AMC uses the terminology of the National Law (meet/substantially meet the standards) in making decisions about accreditation programs and providers.

**Conditions:** Providers must satisfy conditions on accreditation in order to meet the relevant accreditation standard.

<b>1. The context of the medical program</b>	<b>Substantially Met</b>
----------------------------------------------	--------------------------

### 2018

Develop a structure for the Apollo clinical school which details the interface with the Australian-based governance structures, and specifies the teaching, training and assessment expectations, funding, student indemnification and services commitment. (Standard 1.1)

Confirm a formal agreement with Northern Sydney Local Health District (NSLHD) to support effective partnerships for delivery of the program, specifically clinical placements. (Standard 1.6)

Provide the structure of clinical leads for each discipline in the Apollo clinical school, as well as at Royal North Shore Hospital to illustrate the interaction of clinical school leads with Macquarie University. (Standard 1.8)

#### *Commendations*

The evident commitment of the University's Vice Chancellor and senior leadership to the implementation of a distinctive Doctor of Medicine (MD) program which will be embedded within MQ Health. (Standard 1.1)

The outstanding leadership of the Executive Dean, and the diverse and high quality expertise of the academic, professional and clinical staff associated with the medical program. (Standard 1.2)

The Faculty's aim to develop a distinctive educational experience, linking learning and translational research to clinical activities, which should be realised through the well- designed program. (Standard 1.4)

The expectation that clinicians employed by Macquarie University Clinical Associates (MUCA) collectively achieve key performance indicators across all three domains of teaching, clinical work and research. Some clinicians have clearly protected time for teaching and research in

addition to their clinical responsibilities, while others contribute to clinical teaching as part of their clinical activities. (Standard 1.9)

<b>2. The outcomes of the medical program</b>	<b>Met</b>
-----------------------------------------------	------------

No conditions or commendations

<b>3. The medical curriculum</b>	<b>Substantially Met</b>
----------------------------------	--------------------------

## 2017

Provide the finalised MD Program Handbook. (Standard 3.4)

Provide specific learning objectives for Year 1. (Standard 3.4)

## 2018

Provide an update on Year 3 placements in Paediatrics, and Obstetrics and Gynaecology. (Standard 3.2)

Provide specific learning objectives for Year 2. (Standard 3.4)

Provide a curriculum map for the Indigenous Health content. (Standard 3.5)

Provide further detail on the selective and elective terms in Year 4. (Standard 3.6)

### *Commendations*

The Faculty's partnerships with Apollo Hospital, the MindSpot Clinic and the Northern Sydney Local Health District to provide clinical experiences. (Standard 3.2)

The interactive curriculum map completed for Year 1. (Standard 3.2)

<b>4. Teaching and learning</b>	<b>Met</b>
---------------------------------	------------

### *Commendations*

The Faculty's learning design team who, in collaboration with subject matter experts, provide impressive and innovative learning and teaching items. (Standard 4.1)

The opportunity for students to follow a patient from consultation through to treatment and discharge in Macquarie University Hospital allows the student to develop professional relationships with both patients and their families, and develop a holistic understanding of the patient and their needs. (Standard 4.4)

<b>5. The curriculum - assessment of student learning</b>	<b>Substantially Met</b>
-----------------------------------------------------------	--------------------------

## 2017

Provide an update on the implementation of Entrustable Professional Activities (EPAs) in capability-based assessment in the medical program. (Standard 5.2)

Provide evidence that work is progressing on the Stage 2 assessment strategy. (Standard 5.2)

## 2018

Provide the Stage 2 assessment blueprint. (Standard 5.2)

<b>6. The curriculum - monitoring</b>	<b>Met</b>
---------------------------------------	------------

## 2017

Provide information on the implementation of monitoring and evaluation, specifically plans for the evaluation of the first year cohort. (Standard 6.1)

## 2018

Provide updates on the operational aspects of monitoring and evaluation of the program. (Standard 6.1)

<b>7. Implementing the curriculum - students</b>	<b>Met</b>
--------------------------------------------------	------------

## 2017

Provide evidence that the draft fitness to practice policy has been approved through the appropriate University processes. (Standard 7.4)

Provide further detail on student indemnification and insurance agreements, particularly for the Apollo Hospital and elective rotations. (Standard 7.6)

### *Commendation*

The Faculty's significant level of expertise and experience in admissions, and the significant evidence-based, quality focused approach throughout the proposed policy and processes. (Standard 7.2)

<b>8. Implementing the curriculum - learning environment</b>	<b>Substantially Met</b>
--------------------------------------------------------------	--------------------------

## 2018

Confirm the availability of appropriate accommodation for students while undertaking placements at Apollo Hospital. (Standard 8.1)

Confirm the physical facilities available to medical students at Apollo Hospital. (Standard 8.1)

Develop opportunities beyond MQ Health for general practice experience. (Standard 8.3)

Confirm opportunities for rural clinical experiences. (Standard 8.3)

Develop opportunities for students to have experience in the provision of culturally competent health care to the Aboriginal and Torres Strait Islander peoples. (Standard 8.3)

Provide the plans to ensure well trained clinical teachers and supervisors at Apollo Hospital for the first cohort of students in 2020. (Standard 8.4)

*Commendations*

The plans to provide excellent student accommodation for the students while at Apollo Hospital. (Standard 8.1)

The impressive service delivery model and outcomes of the MindSpot Clinic, and rich learning opportunities this clinic will offer students in mental health. (Standard 8.3)

The clinical learning opportunities available at Apollo Hospital, and the commitment of the hospital's clinicians and administrators to facilitate the student experience during this rotation. (Standard 8.3)

## Introduction

---

### The AMC accreditation process

The AMC is a national standards body for medical education and training. Its principal functions include assessing Australian and New Zealand medical education providers and their programs of study, and granting accreditation to those that meet the approved accreditation standards.

The purpose of AMC accreditation is to recognise medical programs that produce graduates competent to practise safely and effectively under supervision as interns in Australia and New Zealand, with an appropriate foundation for lifelong learning and further training in any branch of medicine.

The *Standards for Assessment and Accreditation of Primary Medical Programs by the Australian Medical Council 2012* list the graduate outcomes that collectively provide the requirements that students must demonstrate at graduation, define the curriculum in broad outline, and define the educational framework, institutional processes, settings and resources necessary for successful medical education.

The AMC's Medical School Accreditation Committee oversees the process of assessment and accreditation of primary medical education programs and their providers, and reports to AMC Directors. The Committee includes members nominated by the Australian Medical Students' Association, the Confederation of Postgraduate Medical Education Councils, the Council of Presidents of Medical Colleges, the Medical Council of New Zealand, the Medical Board of Australia, and the Medical Deans of Australia and New Zealand. The Committee also includes a member of the Council, a member with background in, and knowledge of, health consumer issues, and Indigenous members.

The AMC appoints an accreditation assessment team to complete an accreditation assessment. The medical education provider's accreditation submission forms the basis of the assessment. In established medical programs, the medical student society is also invited to make a submission. Following a review of the submissions, the team conducts a visit to the medical education provider and its teaching sites. Following the visit, the team prepares a detailed report for the Medical School Accreditation Committee, providing opportunities for the medical school to comment on successive drafts. The Committee considers the team's report and then submits the report, amended as necessary, together with a recommendation on accreditation to the AMC Directors. The Directors make the final accreditation decision within the options described in the *Procedures for Assessment and Accreditation of Medical Schools by the Australian Medical Council 2017*. The granting of accreditation may be subject to conditions, such as a requirement for follow-up assessments.

The AMC and the Medical Council of New Zealand have a memorandum of understanding that encompasses the joint work between them, including the assessment of medical programs in Australia and New Zealand, to assure the Medical Board of Australia and the Medical Council of New Zealand that a medical school's program of study satisfies approved standards for primary medical education and for admission to practise in Australia and New Zealand.

After it has accredited a medical program, the AMC seeks regular progress reports to monitor that the provider and its program continue to meet the standards. Accredited medical education providers are required to report any developments relevant to the accreditation standards and to address any conditions on their accreditation and recommendations for improvement made by the AMC. Reports are reviewed by an independent reviewer and by the Medical School Accreditation Committee.

## The University and the Faculty

Macquarie University was established in 1964 and identifies itself as a university of service and engagement. In addition to excellence in teaching and learning, world-leading research and a strong international presence, Macquarie highlights its partnerships with industry and ability to contribute solutions to real world problems as key strengths.

The University has over 40,000 students and employs more than 3,000 professional and academic staff members. The location of the campus at North Ryde, within close proximity of what is now Australia's largest high-technology precinct, Macquarie Park, New South Wales, facilitates industry partnerships in research and innovation.

The University is comprised of five faculties:

- Arts
- Business and Economics
- Human Sciences
- Science and Engineering; and
- Medicine and Health Sciences.

The proposed medical program will reside in the Faculty of Medicine and Health Sciences. It will be a four-year graduate-entry Masters (Extended) Degree leading to a Doctor of Medicine (MD). The program is seeking accreditation from 2018 with a proposed intake of 60 fee-paying students (40 domestic and 20 international).

The *Procedures for Assessment and Accreditation of Medical Schools by the Australian Medical Council 2017* state at section 3.2.1 that institutions contemplating the establishment of a primary medical program should conduct independent negotiations with the appropriate state/territory and national authorities concerning student places and clinical facilities. If a decision is made by the relevant authorities to support the establishment of a new medical program, the AMC undertakes the assessment against the approved accreditation standards.

Macquarie does not seek any medical Commonwealth Supported Places.

The Macquarie medical program is distinctive in Australia as a significant component of learning occurs in a university-led and operated not-for-profit private teaching hospital and academic health sciences centre. The program aims to provide medical students with a quality assured international education, recognising the value of learning experiences outside Australia. To that end, the program plans to offer core clinical placements and selective opportunities at the Apollo Hospital in Hyderabad, India.

The Apollo Hospital in Hyderabad is a private multi-specialty hospital which is part of the larger Apollo Hospitals group. The hospital has approximately 470 beds and has accreditation from the USA-based health care organisation the Joint Commission International (JCI). The hospital is located on a large health city campus which includes two hospitals (one private, one public), a maternity hospital, a large rehabilitation facility, several related medical services, and student and staff accommodation.

The core clinical placements at Apollo will occur in Year 3, with each rotation four weeks in duration, for a total of 20 weeks spent in India. The placements are as follows:

- Internal Medicine (General Medicine with opportunities for experience in a range of Internal Medicine subspecialties).
- Surgery (General Surgery with opportunities for experience in a range of surgical subspecialties).

- Paediatrics.
- Obstetrics and Gynaecology; and
- Primary Care.

The Macquarie University proposal is the first submission received by the AMC where the higher education provider proposing an offshore program component did not have an accredited medical program in Australia or New Zealand. Given the proposed program contains an offshore component, the AMC assessed the Stage 1 submission against the accreditation standards, along with the requirements for consideration of a medical program conducted offshore contained in the AMC policy *Primary medical programs provided offshore by Australian and/or New Zealand education providers*.

The architecture of the program is set around individual years, and each year has a distinct focus and purpose.

**Year 1: Foundation of Medical Practice** is held on the university campus and is composed of coursework units in medical science, social aspects of health, professionalism, and foundations of clinical practice.

**Year 2: Integrated Clinical Learning** has three 12-week blocks of integrated clinical studies which cover the areas of medicine and surgery (including several subspecialties) and primary care which are largely practiced at the Macquarie University Hospital and Clinic. The disciplines at MQ Health do not include areas such as mental health, paediatrics, obstetrics, chronic disease and aged care, however the Faculty plans to integrate learning around these areas in its curriculum in Year 2, including the opportunity for students to undertake the MindSpot Wellbeing Program as part of their learning across the year. A 6-week block focusing on critical care, patient safety and quality, and research is also included in this year.

### **Year 3: Core Clinical Placements**

This year includes 4-week blocks of each core clinical placement in Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Primary Care and Mental Health (Australia only).

Students must undertake 24 weeks of all core clinical placements in Australia and 20 weeks at the Apollo Hospital in Hyderabad, India. The India placements have all core clinical placements (except for Mental Health which is undertaken at the NSLHD and at the MindSpot Clinic at Macquarie University).

The assessment of these clinical placements includes programmatic assessment tasks, a combination of TMEX, DOPS, Case Reports, MiniCEX and ITAs, a portfolio and a final clinical exam.

### **Year 4: Extended Clinical Practice**

Students must complete at least 16 weeks of placements in Australia (including emergency medicine for four weeks, plus selectives and electives), at least eight weeks at Apollo Hospital in India (selective) and an 8-week elective in a global health setting.

While considering the full four years of the program, the team looked in detail at the first two years of the program and its readiness for implementation in 2018.

### **Accreditation Background**

The AMC considered Macquarie's Stage 1 proposal in September 2016, and invited the Faculty to proceed to a Stage 2 assessment of the medical program.

When conducting a Stage 2 assessment, the AMC assesses the proposed program against the approved accreditation standards for primary medical education. An AMC team reviewed the Faculty's submission and a written report from students enrolled in the Bachelor of Clinical Science and Doctor of Physiotherapy programs of the Faculty of Medicine and Health Sciences.

The AMC team visited Macquarie University and associated future clinical teaching sites in the week of 3 April 2017.

A sub-team travelled to Apollo Hospital, Hyderabad, India to undertake a site visit from 20 – 23 March 2017.

### **This report**

This report details the findings of the 2017 accreditation assessment. Each section of the accreditation report begins with the relevant AMC accreditation standards.

The members of the 2017 AMC team are at **Appendix One**.

The groups met by the AMC team in 2017 in India are at **Appendix Two** and at the Sydney site visit are at **Appendix Three**.

### **Appreciation**

The AMC thanks the University, and Faculty staff for the detailed planning and the comprehensive material provided for the team. The AMC also acknowledges and thanks the staff, clinicians, students and others who met members of the team for their hospitality, cooperation and assistance during the assessment process.

# 1 The context of the medical program

---

## 1.1 Governance

1.1.1 *The medical education provider's governance structures and functions are defined and understood by those delivering the medical program, as relevant to each position. The definition encompasses the provider's relationships with internal units such as campuses and clinical schools and with the higher education institution.*

1.1.2 *The governance structures set out, for each committee, the composition, terms of reference, powers and reporting relationships, and allow relevant groups to be represented in decision-making.*

1.1.3 *The medical education provider consults relevant groups on key issues relating to its purpose, the curriculum, graduate outcomes and governance.*

The governance of the proposed medical program is innovative, well defined and representative. A wide range of stakeholders has been consulted over the course of the program's development.

The genesis of the medical program at Macquarie can be found in the University's 2013 strategic priorities document, **Our University: A Framing of Futures**. One of the aspirations outlined in this plan included developing an integrated academic health campus which brought together education, biomedical and translational research with state-of-the-art clinical care.

Macquarie University has achieved this aspiration through the creation of MQ Health, Australia's first university-owned academic health sciences centre. The integration of medical research, health care and higher education is articulated through MQ Health's core purpose: *Heal Learn Discover*.

In order to achieve the MQ Health vision, in 2014 the University Council resolved to create the Faculty of Medicine and Health Sciences, moving programs from the Australian School of Advanced Medicine (ASAM), and the established Department of Health Professions from the Faculty of Human Sciences, into this new Faculty. Soon after, the Australian Institute of Health Innovation (AIHI) moved from the University of New South Wales to Macquarie University, adding research strengths in health systems, patient safety, and health informatics to the Faculty. The Faculty of Medicine and Health Sciences was structurally established in 2015 with four academic departments (Biomedical Sciences, Clinical Medicine, Health Professions, and Health Systems and Populations), plus the AIHI.

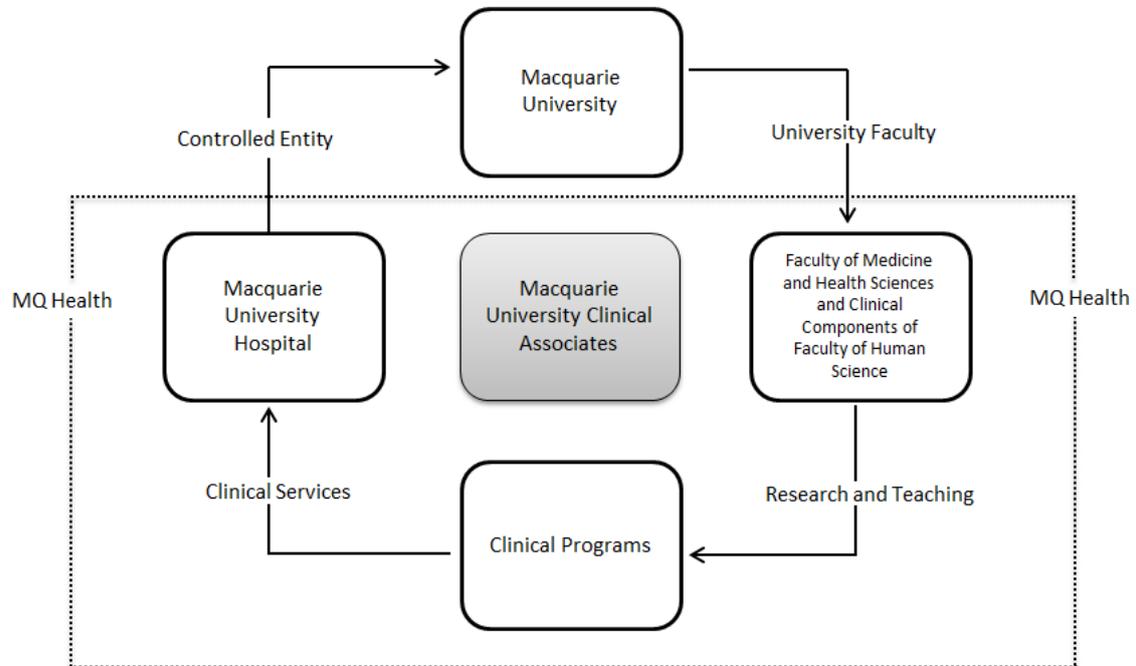
An affiliated organisation, Macquarie University Clinical Associates (MUCA), employs and engages clinicians in achieving MQ Health goals. MUCA is a joint venture organisation between the Faculty of Medicine and Health Sciences and Macquarie University Hospital (MUH). Clinicians have clear academic and clinical performance indicators tied to financial and other incentives. This model, which places priority on clinical practice and teaching, will allow MQ Health to direct the delivery of clinical education for students in the medical program.

As indicated in **Figure 1** below, MQ Health includes Macquarie University Hospital (MUH) and Clinics, the University's Faculty of Medicine and Health Sciences and clinical components of the Faculty of Human Sciences, Macquarie University Clinical Associates (MUCA), and the seven clinical programs under MQ Health:

- Neurosciences
- Cardiovascular and Respiratory
- Cancer
- Surgery and Gastrointestinal

- Bone and Joint
- Primary Care, Wellbeing and Diagnostics; and
- Critical Care and Anaesthetics.

**Figure 1 – Overview of MQ Health Structure**



The clinical programs within MQ Health support the intersection of the specialty expertise in MUH and MQ Health Outpatient Clinics with the academic strategy of the Faculty. The Head of each clinical program is responsible for leadership, strategy and development of the clinical program, as well as integration of the clinical services, teaching and research within the program across MQ Health.

**Figure 2 - MQ Health Clinical Programs**

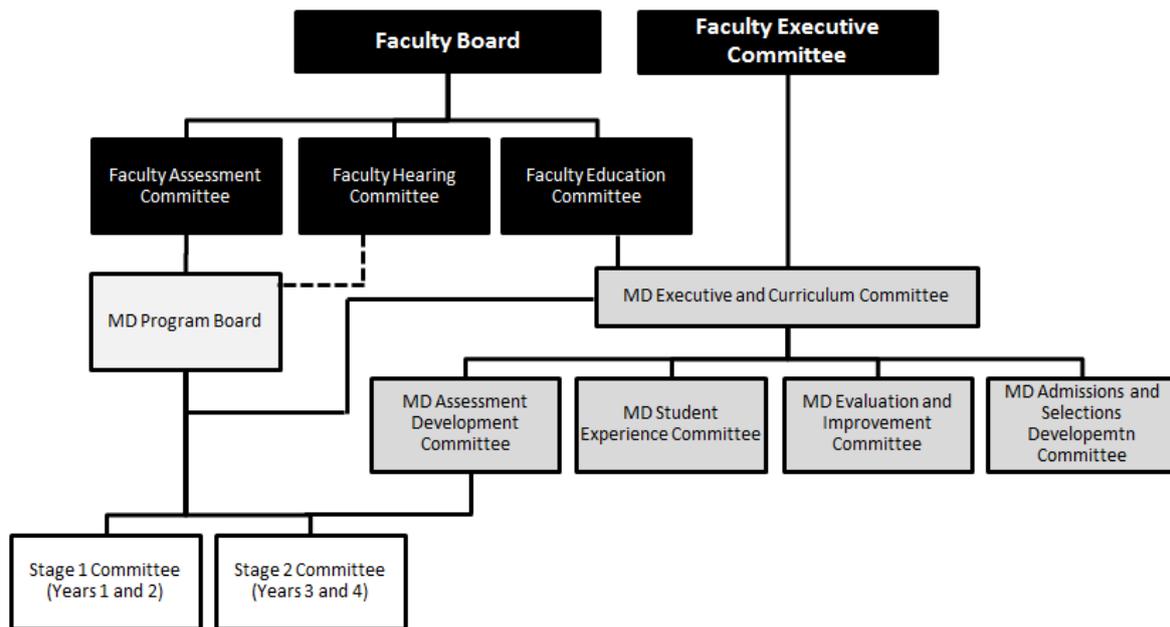
<b>Clinical Program Structure</b>	
<b>Neuroscience</b> Head: Professor Marcus Stoodley	<ul style="list-style-type: none"> <li>• ENT/head and neck</li> <li>• Neurology</li> <li>• Neuropsychology</li> <li>• Neurosurgery</li> <li>• Ophthalmology</li> </ul>
<b>Cardiovascular and Respiratory</b> Head: Dr Jason Kaplan	<ul style="list-style-type: none"> <li>• Cardiology</li> <li>• Cardiothoracic surgery</li> <li>• Respiratory medicine</li> <li>• Vascular medicine and surgery</li> </ul>
<b>Cancer</b> Head: Professor Rick Kefford	<ul style="list-style-type: none"> <li>• Cancer surgery (MDTs)</li> <li>• Medical oncology</li> <li>• Radiation oncology</li> </ul>
<b>Surgery and Gastrointestinal</b> Head: Dr Alice Lee	<ul style="list-style-type: none"> <li>• Colorectal surgery</li> <li>• Gastroenterology</li> <li>• General surgery</li> <li>• Gynaecology</li> <li>• Plastic, reconstructive and maxillofacial</li> <li>• Urology</li> <li>• Upper GI surgery</li> </ul>
<b>Bone and Joint</b> Head: Associate Professor Des Bokor	<ul style="list-style-type: none"> <li>• Hand surgery/therapy</li> <li>• Orthopaedics and sports medicine</li> <li>• Rheumatology</li> </ul>
<b>Primary Care, Wellbeing and Diagnostics</b> Head: Professor Simon Willcock	<ul style="list-style-type: none"> <li>• Allied health</li> <li>• eHealth</li> <li>• General practice</li> <li>• Imaging</li> <li>• Pathology</li> </ul>
<b>Critical Care and Anaesthetics</b> Head: Associate Professor Michael Parr	<ul style="list-style-type: none"> <li>• Anaesthetics</li> <li>• Intensive care</li> <li>• Theatre</li> </ul>

The introduction of a medical program within Macquarie University is strongly aligned with the University's strategic objectives. The team was impressed by the evident commitment of the University's Vice-Chancellor and senior leadership to the implementation of a distinctive Doctor of Medicine (MD) program which will be embedded within MQ Health. The medical program features an international dimension, in particular a 20 week core clinical placement which will be carried out at the Apollo Hospital in Hyderabad, India.

Within the Faculty of Medicine and Health Sciences there is a well-defined committee structure which oversees the executive and academic responsibilities of the Faculty. A set of medical program committees provides an appropriate organisational structure to guide the development and later implementation of the program and interface with the Faculty structure.

The Executive Dean of the Faculty chairs the MD Executive and Curriculum Committee (MECC), which provides oversight of the MD program and guides the development, accreditation, implementation and evaluation of the program. The MECC is also responsible for the coordination, development and ongoing quality assurance of the curriculum for the program to ensure integration and achievement of the Macquarie MD Capabilities. There is a broad diversity of expertise and disciplinary backgrounds represented on this committee.

**Figure 3 - Medical Program Committee Structure**



Committees reporting to the MD Executive and Curriculum Committee include:

**MD Assessment Development Committee** which provides oversight, coordination, development and ongoing quality assurance of the assessment framework. The Associate Dean (Learning and Teaching) chairs this committee.

**MD Student Experience Committee** will provide a forum for staff and students to communicate and discuss all matters affecting the student experience. It will provide a clear channel for the reporting of the student experience to the MD Executive and Curriculum Committee.

**MD Evaluation and Improvement Committee** will facilitate continuous quality improvement for all components of the medical program.

**MD Admissions and Selections Development Committee** will provide oversight to the admission and selection model for the medical program. This committee also develops selection criteria, entry pathways, access schemes, and scholarships. The Associate Dean (Learning and Teaching) chairs this committee.

The MD Program Board provides cohesive management of all operational aspects of the medical program, including admissions, assessment of inherent requirements and reasonable adjustments, progression, fitness to practise and individual student cases. The core members of the Program Board include the Associate Dean, Learning and Teaching (Chair), Program Lead, Academic and Student Services Manager.

A sub-set of committee members from the following domains will join the meeting as required: admissions and selections, inherent requirements and reasonable adjustments, ratification of results processing, progression, fitness to practice and behavioural issues. The Program Board will meet at least six times per year, and reports to the MECC.

Reporting to the MD Program Board and the MD Assessment Development Committee, the MD Stage Committees have responsibility for operational aspects of the program.

**MD Stage 1 Committee (MS1C)** oversees the development of Year 1 and 2 of the medical program, within established curriculum and assessment frameworks. It will also be responsible for implementation, management and evaluation of all aspects of Year 1 and 2 of the program.

Members include the Stage 1 Lead (Chair); Year 1 and Year 2 Unit Convenors; along with up to 6 other members drawn from the academic staff to facilitate representation from the capability aspects.

**MD Stage 2 Committee (MS2C)** will oversee the development, implementation and evaluation of Year 3 and 4 and has a key role in developing and maintaining strong relationships with the program's clinical settings and the staff involved in the delivery of clinical placements for the program.

Members include the Stage 2 Lead (Chair); Associate Dean, Clinical Partnerships; Year 3 and Year 4 Unit Convenors; Director, Clinical Experience (MQ Health); Director, Clinical Experience (NSLHD); Director, Clinical Experience (Apollo); along with up to 6 other members drawn from the academic staff to facilitate representation from the major clinical disciplinary areas and clinical learning sites.

In addition to the formal MD governance structure, academic leads ensure the learning in each aspect is connected and vertically integrated throughout the medical program. This cohesive group of energetic and committed scientific, clinical, professional and medical education experts feeds into the Stage 1 and 2 Committees and the MD Assessment Development Committee and provides a consultation framework for the development of teaching blocks, topics, cases and assessment.

The Australian-based governance structure of the medical program is clear and allows for wide representation in decision making.

The team notes the signed Memorandum of Understanding and Clinical Affiliation Agreement between Macquarie University and Apollo Hospitals. However, there is a need for an agreement which further delineates the roles and responsibilities of each partner in the relationship. The team was concerned that a detailed contract between Macquarie and Apollo Hospitals Group in India had not been finalised at the time of the site visit given the critical nature of the 20 week core clinical placement to the entire medical program. Following the team's site visit, Macquarie provided to the AMC a detailed agreement developed and signed by Macquarie and Apollo Hospital Group outlining the responsibilities of the respective organisations, governance arrangements, and placement details. This agreement addresses the team's concerns.

The team was highly impressed by the leadership, facilities and clinician engagement at Apollo Hospital. However, the clinical school structure and governance arrangements between Macquarie and the Apollo Hospital require further elaboration. There is a need to develop the organisation structure for the Apollo clinical school which details the interface with the Australian-based governance structures, and specifies the teaching, training and assessment expectations, funding, student indemnification and services commitment.

The program has undertaken extensive consultation with relevant groups to support the development of the medical program.

The program seeks strategic advice on the direction and future development of the medical program through an MD External Advisory Board (MEAB). The MEAB will offer guidance, provide intelligence on the medical services industry with potential implications for the Faculty and medical program.

The MEAB includes consideration of the Faculty's relationships to its communities, including students, staff, health care consumers, researchers, health service providers, government and regulatory bodies. The Board is comprised of clinical academics and health care professionals with diverse expertise and experience in developing and implementing medical education programs in Australia.

The role and membership of the Board will be reviewed at the commencement of the academic term for the first intake of students (February 2018). The MEAB will meet quarterly and report to the Executive Dean and MD Executive and Curriculum Committee.

In order to inform the early planning of the medical program, the Faculty established an external student reference group comprised of recent graduates from Australian medical schools.

The MQ Health Consumer Advisory Committee, consisting of patients and community members, has provided feedback on aspects of the program including graduate capabilities, the program's vision and mission statements, and the proposed admissions model. It is envisioned that engagement with this committee will continue as members will be invited to participate as panel members for the MMI admissions process.

Consultation with clinical partners, the establishment of an MD External Advisory Board and representation of clinical academics on a range of medical programs has strongly engaged clinicians, particularly those in MQ Health, in the program development.

## **1.2 Leadership and autonomy**

*1.2.1 The medical education provider has autonomy to design and develop the medical program.*

*1.2.2 The responsibilities of the academic head of the medical school for the medical program are clearly stated.*

The Executive Dean of the Faculty (Head of Program) has full autonomy over the medical program. Additionally, the Executive Dean is cross-appointed as the Managing Director of the Macquarie University Clinical Associates (MUCA). This organisation operates MQ Health outpatient clinics, employs academic clinicians who work at the Macquarie University Hospital, appoints clinicians to clinical leadership structures across MQ Health, and develops the health care workforce through its Doctors in Training program. As such, MUCA provides a key integration function which facilitates an opportunity to expand the role of a private health care provider in health professional education, research and patient care. The medical program will clearly benefit from this arrangement.

Clinicians employed by MUCA have clearly protected time for teaching and research in addition to their clinical responsibilities. The MQ Health paradigm *Heal Learn Discover* has attracted many highly experienced clinicians who will contribute to teaching in the planned medical program. The vision of an academic health sciences centre has been clearly communicated and embraced through the organisation.

The team was impressed by the outstanding leadership of the Executive Dean, and the diverse and high quality expertise of the academic, professional and clinical staff associated with the medical program.

A newly-appointed Deputy Dean of the Faculty (0.4 FTE), will be responsible for oversight of educational innovation and quality, management of academic workloads, and assist the Executive Dean and Heads of Department in introducing new academic promotions processes. The Deputy Dean brings strong educational expertise and deep, relevant experience in the development and implementation of the Faculty's Doctor of Physiotherapy (DPT) program. The medical program will benefit from the experience and evaluation of key elements of the DPT program and student experience, particularly in regard to the students' research projects, Health and Wellbeing

Collaboration (HAWC) program, longitudinal portfolio advisors and interprofessional health care learning.

### **1.3 Medical program management**

*1.3.1 The medical education provider has a committee or similar entity with the responsibility, authority and capacity to plan, implement and review the curriculum to achieve the objectives of the medical program.*

*1.3.2 The medical education provider assesses the level of qualification offered against any national standards.*

The MD Executive and Curriculum Committee (MECC) is responsible for the coordination, development and ongoing quality assurance of the curriculum. This committee reports to the Faculty Executive Committee and the Faculty Education Committee and will ensure the program achieves the Macquarie MD Capabilities.

MECC membership includes the Executive Dean; Faculty General Manager; Associate Dean (Learning and Teaching); Program Manager, Education and Faculty Initiatives; Head of Department and Director (Physiotherapy Program); Head of Department (Clinical Medicine); Clinical Professor and Head of MQ Health Clinical Program (Primary Care, Wellbeing and Diagnostics); Faculty Student Services Manager, and an external consultant with expertise in program-level curriculum and assessment design.

The University Senate approved the medical program proposal as an Australian Qualifications Framework Masters Degree (Extended) program on 1 November 2016.

### **1.4 Educational expertise**

*1.4.1 The medical education provider uses educational expertise, including that of Indigenous peoples, in the development and management of the medical program.*

The team was impressed with the breadth and depth of medical education expertise contributing to the medical program. A number of staff hold education qualifications and several have held very senior roles in medical programs in Australia. This rich skill set facilitates the development and implementation of an educationally sound, innovative program. The team noted the Faculty's aim to develop a distinctive educational experience which links learning and translational research to clinical activities should be realised through the well-designed program.

While the Faculty does not have a dedicated medical education unit, the team was of the view that this did not pose an issue as the year level committees will provide valuable input into the development and implementation of the program.

The Faculty has identified the need to build expertise in Indigenous Health teaching and learning. An Indigenous Health academic will be appointed, however should this appointment be delayed for any reason, it will be critical for the Faculty to identify other sources of Indigenous Health expertise to inform the development of the curriculum. Following the site visit, Macquarie provided further information to advise that the Indigenous Health academic would commence in August 2017. This appointment addresses the team's concerns.

The Faculty has a strong relationship with the staff of Walanga Muru, the University's Office of Indigenous Strategy. The team was impressed by the enthusiasm of the Walanga Muru staff in engaging with the Faculty in the development of the medical program, and in facilitating links with Indigenous communities.

## **1.5 Educational budget and resource allocation**

*1.5.1 The medical education provider has an identified line of responsibility and authority for the medical program.*

*1.5.2 The medical education provider has autonomy to direct resources in order to achieve its purpose and the objectives of the medical program.*

*1.5.3 The medical education provider has the financial resources and financial management capacity to sustain its medical program.*

There is a clear line of responsibility for the medical program and the team is comfortable with funding arrangements. The authority for allocation of funds within the Faculty is clearly at the discretion of the Faculty executive based on strategic priorities.

There is a well-articulated commitment from the University's senior leadership to provide the resources required to develop and implement a successful medical program.

There is explicit recognition from the University's Vice-Chancellor and Chief Operating Officer, and CEO of Macquarie University Hospital, that medical programs are resource intensive, but have the potential to add significantly to the reputation of the University. The University's commitment to integrating research, teaching and learning, and clinical care within MQ Health and the medical program is firmly held.

There is a clear commitment to the cross-subsidisation of the Faculty's teaching and learning, and high quality research, through clinical and teaching income generated elsewhere in the University.

The Faculty has plans to grow the teaching and learning space within the Faculty Building, and the University plans to develop an additional biomedical science teaching and research building, which should be available for 2020-21.

Financing has been identified to support student teaching and services at Apollo Hospital in Hyderabad, and the appointment of a staff member to support administration and student services at the Northern Sydney Local Health District (NSLHD) has been discussed. The team expects that adequate funding arrangements will be outlined in the contracts that will be executed between Macquarie and the relevant clinical sites.

## **1.6 Interaction with health sector and society**

*1.6.1 The medical education provider has effective partnerships with health-related sectors of society and government, and relevant organisations and communities, to promote the education and training of medical graduates. These partnerships are underpinned by formal agreements.*

*1.6.2 The medical education provider has effective partnerships with relevant local communities, organisations and individuals in the Indigenous health sector to promote the education and training of medical graduates. These partnerships recognise the unique challenges faced by this sector.*

The team spoke with several key stakeholders who clearly supported the implementation of the medical program.

The Faculty provided documentation such as Student Placement Agreements and Memoranda of Understanding to the team to substantiate engagement with key stakeholders, particularly those organisations providing clinical placements for the program. Macquarie also provided additional documents to the AMC following the site visit that confirmed agreement from the Northern Sydney Local Health District (NSLHD) to provide the required number of clinical placements in

the relevant disciplines at Royal North Shore Hospital. A clinical placement agreement will be executed between the two organisations. The team will be interested in viewing the clinical placement agreement with NSLHD.

The program has developed good partnerships with various health and community organisations in the state and with the Apollo Hospital in India.

Partnerships with the Indigenous health sector are in the process of development. The staff of Walanga Muru are supportive of the program and spoke with the team regarding their ideas of where they will further develop relationships.

## **1.7 Research and scholarship**

### *1.7.1 The medical education provider is active in research and scholarship, which informs learning and teaching in the medical program.*

Macquarie University has a strong research profile in a number of areas of medical and clinical research including cancer, neurosciences, health systems/services, patient safety and quality, and clinical sciences. The Faculty has clearly identified areas of research focus, and is on a steep trajectory of growth in research income. The University's location within Australia's largest high technology precinct adds significantly to its capacity for translational research and industry impact.

Research opportunities in the medical program are well documented. The medical program leverages the excellent health care systems research expertise found within the Australian Institute of Health Innovation, which is located in the Faculty. There are a few areas of academic medicine yet to be developed, such as in paediatrics and mental health, and the team is confident this will be developed in coming years.

The Faculty's researchers are eager to become involved in teaching in the medical program, particularly in supervision of research projects.

## **1.8 Staff resources**

### *1.8.1 The medical education provider has the staff necessary to deliver the medical program.*

### *1.8.2 The medical education provider has an appropriate profile of administrative and technical staff to support the implementation of the medical program and other activities, and to manage and deploy its resources.*

### *1.8.3 The medical education provider actively recruits, trains and supports Indigenous staff.*

### *1.8.4 The medical education provider follows appropriate recruitment, support, and training processes for patients and community members formally engaged in planned learning and teaching activities.*

### *1.8.5 The medical education provider ensures arrangements are in place for indemnification of staff with regard to their involvement in the development and delivery of the medical program.*

The Faculty and MUCA have most of the staff required for the development and delivery of the medical program. There is particularly strong medical education and student selection expertise, and where there is a need to add clinical expertise not resident within MQ Health, such as in Obstetrics and Gynaecology, there is a plan to secure relevant expertise from Apollo Hospital, Royal North Shore Hospital and other clinical settings.

The University is committed to increasing the number of Indigenous staff and to providing appropriate support. Consistent with the objectives that have been established for Patyegarang: Macquarie University's Aboriginal and Torres Strait Islander Advancement Strategy 2012 – 2017,

the University aims to increase the proportion of Indigenous Staff Members to 2.6% of the University's FTE fixed term and continuing staff. The Faculty will contribute to this objective through increasing the number of Indigenous staff and the AMC will be interested in receiving updates on this activity.

The seven MUCA-appointed Clinical Program Heads are senior leadership roles who are responsible for the development of a strategic framework for the integration of clinical services, teaching and research within the clinical program and across MQ Health. As the program further develops the details of implementation of Stage 2, the team requests the structure of clinical leads for each discipline in the Apollo clinical school, as well as at Royal North Shore Hospital, to illustrate the interaction of clinical school leads with Macquarie University.

The Faculty is guided by the University's Recruitment and Selection Policy and there is scope to allow the Faculty to develop its own structure. This is evidenced through the Faculty's success in creating a number of new and unique positions to specifically support its initiatives.

The University indemnifies staff in relation to work and duties carried out during their employment.

## **1.9 Staff appointment, promotion and development**

*1.9.1 The medical education provider's appointment and promotion policies for academic staff address a balance of capacity for teaching, research and service functions.*

*1.9.2 The medical education provider has processes for development and appraisal of administrative, technical and academic staff, including clinical title holders and those staff who hold a joint appointment with another body.*

The University, Faculty and MUCA have clearly articulated appointment and workload models, which have been strongly influenced by models in the United States where academic health care centres are common.

The university-wide appointment, promotion and development policies for academic staff are well described and of high quality. The relevant policies and processes should flow through to the Faculty but at this stage do not seem to have been fully established, especially for clinical title holders.

The framework for promotion at Apollo Hospital is explicit. The team understands that the framework that will specify how teaching is rewarded at Apollo Hospital will be informed by the Faculty-Apollo agreement as noted at Standard 1.1.

As noted at Standard 1.2, the team commends the expectation that clinicians employed by MUCA collectively achieve Key Performance Indicators across all three domains of teaching, clinical work and research, and that some clinicians have clearly protected time for teaching and research in addition to their clinical responsibilities, while others contribute to clinical teaching as part of their clinical activities.

The Faculty's Learning Innovation Faculty Training (LIFT) site provides information regarding workshops which will assist the Faculty design effective learning experiences, with specific focus on effective digital resources, learning assessment and feedback. A second set of workshops is planned for 2017.

## **2 The outcomes of the medical program**

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### **2.1 Purpose**

*2.1.1 The medical education provider has defined its purpose, which includes learning, teaching, research, societal and community responsibilities.*

*2.1.2 The medical education provider's purpose addresses Aboriginal and Torres Strait Islander peoples and/or Māori and their health.*

*2.1.3 The medical education provider has defined its purpose in consultation with stakeholders.*

*2.1.4 The medical education provider relates its teaching, service and research activities to the health care needs of the communities it serves.*

Macquarie University's purpose in establishing a medical education program has three elements:

- 1 To educate medical students in an environment where learning is fully integrated with outstanding patient-centred clinical care and active health and medical research. This environment is MQ Health, Australia's first university-led and operated teaching hospital and academic health sciences centre.
- 2 To provide Australian medical students with a quality assured international education, recognising the value of student study abroad for learners, society and the health care system.
- 3 To graduate culturally responsive, engaged, global medical professionals, who understand the health systems they work within; have respect for, and sensitivity towards, the cultural needs of diverse populations, including Australian Indigenous peoples; and are aware of the impact of their own culture and values on their medical practice. *(Revised April 2017)*

The team acknowledges that developing culturally responsive doctors is a key priority of the program, and that Indigenous culture, history and health is an important focus. During the site visit, the team discussed with the Faculty the rationale for the inclusion of an explicit reference to Indigenous peoples in the purpose statement. The team reviewed a revision of the purpose statement which addresses Indigenous people, which is essential for inclusion in the purpose statement of an Australian medical school.

*The program's vision: To educate medical students in environments where learning is fully integrated with outstanding patient-centred clinical care and active health and medical research, and to create the nation's first global medical program for Australian and international students.*

The program's global focus has been developed in consultation with, and effectively communicated to, academic and professional staff who will be involved in delivering the program as well as other relevant stakeholders as outlined in Standard 1.

The program relates its teaching, clinical services and research to the health care needs of the communities it serves. MQ Health undertakes health services planning to determine clinical services necessary for the areas it serves, for example in the MQ Health outpatient clinics.

### **2.2 Medical program outcomes**

*A thematic framework is used to organise the AMC graduate outcomes into four domains:*

- 1 *Science and Scholarship: the medical graduate as scientist and scholar*
- 2 *Clinical Practice: the medical graduate as practitioner*
- 3 *Health and Society: the medical graduate as a health advocate*

- 4 *Professionalism and Leadership: the medical graduate as a professional and leader.*
- 2.2.1 *The medical education provider has defined graduate outcomes consistent with the AMC Graduate Outcome Statements and has related them to its purpose.*
- 2.2.2 *The medical program outcomes are consistent with the AMC's goal for medical education, to develop junior doctors who are competent to practise safely and effectively under supervision as interns in Australia or New Zealand, and who have an appropriate foundation for lifelong learning and for further training in any branch of medicine.*
- 2.2.3 *The medical program achieves comparable outcomes through comparable educational experiences and equivalent methods of assessment across all instructional sites within a given discipline.*

The team noted the mapping of the proposed program outcomes to the AMC Graduate Outcome Statements which reveals that all of the AMC outcomes are supported explicitly, except for two:

Outcome 3.1 which relates to the acceptance of responsibility for the advancement of the health and wellbeing of individuals, communities and populations.

Outcome 4.1 refers to *Good Medical Practice: Code of Conduct for Australian and New Zealand Doctors*.

Both outcome statements are implicitly supported by several of the Macquarie expectations, however the program considered both to be difficult to assess directly. The Faculty will implement a system to enable observed breaches or exemplary conduct in relation to these outcomes to be recorded and considered through the portfolio assessment process. The team accepts those comments.

The medical program graduate expectation statements have been broadly mapped to the thirteen Entrustable Professional Activities (EPAs), determined by the Association of American Medical Colleges (AAMC) as being required of students entering residency in the United States. The team noted the interesting innovations proposed with the adoption of EPAs into the program and, as noted in Standard 5, will be interested in the development of this initiative.

### **3 The medical curriculum**

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#### **3.1 Duration of the medical program**

*The medical program is of sufficient duration to ensure that the defined graduate outcomes can be achieved.*

The proposed program is a four-year graduate-entry Doctor of Medicine (MD).

The curriculum is built around years. However, to promote integration, the years are organised into two stages (Stage 1 includes Years 1 and 2, with Stage 2 encompassing the final two years of the program).

The overall program duration of 150 weeks, over four years at an average student load of 32 hours/week, is equivalent to approximately 4,800 hours. These hours are distributed as follows:

- 40% is student-led learning (1,928 hours)
- 26% is teacher-led learning (1,232 hours); and
- 34% is experiential learning (1,640 hours).

The majority of experiential learning, and a proportion of teacher-led learning, occurs in clinical environments. The emphasis on student-led and experiential learning modes is consistent with the Faculty's educational philosophy to use a technology-enhanced approach, where face-to-face teaching time (traditionally teacher-led learning) is primarily used for interactive and integrative learning, and for specific clinical skill development.

The team concluded that the program duration would enable graduates to achieve the program's graduate capabilities.

#### **3.2 The content of the curriculum**

*The curriculum content ensures that graduates can demonstrate all of the specified AMC graduate outcomes.*

##### *3.2.1 Science and Scholarship: The medical graduate as scientist and scholar.*

*The curriculum includes the scientific foundations of medicine to equip graduates for evidence-based practice and the scholarly development of medical knowledge.*

##### *3.2.2 Clinical Practice: The medical graduate as practitioner.*

*The curriculum contains the foundation communication, clinical, diagnostic, management and procedural skills to enable graduates to assume responsibility for safe patient care at entry to the profession.*

##### *3.2.3 Health and Society: The medical graduate as a health advocate.*

*The curriculum prepares graduates to protect and advance the health and wellbeing of individuals, communities and populations.*

##### *3.2.4 Professionalism and Leadership: The medical graduate as a professional and leader.*

*The curriculum ensures graduates are effectively prepared for their roles as professionals and leaders.*

The outcomes for the Macquarie University medical program have been articulated as graduate capabilities structured into four domains:

- Scientist and Scholar
- Clinical Practitioner
- Engaged Global Citizen; and
- Professional.

Each of the four domains are subdivided into two aspects; these eight aspects reflect the combined knowledge, skills, cognitive ability, and attitudes required of medical graduates. The eight aspects include:

- An applied medical scientist
- A scholar and research informed practitioner
- An effective personal and digital communicator
- A patient-centred and safe clinician
- A socially and culturally versatile practitioner
- A public health and systems aware practitioner
- A team worker
- An ethical and reflective practitioner.

The domains and aspects are summarised in the figure below.

**Figure 4 - Curriculum Domains and Aspects**

Domain	Scientist and Scholar		Clinical Practitioner		Engaged Global Citizen		Professional	
Aspect	Scientist	Scholar & Research	Communicator	Patient Centred & Safe	Socially & Culturally Aware	Public Health	Team Worker	Ethical & Reflective

Flowing from the eight aspects are 31 expectation statements which reflect the standard expected at graduation.

A further 24 expectation statements have been defined as expectations of development at the mid-point of the program (end of stage 1). Satisfactory achievement of the relevant expectation statements will be mandatory for progression from stage 1 to stage 2 in the program (at the end of Year 2), and for completion of the program.

The medical program's expectation statements are consistent with the AMC Graduate Outcomes. The medical program expectations extend on the AMC Outcomes in three key areas:

- There is greater emphasis on the medical graduate having a global focus in their practice and as a health advocate
- There is more explicit emphasis on using digital and electronic systems in patient care and practice; and
- The expectation statements are, in parts, more integrated across the four domains.

The content of the curriculum is organised into two stages, each stage being two years in duration.

## **Stage 1**

### *Year 1 Foundations of Medical Practice*

Year 1 consists of a combination of units in applied medical sciences, clinical practice and evidence-based and interprofessional health care presented in two sessions. Each session has three distinct units with separate assessments (and assessment components), with an overarching programmatic assessment framework. Progression rules exist for each unit and the year as a whole. The curriculum is organised through a series of three week case-based clinical colloquium and team-based learning, which are structured around body systems and common medical conditions. Clinical learning will occur in simulated clinical scenarios.

### *Year 2 Integrated Clinical Learning and Research*

Year 2 is organised into four integrated units structured on the clinical programs that organise clinical activities at MQ Health. The strengths of MQ Health have been well utilised in defining the underlying structure of the curriculum.

Within the three units delivered over 12 weeks, the following disciplines are combined:

- Primary Care and Wellbeing and Diagnostic (including mental health) with Cancer
- Neurosciences is combined with Bone and Joint; and
- Cardiovascular and Respiratory with Surgery and Gastrointestinal.

The framework for curriculum design in these three units uses a weekly high-level theme (common to all three units) linked to a set of unit-specific case presentations, topics or scenarios to provide a focus for learning. The proposed 12 weekly themes represent:

- Six commonly understood classical disease presentations or pathologies (collapse, infection, inflammation, pain, organ failure, and bleeding);
- Three important aspects of health care delivery (prevention, health promotion, and team-based care); and,
- Three of the largest health burdens of modern society (multi-morbidity, psychological medicine, and ageing).

The second session of Year 2 consists of one of the remaining 12 week integrated block units plus MEDI923: Critical Care, Patient Safety & Quality and Research. This unit is studied by all students over the final six weeks of Year 2. The clinical context of this unit is the Critical Care and Anaesthetics Program of MQ Health, and the unit provides focused learning on the patient safety and quality aspects of health systems, plus more advanced learning about research methodologies.

Year 2 students will also enrol in MEDI924: Reflective Medical Practice 1, which is a unit designed for students to revise, reflect and be assessed on their consolidated learning at the mid-point of the medical program. This unit provides 150 hours of student load to facilitate meaningful reflection and prepare for major mid-point barrier assessments.

### *Research*

In Year 2, research training will be delivered as part of the common longitudinal program, and within MEDI923. The research content of this unit will be focused upon skill development required to design and develop a specific research project plan, and it will include the equivalent of five days of research-related learning (30 hours).

Students will select from three streams: quantitative methods, qualitative methods, or clinical research depending upon the nature of the particular research project they have selected to undertake in Year 3 and 4. The five research areas offered to the students will be safety and quality, health care systems, clinical practice, public health and medical education.

## **Stage Two**

Years 3 and 4 represent work-integrated learning commonly referred to in medical education as clinical clerkships. A range of prescribed, selective and elective clerkships are proposed. In Year 3, all clerkships are designed as 4-week modules, which are combined into 20 or 24-week units of study. The Year 3 units are prescribed, with students rotating through the core clinical disciplines. Clerkships in Year 4 offer a large degree of flexibility, both with respect to student choice in the clinical disciplines, to experiences, and to the physical location in which these experiences occur.

### *Year 3: Core Clinical Placements*

Year 3 will comprise a series of core clinical clerkships, each of 4-weeks duration, in the clinical disciplines of Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Primary Care and Mental Health. Students will undertake two rotations through each of the core clinical placements in both Australia and India, with the exception of Mental Health which will only be undertaken in Australia.

In MEDI933: Core Clinical Placements B, students will undertake each of the following six core clinical placements in Australia (24 weeks duration):

- Internal Medicine: 4 weeks at MQ Health in clinical placements that include Cardiology, Respiratory Medicine, Neurology, Gastroenterology/Liver, Endocrine and Diabetes, and Cancer Medicine
- Surgery: 4 weeks at MQ Health in clinical placements that include Colorectal and Upper GI Surgery, Orthopaedic Surgery, Cardiothoracic Surgery, Urology, and Neurosurgery
- Paediatrics: 4 weeks at Northern Sydney Local Health District (NSLHD)
- Obstetrics and Gynaecology: 4 weeks at NSLHD
- Primary Care: 4 weeks at MQ Health. Opportunities for students to undertake clinical placements in rural primary care practices will be pursued but these affiliations are yet to be established
- Mental Health: 4 weeks at NSLHD plus opportunities at the MindSpot Clinic at Macquarie University.

In MEDI932: Core Clinical Placements A, students will undertake each of the following five core clinical placements at the Apollo Hospital Group in Hyderabad, India (20 weeks duration):

- Internal Medicine: 4 weeks at Apollo Hospital, Hyderabad in clinical placements of General Medicine with opportunities for experience in a range of Internal Medicine subspecialties
- Surgery: 4 weeks at Apollo Hospital, Hyderabad in clinical placements of General Surgery with opportunities for experience in a range of surgical subspecialties
- Paediatrics: 4 weeks at Apollo Hospital, Hyderabad
- Obstetrics and Gynaecology: 4 weeks at Apollo Hospital and Apollo Cradle, Hyderabad
- Primary Care: 4 weeks at Apollo Hospital, Hyderabad in clinical placements in the Hospital Emergency Department and Preventative Medicine setting.

Student groups undertaking parallel clinical placements in similar disciplines in India and Australia will compare their experiences through technology aided self-reflection and online communities of practice. Synchronous and asynchronous online discussions and tutorials will enable comparative discussion of experiences and reflection on cultural difference, medical practice and health systems across the two settings.

The team accepts that the clerkship model of clinical learning is experiential by its nature and thus variable in the particular clinical cases encountered by different students. The clerkships in Medicine, Surgery and Primary Care will have no set cases as the purpose is learning the key tenets of the broader clinical discipline including the approach to clinical assessment, reasoning and management, regardless of the particular case mix.

The attachments to General Medicine at Apollo Hospital in Hyderabad will expose students to a range of tropical diseases that they would rarely, if ever, encounter in Australia. With a total of eight weeks experience in each of these core disciplines on two separate occasions, combined with sharing cases of all students attached to that particular discipline through the communities of practice initiative, the team agrees that students will encounter a rich range of experiences across two different countries.

For clerkships in Paediatrics and, Obstetrics and Gynaecology, the program plans to organise a more structured 8-week experience to ensure students undertake learning in common health problems encountered in these disciplines. Further development work will be undertaken on these Year 3 placements in Paediatrics and Obstetrics and Gynaecology, and the team will be interested in updates on these initiatives.

The final component of Year 3 will be a year-long MEDI931: Research Project 1 in which 150 hours of student load is allocated to undertake a group research task. Students will work in pairs to develop and finalise a research question, plan and undertake the research projects.

#### *Year 4: Advanced Clinical Placements*

During Year 4, all students will undertake the following clinical clerkships in Australia (16 weeks duration):

- Emergency Medicine: 4 weeks at NSLHD
- Selective clerkships: 4 weeks at MQ Health, NSLHD and/or MindSpot Clinic
- Selective clerkships: 4 to 8 weeks at MQ Health, NSLHD and/or MindSpot Clinic.

During Year 4, all students will undertake the following clinical placements in global settings (16 weeks duration):

- Selective clerkships: 4 to 8 weeks at Apollo Hospital, Hyderabad, India
- Elective: 8 weeks (student-initiated).

Year 4 continues the clinical clerkship model, but the key difference compared to Year 3 is a much greater degree of flexibility and student choice in assembling the particular clinical experiences to be undertaken, and the timeline in which the requisite 32 weeks are completed.

The only prescribed module is a 4-week clerkship in Emergency Medicine, which will be undertaken in Sydney at a hospital within the NSLHD. Students will be able to choose from a menu of selective clerkships available within MQ Health, the NSLHD, or Apollo Hospital of either 4 or 8-weeks duration, plus undertake an elective of 8-weeks duration which is student-initiated and organised.

The team commends the Faculty's partnerships with Apollo Hospital, the MindSpot Clinic and NSLHD to provide clinical experiences. In working with NSLHD, the Faculty has engaged with the University of Sydney, resulting in a collaborative relationship.

Students will finalise and present their research projects, in partnership with Doctor of Physiotherapy students as part of an Interprofessional Research Symposium, offering a good opportunity for interprofessional learning.

Detailed curriculum mapping is planned to include all learning activities, and each activity will have a set of learning objectives following the overarching format of capability – aspect – activity learning outcome. The team recognises that the first level of curriculum mapping for Year 1 has been achieved and commends the interactive searchable map. As noted at Standard 3.4, the team looks forward to reviewing a more detailed map including specific learning objectives for Year 1.

Progress on curriculum content for Year 2 includes identification of cases for case-based tutorials in consultation with the Year 1 group, and development of draft learning outcomes for each week/case. A draft of the bedside teaching schedule has been developed and an example case developed. The team recognises that the Year 2 curriculum is now in development, and looks forward to receiving the learning objectives as referenced at Standard 3.4.

### **3.3 Curriculum design**

*There is evidence of purposeful curriculum design which demonstrates horizontal and vertical integration and articulation with subsequent stages of training.*

The curriculum has been purposefully designed, with horizontal and vertical integration embedded in the program. The curriculum is team and case-based. The Year 3 and 4 clinical clerkship model articulates well with the expectations of prevocational training. The final assessments in the program will focus on entrustment decisions in relation to the EPAs, to provide assurance that graduates are ready to contribute effectively as hospital interns in Australia.

The medical program has been designed by defining the learning outcomes of the program, developing assessment tasks that measure achievement of the stated outcomes, followed by development of content and pedagogical approaches. The team notes the staff involved in curriculum development are highly enthusiastic, skilled and engaged in the process.

A set of guiding pedagogical principles (Enhance-Extend-Empower-Entrust) have been devised to assist Stage Committees and Curriculum Working Groups with learning design. The clinical colloquium and team-based and case-based learning provide for integration across the applied medical science units and clinical practice units.

The case-based learning in Year 2, using twelve common themes across the three, 12-week units of teaching allows for further integration.

Longitudinal learning in Year 2, the long-term research project and the programmatic assessment practices provide integration opportunities.

The communities of practice concept will facilitate comparative case-based tutorials between students working in India and Australia in Year 3. This approach will facilitate a wealth of learning opportunities, including conversations regarding differences in health care systems and clinical presentations and management. As noted at Standard 8.4, the team commends the Faculty on the relationship with Apollo Hospital and recognises the wealth of learning that is possible during this clinical placement.

An Integration Team, comprised of members of the Year 1 and 2 groups and discipline or aspect leads, will have a role in program development and integration across the years and the various

sites of student learning. The AMC team recognises the innovative nature of an Integration Team and its ability to communicate effectively and efficiently the extent and depth of discipline components in various years of the curriculum.

The enthusiasm, expertise and collaborative interaction between discipline and academic leaders, clinical staff and members of the various committees is impressive.

### **3.4 Curriculum description**

*The medical education provider has developed and effectively communicated specific learning outcomes or objectives describing what is expected of students at each stage of the medical program.*

The Faculty will employ a range of methods to communicate the graduate capability framework (including the capabilities, aspects and expectation statements) and the unit learning outcomes, to students and relevant staff.

All information about the medical program will be published in the MD Program Handbook, which will include information about the program structure, graduate capabilities, the program philosophy, year by year and stage by stage information about the units, timetables, unit and programmatic assessments and links to key policies relevant to students. The team reviewed a draft of the MD Program Handbook, and look forward to any updates of this. Unit Guides, which will contain unit specific information, will be released online two weeks before the start of the study period in 2018, in line with University policy.

An interactive website with information about the program, including a detailed curriculum map outlining the structure of the curriculum is available. Year 1 units have unit outcomes attached. However, learning objectives for all teaching sessions have not yet been developed, and are required for assessment blue printing. As noted at Standard 3.3, the team requests the program complete work on specific learning objectives for Year 1 and Year 2.

### **3.5 Indigenous Health**

*The medical program provides curriculum coverage of Indigenous Health (studies of the history, culture and health of the Indigenous peoples of Australia or New Zealand).*

The Indigenous Health curriculum is in the early stages of development. A Faculty-level Indigenous Strategy Committee will be charged with developing the Indigenous Health curriculum for the medical program.

It is anticipated that the students will have the opportunity to learn about Indigenous Health through rural and outer urban Aboriginal Medical Service visits, and GP settings.

The team commends the open communication with staff from Walanga Muru and looks forward to reviewing a curriculum map outlining the various components of Indigenous Health content.

### **3.6 Opportunities for choice to promote breadth and diversity**

*There are opportunities for students to pursue studies of choice that promote breadth and diversity of experience.*

Students will be offered opportunities for breadth and diversity of learning during their research project. The projects, which will be presented in an interprofessional research symposium with the Doctor of Physiotherapy students, will also promote interprofessional learning and the team recognises the strengths of this approach. The program will also offer a variety of student initiated learning opportunities during clinical placements.

Selective and elective terms in Year 4 will provide opportunities for breadth and diversity of experiences and the team looks forward to receiving further details of these activities.

## **4 Learning and teaching**

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### **4.1 Learning and teaching methods**

*The medical education provider employs a range of learning and teaching methods to meet the outcomes of the medical program.*

The Faculty plans to use a wide range of learning and teaching methods across the curriculum to optimise learning and provide vertical and horizontal integration.

The Faculty's educational philosophy emphasises a technology-enhanced blended learning approach featuring a variety of teaching methods, examples being the Clinical Colloquium/team-based learning, the flipped classroom and clinical assessments. The team was impressed by the work of the Faculty's learning and design team who, in collaboration with subject matter experts, provide impressive and innovative learning and teaching items.

Given the focus on curriculum development in Years 1 and 2, firm details of all teaching and learning activities in Years 3 and 4 are still to be concluded. There is a commitment to continue the teaching and learning of clinically relevant medical sciences, although the exact format of this is still to be developed.

The use of a detailed curriculum map will play a major role in ensuring quality in the delivery of the spiral curriculum. As noted at Standard 3, the team acknowledges the mapping is under development and requests updates on progress.

### **4.2 Self-directed and lifelong learning**

*The medical program encourages students to evaluate and take responsibility for their own learning, and prepares them for lifelong learning.*

Students will have a combination of structured and student-directed learning opportunities throughout the program.

The proportion of teacher-led learning is highest in Year 1 (46% of student hours), and gradually reduces across year levels (i.e. 29% in Year 2 and ~13% in each of Years 3 and 4) consistent with a shift to more self-directed student-led and experiential learning, which are the dominant modes in Years 3 and 4. This shift across the program aims to encourage students to evaluate and take responsibility for their own learning, and to prepare them for lifelong learning.

Over the whole program, 40% of learning is student-directed. The addition of a large proportion of experiential learning and the use of reflective writing in an e-portfolio will provide opportunities for developing self-directed learning skills. All students will have a portfolio mentor who will guide the student and assist in reflection. The mentor will be reviewing up to six students a year, allowing for a team of students (up to 24) per mentor, to support each other.

### **4.3 Clinical skill development**

*The medical program enables students to develop core skills before they use these skills in a clinical setting.*

The program provides graded staging of learning, with increasing levels of clinical responsibility.

The Enhance-Extend-Empower-Entrust paradigm is used by the Faculty as the framework for developing integration and a step-wise approach to increasing the level of knowledge required before students are entrusted with using skills in a clinical setting.

One of the strengths of the Macquarie medical program is that student learning will occur within an active clinical facility.

In Year 1, students learn clinical skills in controlled and safe environments. The inclusion of a structured simulated-patient program, including use of the simulation laboratory in clinical skills sessions, will enable students to acquire and practise these skills in a safe and supervised environment in preparation for the clinical years. Clinical skills tutorials with clinical tutors will also assist in the acquisition of skills.

In Year 2, students will spend a minimum of eight hours/week interacting with real patients within MQ Health's hospital and clinics. The clinical interactions will be relatively structured and based around a weekly theme and set of clinical presentations. The team noted this year of scaffolded clinical learning is an appropriate approach to prepare students for the more independent clinical learning planned in the Stage 2 clerkships.

In later years, students will have the opportunity to develop and practise their clinical skills in authentic clinical settings with appropriate supervision and support. The program proposes extensive student clinical contact with patients.

#### **4.4 Increasing degree of independence**

*Students have sufficient supervised involvement with patients to develop their clinical skills to the required level and with an increasing level of participation in clinical care as they proceed through the medical program.*

The team is confident that students will be afforded appropriately staged involvement with patients that will safely develop their clinical skills. Small group bedside teaching in Year 2 allows the students to interact with real patients in a structured and supervised environment.

Students will have an opportunity to follow a patient from consultation through to treatment and discharge in MUH. This experience allows the student to develop professional relationships with both patients and their families, and develop a holistic understanding of the patient and their needs. The team acknowledges this innovative and valuable learning experience.

#### **4.5 Role modelling**

*The medical program promotes role modelling as a learning method, particularly in clinical practice and research.*

The MQ Health core purpose, *Heal Learn Discover*, represents a culture that places equal importance on teaching, research and clinical care and as a result creates the ideal environment for positive role modelling opportunities.

The strategic goals of MQ Health underpinning this core purpose are:

- 1 Integrated organisation – Build an organisation that is capable of and committed to achieving the vision of an integrated academic health sciences centre.
- 2 Patient centred academic culture and identity – Create an academically driven organisational culture that promotes and differentiates MUHSC to internal and external constituencies.
- 3 Signature clinical services – Develop signature clinical programs and services that attract patients from across Australia and beyond.
- 4 Distinctive educational programs – Design undergraduate and postgraduate educational programs that leverage our unique capabilities.
- 5 Impactful research – Expand and develop biomedical, clinical, translational and health systems research towards improved health outcomes.

- 6 Synergistic partnerships - Partner with industry, other academic institutions, government organisations and the community to advance research, education and clinical care.

As noted in Standard 1, the team recognises MUCA's innovative employment model which enables clinicians to become role models in the domains of clinical care, research and teaching.

#### **4.6 Patient centred care and collaborative engagement**

*Learning and teaching methods in the clinical environment promote the concepts of patient centred care and collaborative engagement.*

The concept of patient centred care is embodied in the program's vision: *To educate medical students in environments where learning is fully integrated with outstanding patient-centred clinical care and active health and medical research, and to create the nation's first global medical program for Australian and international students.*

The curriculum design is informed by, and effectively supports, this vision, and the purpose of the program which is to educate medical students in an environment that integrates outstanding patient-centred clinical care and active health and medical research.

#### **4.7 Interprofessional learning**

*The medical program ensures that students work with, and learn from and about other health professionals, including experience working and learning in interprofessional teams.*

Medical students will participate in evidence-based and interprofessional health care units (MEDI912 and MEDI915) with first year Doctor of Physiotherapy students. This approach represents a significant commitment to incorporate interprofessional education into the Faculty's two Masters (Extended) programs.

The presentation of the research projects within the medical program will be undertaken with the Doctor of Physiotherapy students, an opportunity which will promote interprofessional learning. The team recognises the strengths of this approach.

The Health and Wellbeing Collaboration (HAWC) program provides another opportunity for interprofessional learning. In Year 1, students engage in independent student-initiated interaction with a volunteer member of the community with a health issue. The project has run successfully for the last five years in the physiotherapy program, and will be expanded to include medical students.

The team applauds the proposed dedicated space which would allow physiotherapy and medical students to interact with patients.

## 5 The curriculum – assessment of student learning

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### 5.1 Assessment approach

5.1.1 *The medical education provider's assessment policy describes its assessment philosophy, principles, practices and rules. The assessment aligns with learning outcomes and is based on the principles of objectivity, fairness and transparency.*

5.1.2 *The medical education provider clearly documents its assessment and progression requirements. These documents are accessible to all staff and students.*

5.1.3 *The medical education provider ensures a balance of formative and summative assessments.*

The Faculty has developed an assessment framework based on:

- Assessment of learning
- Assessment for learning
- Assessment as learning.

The Faculty has outlined their assessment philosophy and strategy, which aligns with the University's Assessment Policy. The Faculty will use a program level design approach to the development of assessment which will facilitate integration and balance of assessment tasks across the medical program.

The Faculty will focus primarily on capability-based assessment using a mix of unit and programmatic assessment. The capability-based assessment, which relies on the use of Entrustable Professional Activities (EPAs), is linked to the medical program's graduate capability framework. This framework is structured into four capabilities: Scientist and Scholar; Clinical Practitioner; Engaged Global Citizen; and Professional. Mid-program and graduation expectation statements have been mapped to specific EPA's in the medical program capability framework, and this work has been provided in the program's submission.

The program's proposed progression rules are described in terms of progression across the program and are supported by the University's General Coursework Rules.

The Faculty will adopt the University's five-point grading scale (i.e. High Distinction / Distinction / Credit / Pass / Fail), for reporting most Year 1 and Year 2 (Stage 1) units, with associated descriptors which have been specifically designed for the medical program.

Clinical units in Years 3 and 4 (Stage 2) will be assessed on a Pass / Fail basis. Within each unit capability-based assessment tasks will use a four-point grading scale (i.e. Pass+ / Pass / Pass- / Fail) with relevant descriptors. Students who fail a hurdle assessment task will be given the opportunity of supplementary assessment. Students who fail a unit will be required to successfully repeat the unit before proceeding to the next year level. Students who fail a unit at a second attempt will exit the program. This process aligns with Macquarie University policies and rules.

There will be no need to synchronise assessment between India and Australia as the only major assessment task will be the end of Year 3 OSCE, which will be held in India and Australia using different stations.

The Faculty will use an electronic portfolio to assess longitudinal learning of the students across the four years of the program. The portfolio will be regularly reviewed and assessed by a portfolio mentor who will oversee students at each year level. Over time, this will facilitate the development of a community of practice with vertical peer mentoring.

The Faculty provided an assessment blueprint which indicates an extensive range of both summative and formative assessment across Stages 1 and 2. All major summative assessments will also be offered in a low-stakes formative format before being used for summative purposes.

## **5.2 Assessment methods**

*5.2.1 The medical education provider assesses students throughout the medical program, using fit for purpose assessment methods and formats to assess the intended learning outcomes.*

*5.2.2 The medical education provider has a blueprint to guide the assessment of students for each year or phase of the medical program.*

*5.2.3 The medical education provider uses validated methods of standard setting.*

The Faculty will use a broad range of assessment tools across the curriculum, including written examinations, practical examinations, Objective Structured Clinical Examinations (OSCEs), clinical assessments including case reports, MiniCEX and Direct Observed Procedural Skills (DOPS), as well as a portfolio and Entrustable Professional Activities (EPAs).

The Faculty plans to modify and adapt existing EPA frameworks from the Association of American Medical Colleges (AAMC) to suit the Australian context, and the level of the medical program. It is anticipated that the Chen et al. *Developing EPAs for entry into clerkship* and the AAMC's *Core EPAs for Entering Residency* will be adapted, creating mid-program and graduate EPAs respectively. The Faculty intends to incorporate the EPAs into the medical program's assessment scheme. The final assessments in the program will focus on entrustment decisions in relation to the EPAs, to provide assurance that graduates are ready to contribute effectively as hospital interns in Australia, while the assessment of the capabilities will assure that they are ready to direct their own development as ethical, culturally responsive and reflective professionals in whatever field of medicine they choose, and in whatever global context they practice. The use of EPA's for capability-based assessment in a medical program is innovative and the team will be interested in further updates about their implementation and performance.

The Faculty has deliberately reduced reliance on single high stakes examinations. Key progression decision points are made mid program (i.e. at the end of Stage 1) and at the end of the program (i.e. at the end of Stage 2). The end of Stage 1 assessment will include a summative 12 station OSCE and a Portfolio examination.

While the Stage 1 assessment has been clearly articulated, more work is required on developing the strategy for Stage 2. The team requests evidence that work is progressing on the Stage 2 assessment strategy.

The team looks forward to a second update on the Stage 2 assessment blueprint as further development leads to completion of the blueprint.

The Faculty will use validated standard setting methods where they are indicated. This will depend on the type of assessment task. Consistency across sites will be important given the significant number of students based in India in Years 3 and 4. In particular, the training of OSCE examiners will be important given that this will be the major form of assessment in Year 3 clinical sites. This process will be facilitated by regular faculty exchange and calibration between Apollo and Macquarie University will occur by regular tele-/video-conferencing.

### **5.3 Assessment feedback**

*5.3.1 The medical education provider has processes for timely identification of underperforming students and implementing remediation.*

*5.3.2 The medical education provider facilitates regular feedback to students following assessments to guide their learning.*

*5.3.3 The medical education provider gives feedback to supervisors and teachers on student cohort performance.*

The Faculty has appropriate remediation and exclusion policies which align with Macquarie University policies and rules.

Plans are in place to appoint a clinical lead at the Apollo Hospital, and this role will be finalised once the details for Stage 2 of the program are more developed and the contract between Macquarie University and Apollo Hospital has been signed, as noted in Standard 1. The inclusion of Apollo Hospital clinical staff on key MD committees will also facilitate the exchange of information and help embed a successful assessment strategy in Years 3 and 4 at Apollo Hospital.

### **5.4 Assessment quality**

*5.4.1 The medical education provider regularly reviews its program of assessment including assessment policies and practices such as blueprinting and standard setting, psychometric data, quality of data, and attrition rates.*

*5.4.2 The medical education provider ensures that the scope of the assessment practices, processes and standards is consistent across its teaching sites.*

An assessment policy outlines the principles and underpins the University's approach to assessment, including the requirement for regular reviews and the use of moderation as a quality review and assurance process across all stages of the assessment cycle.

Assessment processes are designed to engage students in the learning process and to encourage and support learning. The assessment policy aims to provide flexibility to staff and students, while ensuring that all assessment meets a common set of minimum standards as outlined in this policy.

The MD Evaluation and Improvement Committee (MEIC) will oversee the development and implementation of a regular quality assurance process which would include continuous evaluation and monitoring of the performance of the curricular and assessment frameworks, student outcomes, the admission and selection model, clinical placements and the student experiences. This committee will report to the MD Executive and Curriculum Committee.

## 6 The curriculum – monitoring

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### 6.1 Monitoring

6.1.1 *The medical education provider regularly monitors and reviews its medical program including curriculum content, quality of teaching and supervision, assessment and student progress decisions. It manages quickly and effectively concerns about, or risks to, the quality of any aspect of medical program.*

6.1.2 *The medical education provider systematically seeks teacher and student feedback, and analyses and uses the results of this feedback for monitoring and program development.*

6.1.3 *The medical education provider collaborates with other education providers in monitoring its medical program outcomes, teaching and learning methods, and assessment.*

The proposed monitoring and quality assurance framework is an impressive combination of University and Faculty approaches and includes specific considerations for offshore components. The leadership of the medical program demonstrates a strong commitment to monitoring and evaluation, and there is considerable evaluation expertise within the Faculty. Plans appear suitable for monitoring and evaluation of the program, and the team looks forward to future updates, particularly on the operational aspects of monitoring and evaluation at off-campus sites as well as the first year cohort.

The University has a range of frameworks, policies and procedures focusing on the quality improvement of curriculum, teaching, assessment and progression. In order to encourage continuous improvement in University outcomes and effectiveness of its structures and activities, a Quality Enhancement (QE) Framework ensures the alignment of planning, resources and effort behind the achievement of its goals.

A University Quality Enhancement Committee undertakes organisation unit reviews which examine the quality of academic programs, research, learning and teaching. These reviews form part of the evaluation element of the University's QE Framework.

A Quality Assurance Framework for Program and Unit Reviews is currently being developed and will establish both cyclical review of programs and units based on threshold standards, and out of sequence reviews are based on risk indicators. The Framework will identify risk profiles of programs which will indicate the review requirements, including the schedule of review and the level and type of detail required. Macquarie considers a program with offshore provision, such as the medical program, a higher risk category and as such it is anticipated that the medical program would be subject to more regular and detailed review within the University's Quality Assurance Framework for Program and Unit Reviews.

The Quality Assurance Framework also seeks feedback from peers, students, industry and the community. Academic programs are continually evaluated for relevance and sustainability; program learning outcomes are reviewed and academic standards are assured.

Specific to the medical program, the MD Evaluation and Improvement Committee (MEIC) will oversee the development and implementation of a regular quality assurance process. This would include continuous evaluation and monitoring of the performance of the curricular and assessment frameworks, student outcomes, the admission and selection model, clinical placements and the student experiences. This committee will report to the MD Executive and Curriculum Committee.

The policy and procedures together provide a foundation for embedding student evaluation and feedback processes into a continuous cycle of quality enhancement at individual, unit, program, department, Faculty and University levels. Student experiences and student feedback will form a

major source of data towards quality assurance and will form a strong component for the evaluation of the program. The planned Student Experience Committee will meet quarterly (or more regularly, if required) and review student feedback, and connect with the MD Evaluation and Improvement Committee.

There is a proposal to ensure monitoring of the offshore training at Apollo Hospital through affiliation agreements that will reflect the responsibilities for quality assurance, including monitoring, reviewing and reporting. Early and continuing evaluation of the students' experience during their India rotation will be beneficial, with modifications to the program as required.

Key performance indicators will be identified related to the India clinical placements, and a process for evaluating the performance against these will form the basis of cyclical audits. In India, the team's interaction with the executive of the Apollo Hospital and the clinicians reflected a strong commitment to teaching and maintaining quality of training. Clinicians look forward to regular online interactions and faculty exchanges with their peers at Macquarie. It is planned that all clinicians involved in training students will engage in staff development.

In addition to engaging students, the medical program intends to use a broader range of feedback mechanisms for the evaluation of teaching and curriculum. The Faculty will collaborate with other Australian and New Zealand medical schools through the Medical Deans and monitor the medical program outcomes through the Medical Schools Outcome Database (MSOD).

The Faculty demonstrates its commitment to learning, teaching and curriculum enhancement by informing students about changes made in response to feedback from previous students. The team had an opportunity to meet Bachelor of Clinical Science (BClinSci) students who confirmed the Faculty promptly addressed student feedback.

Overall, the plans appear suitable for monitoring and evaluation of the program, but translation to practice will need to be reviewed once the program is in place. There are also plans to conduct research through longitudinal studies, expanding into the postgraduate years.

## **6.2 Outcome evaluation**

*6.2.1 The medical education provider analyses the performance of cohorts of students and graduates in relation to the outcomes of the medical program.*

*6.2.2 The medical education provider evaluates the outcomes of the medical program.*

*6.2.3 The medical education provider examines performance in relation to student characteristics and feeds this data back to the committees responsible for student selection, curriculum and student support.*

The University and the Faculty propose to have quality assurance frameworks that measure outcomes against pre-defined standards of assessment. Any quality issues pertaining to student outcomes will be identified, discussed and resolved to promote continuous quality improvement.

There is a committee structure at the Faculty level that will monitor assessment and student outcomes. There is a plan to appoint an experienced evaluation and improvement officer to coordinate evaluation activities and support the academic staff to undertake evaluation activities. There are also plans to study the performance of cohorts of students and graduates in relation to the outcomes of the program, including a focus on the performance of students across the Australian sites and in India.

The Faculty is aware that students admitted through some access schemes may need additional support to achieve the required outcomes, and will plan specific student support activities.

There are plans to capture and evaluate the graduate outcomes using established university surveys and analyses, and through participation in MSOD. The program also aims to collaborate with the University's Analytics, and Career and Employment Services teams to capture quantitative and qualitative data about graduate outcomes and the graduates' preparedness to practise as interns in Australia.

### **6.3 Feedback and reporting**

*6.3.1 The results of outcome evaluation are reported through the governance and administration of the medical education provider and to academic staff and students.*

*6.3.2 The medical education provider makes evaluation results available to stakeholders with an interest in graduate outcomes, and considers their views in continuous renewal of the medical program.*

The program plans to regularly share evaluation data with the program executive, faculty and students. The results of the various evaluation mechanisms including curriculum and assessment frameworks, student support services, quality and adequacy of clinical experiences and graduate outcomes will be considered by the MD Evaluation and Improvement Committee and would be used to inform continuous cycles of improvement. The program also proposes to make the feedback and evaluation results available to relevant stakeholders such as the MD External Advisory Board.

The Faculty also plans to develop an annual student and staff communication strategy to convey the changes and improvements made to the program in response to the evaluation feedback. The program will be required to provide evidence of this in future.

## **7 Implementing the curriculum - students**

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### **7.1 Student intake**

*7.1.1 The medical education provider has defined the size of the student intake in relation to its capacity to adequately resource the medical program at all stages.*

*7.1.2 The medical education provider has defined the nature of the student cohort, including targets for Aboriginal and Torres Strait Islander peoples and/or Māori students, rural origin students and students from under-represented groups, and international students.*

*7.1.3 The medical education provider complements targeted access schemes with appropriate infrastructure and support.*

The program plans to enrol up to 60 full-fee paying students. Macquarie University will not have Commonwealth Supported medical places. The intended cohort size is well defined with assessment of capacity across all stages and proposed clinical contexts evident.

There is a target for 20 international students, drawn from a variety of backgrounds. While there are no specific targets for rural students there is a planned inclusion of bonus points and scholarships to attract rural applicants. There is a target of enrolling two Indigenous students per year.

A particular strength is the input of the Walanga Muru unit, overseeing the development of support arrangements for future Indigenous students. Given the full-fee nature of the program, a key area of focus is financial support, with the intent to provide significant scholarship support for Indigenous students. The team acknowledges ongoing work around further equity merit scholarships/support for other student groups.

### **7.2 Admission policy and selection**

*7.2.1 The medical education provider has clear selection policy and processes that can be implemented and sustained in practice, that are consistently applied and that prevent discrimination and bias, other than explicit affirmative action.*

*7.2.2 The medical education provider has policies on the admission of students with disabilities and students with infectious diseases, including blood-borne viruses.*

*7.2.3 The medical education provider has specific admission, recruitment and retention policies for Aboriginal and Torres Strait Islander peoples and/or Māori.*

*7.2.4 Information about the selection process, including the mechanism for appeals is publicly available.*

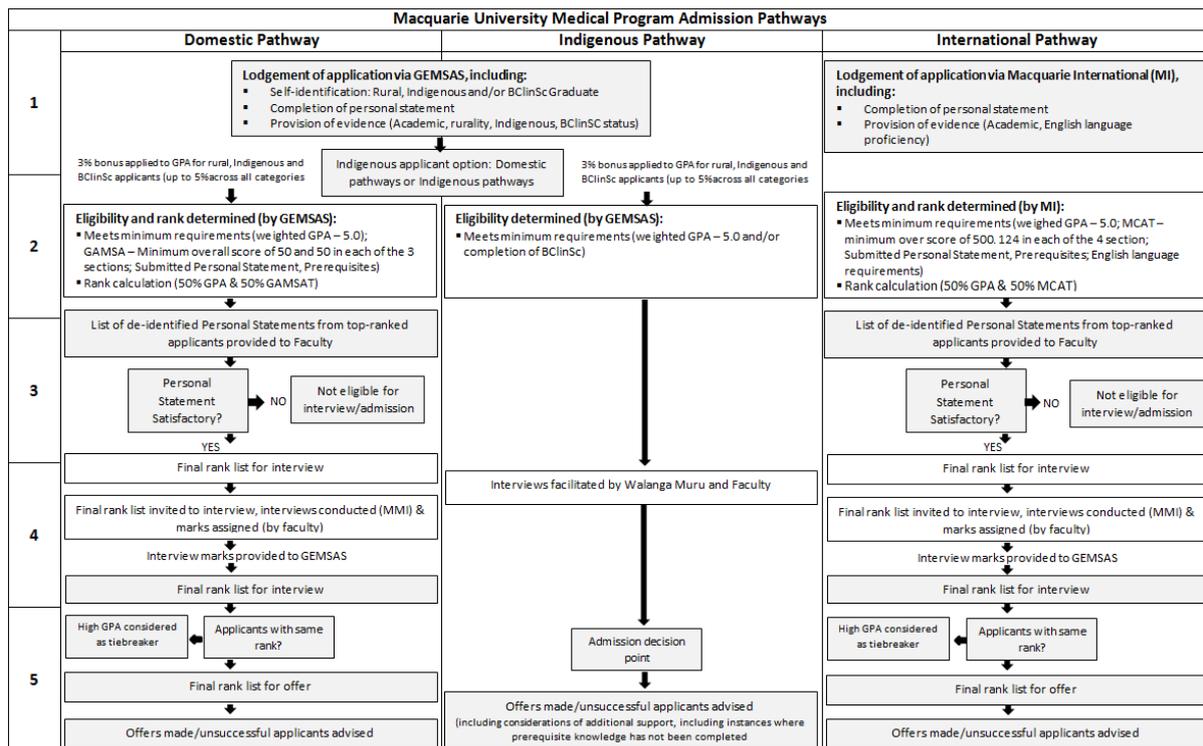
The program has provided detailed selection policy and processes, describing three pathways to admission:

- 1 Domestic Pathway
- 2 Indigenous Pathway
- 3 International Pathway.

All applicants will be required to have successfully completed prerequisite study of one tertiary-level unit in human anatomy and one tertiary-level unit in human physiology.

**Figure 5** outlines the detail of the proposed admissions pathways including related bonuses. Significant interaction with GEMSAS regarding implementation of admissions and selection processes is evident.

**Figure 5 – Macquarie Medical Program Admission Pathways**



The University’s Academic Appeals Policy indicates a written appeal will be considered on procedural grounds. The program proposes to amend the policy slightly to reflect the unique features of the medical program admission process. Under the policy, an Academic Appeals Panel composed of a chair and two other members will be appointed by the Deputy Vice-Chancellor (Students and Registrar) from an established pool of staff. This is well defined, and will be published on the website.

The team commends the Faculty’s significant level of expertise and experience in the area of admissions, and the significant evidence-based, quality focused approach throughout the proposed policy and processes.

The clinical experience in Hyderabad is an essential component of the program, and the Faculty has clearly articulated that partaking in the Apollo Hospital rotation is a compulsory requirement for completion of the medical program and will require applicants to acknowledge and agree to this requirement at admission. The Faculty is however aware that exceptional circumstances may arise for a student during the course which will not allow the student to undertake the Apollo Hospital rotation and the Faculty will arrange an alternative clinical placement, as appropriate.

The team notes the inclusion of a personal statement in the admission process, which will be used to assess the alignment of students with the unique features and demands of the program, and the multiple mini interviews. Significant existing quality control and assurance processes will be implemented, including external agency involvement in international student recruitment.

### 7.3 Student support

7.3.1 *The medical education provider offers a range of student support services including counselling, health, and academic advisory services to address students’ financial, social, cultural, personal, physical and mental health needs.*

7.3.2 *The medical education provider has mechanisms to identify and support students who require health and academic advisory services, including:*

- *students with disabilities and students with infectious diseases, including*
- *blood-borne viruses*
- *students with mental health needs*
- *students at risk of not completing the medical program.*

7.3.3 *The medical education provider offers appropriate learning support for students with special needs including those coming from under-represented groups or admitted through schemes for increasing diversity.*

7.3.4 *The medical education provider separates student support and academic progression decision making.*

A broad range of support mechanisms are in place, administered at both University and Faculty levels. The services are organised in a highly cohesive and collaborative approach encompassing Counselling and Psychological Services (CAPS), Disability Services, the MindSpot Clinic Wellbeing Program, MQ Health Services, and central and student support services.

Additionally, there is support offered for teaching and learning skills, and specific international-student focused services.

Students from the Bachelor of Clinical Science and Doctor of Physiotherapy programs submitted a written response in support of the medical program's accreditation, and the team met several students currently enrolled in the Faculty. The students expressed a high degree of satisfaction with the manner in which the Faculty responded to issues, both in terms of the speed and resolution of issues.

At-risk students will be identified through a range of measures including mid-year assessment, low stakes summative assessment and formative assessment tasks. The Faculty has identified a broad range of mechanisms to support at-risk students throughout the program, including the innovative use of the MindSpot Wellbeing Program. In addition, there is a reliance on portfolio advisors and clinical mentors who will engage with students longitudinally. This process will necessitate specific training of advisors/mentors.

Support of students during offshore placements is an essential requirement of the program, and plans are in place to provide support at Apollo Hospital. Macquarie has clear links to consular and local services in India, as well as University support services centrally and in-country.

There is an existing broad range of engagement options used in support of the University's offshore students which will be made available to the medical program. There is a clear intent to assess needs and augment local support systems as required on an ongoing basis. The Faculty will also develop a comprehensive Pre-Departure Preparation Program for completion prior to commencement of rotations in India in Stage 2, and an on-arrival orientation/induction program. Additional local support will be provided by a Clinical Experience Officer in India.

The team notes the separation of the Assistant Dean (Students), responsible for student support, from committees overseeing progression decision making. The team notes that the Assistant Dean (Students) role remains to be appointed.

## **7.4 Professionalism and fitness to practise**

7.4.1 *The medical education provider has policies and procedures for managing medical students whose impairment raises concerns about their fitness to practise medicine.*

*7.4.2 The medical education provider has policies and procedures for identifying and supporting medical students whose professional behaviour raises concerns about their fitness to practice medicine or ability to interact with patients.*

The team reviewed a draft Fitness to Practice Policy. The policy indicates the expectations for students in the program, and specifies compliance with the codes of conduct and policies for professional practice as outlined by the New South Wales Ministry of Health's Code of Conduct, Good Medical Practice: Code of Conduct for Doctors in Australia, and Macquarie University's Student Code of Conduct.

This policy also articulates with an Inherent Requirements policy outlining expectations for students in four domains: physical, cognition, communication and behavioural.

There is a process in place to deal with fitness to practice issues based on the severity of the issue. The team will be interested in receiving confirmation that this draft policy has been approved through the appropriate University processes.

Students experiencing fitness to practice issues will be provided with guidance and support while taking due account of any risks to patient safety, and risks to students, staff and the public.

There will be a code of conduct which applies to both Australian and Indian placements.

## **7.5 Student representation**

*7.5.1 The medical education provider has formal processes and structures that facilitate and support student representation in the governance of their program.*

The Faculty has outlined a commitment to student representation in program governance. The key pillars of this strategy are:

**MD Student Experience Committee (MSEC):** composed of peer nominated student representatives, Assistant Dean (Students), Academic Program Lead, Program Manager, Education and Faculty Initiatives, Stage 1 and 2 Leads. This committee will meet quarterly or more often if required, and be responsible for representation regarding communication channels between students and staff, academic matters including curriculum design and assessment, learning resources and pastoral and other forms of student support. The MSEC will report to the MD Executive and Curriculum Committee and MD Evaluation and Improvement Committee, as appropriate.

**Faculty Board Representative:** The Faculty Board incorporates at least two student members.

**Medical Society:** a medical student society will be set up, with funding support by Campus Life and the Faculty.

The Faculty's proposed student representation strategy appears appropriate for this stage of program development, and includes scope for flexibility in the composition and frequency of committees to provide appropriate representation of evolving program.

## **7.6 Student indemnification and insurance**

*7.6.1 The medical education provider ensures that medical students are adequately indemnified and insured for all education activities.*

All enrolled students are covered by the University insurance and indemnity arrangements, as outlined in the University's Insurable Risk Guideline.

Medical students going to clinical placements at Apollo Hospital in Hyderabad will be covered by the University's Travel Insurance cover for up to six months.

It is anticipated that medical students on clinical placements, including selective and elective placements in Year 4 of the program, will be required to submit a Risk Assessment developed by the University's Work Health Safety (WHS) unit. The Faculty will communicate information on travel-related and clinical placement WHS issues as well as International SOS guidance information.

The team requires further detail on student indemnification and insurance agreements particularly for Apollo and elective rotations.

## **8 Implementing the curriculum – learning environment**

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### **8.1 Physical facilities**

*8.1.1 The medical education provider ensures students and staff have access to safe and well-maintained physical facilities in all its teaching and learning sites in order to achieve the outcomes of the medical program.*

There are adequate physical facilities to accommodate delivery of Stage 1 of the medical program (Years 1 and 2) in modern ICT-enabled learning and teaching rooms within the Faculty, Macquarie University Hospital (MUH) and the University. The flexible configuration of the rooms can be augmented to facilitate medium-sized seminars, small-group tutorials and interactive groups as well as informal learning opportunities.

The implementation of the University's Master Plan will deliver additional facilities to support the delivery of the medical program. The planned modification of the ground floor of the Clinic building as a student learning centre, made possible by a relocation of faculty administration, should cater well for the required teaching infrastructure for students in Stage 1 of the medical program. Completion of these modifications will be in time for the planned commencement of the first student cohort in early 2018.

This learning centre will be complemented by other teaching areas at the Faculty site, within MindSpot Clinic, and MQ Health, and within both the spacious hospital and MQ Health outpatient clinics. Facilities to support student research are readily available within the Faculty's Departments or MQ Health Outpatient Clinics and MUH, for clinical research. The team supports the Faculty's aspiration for space for interprofessional learning and for a dedicated education building.

MQ Health is planning a renovation of the GP Clinic which will encompass the latest design principles for primary care and include dedicated teaching facilities and technology to support a modern academic practice. MQ Health is looking at options to provide clinical experience in childhood development/developmental paediatrics by 2020 and has appointed a lead in paediatrics. The Royal Institute for Deaf and Blind Children will also be relocating to the Macquarie campus.

The team was impressed by the resources for teaching anatomy. The Faculty is to be commended for its anatomy teaching laboratory and patient simulation centre.

In Stage 2 of the medical program (Years 3 and 4) clinical experience and teaching will be provided at MUH and MQ Health Outpatient Clinics, (Medicine, Surgery and Primary Care), health care facilities of Northern Sydney Local Health District (Paediatrics, O&G, Mental Health and Emergency Medicine) and at Apollo Hospital in Hyderabad.

#### *Apollo Hospital*

A sub-team travelled to Hyderabad to conduct a site visit at the Apollo Hospital, the Apollo Cradle (maternity hospital) and new teaching facilities including libraries, tutorial rooms, and computer rooms. It was obvious that clinicians the team met on the tour were highly engaged and interested in the potential for the Macquarie partnership.

The main hospital has a range of specialist facilities including several Centres of Excellence. The patient rooms range from large private suites for primarily international patients to general wards.

Teaching space and student common areas at Apollo has yet to be planned and will be needed by January 2020. The team commends the Faculty for the plans to provide excellent student

accommodation in the residential area of Banjara Hills, 10-15 minutes from Apollo. The team toured the proposed accommodation and was impressed with the high standard of accommodation and services which would be available to the students. The team looks forward to confirmation of these facilities.

### *NSLHD and Royal North Shore*

Macquarie students attending Royal North Shore Hospital for rotations in Paediatrics, Mental Health and O&G, in Year 3 and Emergency Medicine in Year 4 will utilise teaching space and student common areas of the Northern Clinical School of the University of Sydney. Royal North Shore Hospital has extensive teaching spaces and meeting rooms, a large library, pathology museum, and Clinical Skills and Simulation Centre within the hospital and adjacent Kolling building. Hospitals and other health facilities of Northern Sydney Local Health District, other than Royal North Shore Hospital, to be used for clinical experience and teaching of Macquarie students, are yet to be determined.

### *Year 4 Selectives and Electives*

In Year 4 of the program, students will spend 28 weeks of the 32 weeks of the medical program undertaking selective and elective placements. Whilst many of these placements will be within the clinical facilities of MQ Health, Northern Sydney Local Health District and Apollo, some could also be completed in other countries, including North America.

Overall the AMC team is confident that the clinical sites to be used for teaching and learning in Years 3 and 4 of the medical program are of high quality with very good physical teaching facilities. The physical facilities at Apollo have yet to be confirmed, and the AMC will require an update on this.

## **8.2 Information resources and library services**

*8.2.1 The medical education provider has sufficient information communication technology infrastructure and support systems to achieve the learning objectives of the medical program.*

*8.2.2 The medical education provider ensures students have access to the information communication technology applications required to facilitate their learning in the clinical environment.*

*8.2.3 Library resources available to staff and students include access to computer-based reference systems, support staff and a reference collection adequate to meet curriculum and research needs.*

The University uses iLearn as its learning management system which integrates with other learning technologies including iTeach, Echo 360 (recorded lectures) Turnitin, iShare and Zoom. The Faculty has access to all centrally provided ICT services and in addition has access to an e-portfolio Tool (PebblePad), an Adaptive Learning Platform, Anatomage Table and a Faculty-based media production team. These technologies have been used for the Faculty's Bachelor of Clinical Science and Doctor of Physiotherapy programs and seem very fit for purpose. Access to all these ICT resources will be available at off campus sites such as the Apollo Hospital site in Hyderabad and Northern Sydney Local Health District. Students at Apollo Hospital will have access to available Wi-Fi through which they can access their Learning Management System and e-portfolio System. Computer terminals are readily available in Years 3 and 4 in Sydney providing direct connection to the NSW Health Clinical Information Access Portal.

The Faculty also plans to explore innovative initiatives to advance the online support for Stage 2 of the program, "WeChat" and Examity. The University provides central ICT support through its

Central IT Services and Learning Innovation Hub. Students have access to a set of online guides and resources related to the Learning Management System.

The University Library is a single central facility with a focus on providing a central collaborative learning and teaching space. The library building has the first Australian automated book storage and retrieval system (ASRS). The library includes 2,800 client seats, 300 computers, training rooms, dedicated laptop areas, areas for group study and practice presentations, and quiet study-space, including Indigenous student study space. The library will be largely utilised by students in Stage 1 of the Medical Program. The library has extensive resources to support online and off-shore study which will be critical for Stage 2 students who will also have access to hospital libraries at all clinical locations and the Macquarie University Hospital has been included within the University's licence agreement with publishers.

The enthusiastic clinical librarians will support the growth and development of all the Faculty's programs and services.

### **8.3 Clinical learning environment**

*8.3.1 The medical education provider ensures that the clinical learning environment offers students sufficient patient contact, and is appropriate to achieve the outcomes of the medical program and to prepare students for clinical practice.*

*8.3.2 The medical education provider has sufficient clinical teaching facilities to provide clinical experiences in a range of models of care and across metropolitan and rural health settings.*

*8.3.3 The medical education provider ensures the clinical learning environment provides students with experience in the provision of culturally competent health care to Aboriginal and Torres Strait Islander peoples and/or Māori.*

*8.3.4 The medical education provider actively engages with other health professional education providers whose activities may impact on the delivery of the curriculum to ensure its medical program has adequate clinical facilities and teaching capacity.*

Clinical placements will be largely at MQ Health, the Apollo Hospital, the MindSpot Clinic, and facilities of the North Sydney Local Health District (NSLHD). Figure 6 provides a summary of the medical program's clinical sites.

**Figure 6 - Summary of the Program's Clinical Learning Environment**

	MQ Health AUSTRALIA	MindSpot Clinic AUSTRALIA	NSLHD AUSTRALIA	Apollo Health City HYDERABAD, INDIA	Other VARIOUS
Medicine	Stippled			Stippled	
Surgery	Stippled			Stippled	
Primary Care	Stippled			Stippled	
Obstetrics and Gynaecology			Stippled	Stippled	
Paediatrics	Dark Grey		Stippled	Stippled	
Mental Health		Dark Grey	Dark Grey		
Emergency Medicine			Stippled		
Selectives	Stippled	Stippled	Stippled	Stippled	Dark Grey
Electives					Black

Plans to develop	Delivered in combination/across setting	Delivered entirely within setting	Student-initiated
		Stippled	Black

**MindSpot Clinic** provides telephone and online mental health information, referral and recommendations about local mental health services as well as treatment for patients with a wide variety of complex psychiatric disorders. MindSpot will also be available for any students who have concerns about their own mental health.

The clinic can accommodate up to three students for a two week placement, over a period of 40 weeks per year. The team met clinicians at MindSpot, which is located on the Macquarie campus. The team was deeply impressed with the service delivery model and outcomes, and the learning opportunities in mental health.

MindSpot is a comprehensive ambulatory mental health service, apart from child mental health, neurocognitive disorders and acute psychoses. The Faculty recognises the limited experience that will be available within MindSpot and have arranged further mental health placements within NSLHD.

**Northern Sydney Local Health District (NSLHD)** Following discussions with NSLHD and the Northern Clinical School of the University of Sydney, School of Medicine, clinical training placements have been obtained in Mental Health, O&G, Paediatrics and Emergency Medicine. These placements are supported by a Student Placement Agreement (SPA), letters of intent and statements of support from NSLHD and RNSH. Clinical training/teaching areas and student accommodation in Sydney have also been identified.

**Apollo Hospital, Hyderabad, India** The Faculty has undertaken considerable work with Apollo Hospital in the development of the Macquarie training program in India. An Associate Dean, Clinical Partnerships has been hired to engage with the executive and more specifically the clinicians at Apollo to build the Apollo/Macquarie relationship. The Associate Dean, a surgeon with extensive medical education expertise and previous experience in India, will spend an extended period of time in India to develop the medical program.

While in India the team toured the Apollo Hospital and maternity hospital, Apollo Cradle. Although Apollo Hospital is a private facility, the team as informed there should be no reluctance from patients to involve students in patient care. There may be some language barriers, however more than half of the patients speak English, and all medical staff members at Apollo Hospital speak English. The team notes that Apollo can provide a very wide mix of patients and volume of clinical cases to students.

The team viewed an outstanding facility providing direct care to patients in other Apollo hospitals in India using direct video monitoring of patients. This will be an excellent learning opportunity for students with application to care of Australian patients in rural and remote areas.

The team was impressed by the clinical learning opportunities available at Apollo Hospital and the commitment of the hospital's clinicians and administrators to facilitate the student experience during their rotation. As referenced at Standard 6, given the different health system in India, the private nature of Apollo Hospital, and cultural and language differences between Australia and India, early and continuing evaluation of the students' experience during their India rotation will be beneficial, with modifications to the program as required. The Faculty plans to facilitate the exchange of clinical academic staff between Macquarie University and Apollo Hospital.

The Apollo Hospital clinicians have considerable experience in teaching postgraduate specialist trainees across a number of specialties and subspecialties in medicine. The team was impressed by the commitment of Apollo-based clinicians to teach the students and assist in their learning. The clinicians are eager to receive information and resources to facilitate their teaching and assessment of the students. The team understands this process will be rolled out over the next 12-18 months.

**MQ Health** will provide students with exposure to clinical experiences and learning opportunities across a broad range of clinical settings. As noted at Standard 4, students will be able to follow the journey of patients from consultation in the specialist clinic, through to diagnostics and imaging at Macquarie Medical Imaging, through to their inpatient stay and/or surgery or procedure.

The students will also be provided with opportunities to work with, and learn from, interprofessional teams. MQ Health engages interns, fellows and registrars in a number of specialties, providing further teaching and learning opportunities. A number of the MQ Health salaried GPs have extensive experience in clinical education of medical students.

As the Apollo primary care experience will be very different to primary care in an Australian general practice context, the Faculty are looking at ways in which these differences can be leveraged to enhance student learning. To ensure all students have ready access to a range of models of care and placements in various clinical settings, the Faculty is considering developing general practice placements outside MQ Health, including general practices serving socially disadvantaged areas. It will be important that any such expansion occurs with minimal disruption to the general practice placements that may be in place with the University of Sydney or Western Sydney University. The team encourages the Faculty to explore opportunities for general practice experience and provide an update to the AMC on progress.

While there is no fixed rural placement, the Faculty is considering developing clinical experience opportunities in rural areas of Australia. The team acknowledges that similar to general practice placements, there is a significant demand for rural clinical placements. The team suggests the Faculty continue to explore opportunities for rural experiences for their students and report to the AMC on these placements.

The Faculty has yet to develop clinical learning opportunities for students to experience the provision of culturally competent health care to the Aboriginal and Torres Strait Islander peoples. As noted at Standard 3.5, the team would like to see the plan to provide students with experience in the provision of culturally competent health care to the Aboriginal and Torres Strait Islander peoples and an Indigenous curriculum to underpin the learning experience.

The team commends the Faculty for its extensive engagement with its clinical partners, including Apollo Hospital, Northern Sydney Local Health District, and the University of Sydney Faculty of Medicine in the development of memoranda of understanding so that the Macquarie students can receive clinical training in their respective health facilities. It is clear that a high degree of mutual

respect, and cooperation characterises this endeavour. In Year 4 of the program it is planned to have a number of student selectives/electives, some of which will be international placements. As noted at Standard 4, the AMC would anticipate that the Faculty would finalise these international selective arrangements within the next two years.

#### **8.4 Clinical supervision**

*8.4.1 The medical education provider ensures that there is an effective system of clinical supervision to ensure safe involvement of students in clinical practice.*

*8.4.2 The medical education provider supports clinical supervisors through orientation and training, and monitors their performance.*

*8.4.3 The medical education provider works with health care facilities to ensure staff have time allocated for teaching within clinical service requirements.*

*8.4.4 The medical education provider has defined the responsibilities of hospital and community practitioners who contribute to the delivery of the medical program and the responsibilities of the medical education provider to these practitioners.*

The Faculty has developed processes to support clinical supervisors and teachers through orientation and training, for monitoring their performance and providing remediation if required. These processes are underway for MQ Health supervisors and teachers, and the program plans to implement these processes at Apollo Hospital in advance of delivery of Stage 2.

The Faculty has plans to engage closely with the clinicians at Apollo Hospital, to establish international staff transfers, and also link the institutions regularly via videoconference. Clinicians will be given staff development in the *Macquarie way*, focusing on WBA and Mini-CEX teaching. The clinical leads in Apollo, once appointed, will regularly engage with the clinical leads in Sydney via video-conference. There is a need to have well trained clinical teachers and supervisors in Apollo Hospital well before the first cohort of students in 2020.

As referenced at Standard 1, the Faculty acknowledges that further development work is required over the next two years to build a typical “clinical school” structure and processes within MQ Health and Apollo Hospital. This will be fundamental to an efficient process of teaching/learning between the two campuses.

Although the Apollo Hospital does not currently educate MBBS medical students, as only *not for profit* organisations in India can offer primary medical degrees, there is a culture of medical education in the organisation.

Apollo has approximately 90 specialty trainees completing the Diplomate of National Board (DNB) training at the hospital. The DNB program is three years, and offered by private institutions who are accredited by the National Board of Examinations. Those trainees who pass the DNB exam can then go on to undertake super specialty training (optional) or work as Registrars, then Consultants.

There are multiple PG trainees at the hospital now, and many consultants already teach specialist trainees, so are familiar with the assessment tools such as WBA and Mini-CEX.

**Figure 7 - Medical Education in India**

STAGE	OFFERED BY	QUALIFICATION AWARD	TIMEFRAME
<b>Primary Medical Degree (MBBS)</b>	Awarded by a College accredited by the Medical Council of India ( <i>must be not for profit</i> )	Bachelor of Medicine and Bachelor of Surgery (MBBS), and	4.5 years
		Compulsory Rotatory Residential Internship (CRRI)	1 year
<b>Specialty Training</b> (two pathways)	MCI accredited University Medical Colleges	Masters Degree [Doctor of Medicine (MD) or Master of Surgery (MS)], or	2-3 years
	Private institutions (e.g. Apollo) who are accredited by National Board of Examinations (NBE)	Diplomate of National Board (DNB) in a specialty	3 years
<b>Super specialty training (Optional)</b>			

The AMC team was informed that Macquarie students will be welcome to attend all clinical activities, and will be made part of the team. They will attend morning rounds and will work closely with the DNB trainees.

The MQ Health paradigm *Heal Learn Discover* has attracted many highly experienced clinicians who will contribute to teaching in the planned medical program. As noted at Standard 1.2, the team was impressed that clinicians employed by MUCA have clearly protected time to undertake their teaching commitments in addition to their clinical responsibilities. This commitment is specified in the employment contracts which stipulate that clinicians will participate in academic activities including teaching.

Apollo Hospital will recognise the teaching commitments of their clinicians with some monetary consideration given that Apollo clinicians are paid on a fee for service basis.

## **Appendix One: Membership of the 2017 assessment team**

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**\*Professor Wayne Hodgson (Chair)**, BSc, PhD, GradCertHEd  
Deputy Dean (Education), Monash University, Faculty of Medicine, Nursing and Health Sciences

**\*Emeritus Professor Napier Thomson (Deputy Chair)**, MBBS, MD, FRACP, FRCP, FACP, FRCPI  
Professor of Medicine, Monash Medical School, Alfred Hospital

**Dr Vandit Bhasin**, BE/BSci, MBBS  
Medical Intern, Caboolture Hospital, Queensland Health

**\*Professor Nicholas Glasgow**, BHB, MBChB, GradDipFamMed, MD, FRNZCGP, FRACGP, GradCertEdStudies, FACHPM  
Acting Head, Department of Health Services Research and Policy, Research School of Population Health, Australian National University

**Professor Susan Elliott**, MBBS, MD, GradCertHigherEd, GradCertHealthEco, FRACP  
Deputy Vice-Chancellor and Vice-President (Education), Monash University

**Professor Sally Sandover**, BSc, MPH  
Associate Dean, Curtin University, Curtin Medical School

**\*Professor Rita Sood**, MD, MMed, FAMS, FRCP  
Professor, Department of Medicine, All India Institute of Medical Sciences, New Delhi  
President, South East Asian Regional Association for Medical Education

**\*Ms Fiona van der Weide**  
Accreditation Administrator, Australian Medical Council

**\*Ms Annette Wright**  
Program Manager, Medical Education and Accreditation, Australian Medical Council

*\*Indicates team members who participated in site visits to India*

## **Appendix Two: Groups met by the 2017 assessment team - India**

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### **Macquarie University, Faculty of Medicine and Health Sciences**

Executive Dean, Faculty of Medicine and Health Sciences

Associate Dean, Clinical Partnerships

Faculty General Manager

Program Manager, Education and Faculty Initiatives

### **Apollo Hospital - Executive**

Joint Managing Director, Apollo Hospitals

President, Hospitals Division, Apollo Hospitals

Director of Medical Services, Apollo Hospitals

Senior Manager – Administration

Medical Superintendent, Apollo Hospitals

Dean, Apollo Institute of Medical Sciences and Research

### **Clinical Disciplines – Medicine & Surgery**

Consultant – Critical Care

Consultant – General Medicine

Consultant Physician and Intensivist, General Medicine

General Surgeon

Senior Consultant Surgeon

### **Clinical Disciplines – Paediatrics & Obstetrics and Gynaecology**

Consultants, Paediatrics

Consultant, Paediatrics and Neonatology

Obstetrics & Gynaecology

Gynaecologist

### **Clinical Disciplines – Primary Care/Emergency Medicine**

Head of Department, Emergency Medicine

Deputy Head of Department, Emergency Medicine

### **Student Support**

Country Manager – South Asia, Macquarie International

Regional Director - South Asia & the Middle East, Macquarie International

Senior Manager – Administration, Apollo Hospital

Program Manager, Education and Faculty Initiatives

### **Apollo Cradle**

Cradle Unit Head

## **Appendix Three: Groups met by the 2017 assessment team - Sydney**

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### **Senior leadership**

Vice-Chancellor

Executive Dean, Faculty of Medicine and Health Sciences

Chief Operating Officer and Deputy Vice-Chancellor, International

Director, Human Resources

Deputy Vice-Chancellor, Research

Interim Deputy Vice-Chancellor, Academic

### **Chief Operating Officer Portfolio**

Chief Operating Officer and Deputy Vice-Chancellor, International

Pro Vice-Chancellor - International

Chief Financial Officer

Director of Property

Faculty General Manager

### **Walanga Muru, Office of Indigenous Strategy**

Director

Project Officer

Team Leader

### **Faculty Executive**

Executive Dean, Faculty of Medicine and Health Sciences

Associate Dean, Clinical

Associate Dean, Clinical Partnerships

Associate Dean, Higher Degree Research

Associate Dean, Learning and Teaching

Associate Dean, Research

Chief Executive Officer, Macquarie University Hospital

Director, Australian Institute of Health Innovation (AIHI)

Faculty General Manager, Head of Department, Biomedical Sciences

Head of Department, Clinical Medicine

Head of Department, Health Professions

### **Research – Faculty**

Associate Dean, Higher Degree Research

Associate Dean, Research

Faculty Research Manager

Head of Department, Biomedical Sciences

Head of Department, Clinical Medicine  
Head of Department, Health Professions  
Director, Australian Institute of Health Innovation  
Director, Centre for Health Informatics, AIHI

### **Research - MD**

Academic Lead  
Associate Dean, Higher Degree Research  
Associate Dean, Research  
Interim Research Lead  
Lecturer, Research Skills Training

### **MD Executive and Curriculum Committee**

Executive Dean, Faculty of Medicine and Health Sciences  
Associate Dean, Learning and Teaching  
Associate Dean, Clinical Partnerships  
Head of Department, Health Professions  
Head of Department, Clinical Medicine  
Program Manager, Education and Faculty Initiatives  
Faculty General Manager  
Student Services Manager  
MQ Health Clinical Program Head (Primary Care, Wellbeing and Diagnostics)  
Consultant – Medical Education and Assessment

### **Assessment Development Committee**

Head of Department, Health Professions  
Associate Dean, Learning and Teaching  
Consultant – Medical Education and Assessment  
General Practitioner and Clinical Educator, MQ Health  
Senior Learning Designer (ePortfolio focus)

### **Year 1 Curriculum**

Executive Dean, Faculty of Medicine and Health Sciences  
Academic Lead, MD  
Associate Dean, Learning and Teaching  
Neurosurgeon and Clinical Senior Lecturer, Clinical Medicine  
Professor of Ethics in Surgery and Medicine  
General Practitioner and Clinical Educator  
Head of Department, Health Professions

Bachelor of Clinical Science Co-Director and Lecturer, Biomedical Sciences  
Librarian and Lecturer, Clinical Medicine  
MQ Health General Practitioner  
Program Manager, Education and Faculty Initiatives  
Senior Lecturer, Clinical Medicine  
Senior Research Fellow, Centre for Health Systems and Safety Research  
Simulation Coordinator, Surgical Skills Laboratory  
Student Services Manager

### **Year 2 Curriculum**

Academic Lead, MD  
Associate Dean, Clinical  
Associate Dean, Learning and Teaching  
Associate Professor, Centre for Healthcare Resilience and Implement Science  
Deputy Director of Primary Care and General Practice  
Executive Dean, Faculty of Medicine and Health Sciences  
Head of Department, Health Professions  
Rheumatologist and Associate Professor, Clinical Medicine  
Program Manager, Education and Faculty Initiatives  
Professor of Respiratory Medicine, Clinical Medicine  
Medical Oncologist and Senior Lecturer, Clinical Medicine  
Paediatric Neurologist and Senior Lecturer, Clinical Medicine

### **Year 3 & 4 Curriculum**

Academic Lead, MD  
Associate Dean, Clinical  
Associate Dean, Clinical Partnerships  
Director of Clinical Training, MQ Health  
Director of Medical Services, MQ Health  
Paediatric Neurologist and Senior Lecturer, Clinical Medicine (Clinical Lead, Paediatrics)

### **Learning Design Team**

Associate Dean, Learning and Teaching  
Senior Learning Designers  
Former Senior Teaching Fellow

### **Admission and Selection Development Committee**

Academic Lead, MD  
Associate Dean, Learning and Teaching

Medical Oncology Fellow and Tutor, Clinical Medicine  
Director of Organisational Psychology Programs, Faculty of Human Sciences  
Executive Dean, Faculty of Medicine and Health Sciences  
Faculty Student Recruitment Manager and Project Manager  
Physiotherapy Clinical Education and Student Support Manager  
Student Services Manager

### **MQ Health Executive**

Chief Executive Officer, Macquarie University Hospital  
Director of Medical Services, MQ Health  
Director, Academic Health Strategy  
Executive Dean, Faculty of Medicine and Health Sciences and Managing Director, MUCA  
Faculty General Manager and COO, MUCA

### **MQ Health Tour**

Associate Dean, Clinical  
Clinical Professor, Clinical Medicine  
Director of Clinical Training

### **MQ Health Clinical Program Heads & Clinical Nurse Leads**

Neurosciences  
Bone and Joint  
Primary Care, Wellbeing and Diagnostics  
Cancer  
Cardiovascular and Respiratory  
Surgery and Gastrointestinal  
Critical Care and Anaesthetics

### **Students**

Bachelor of Clinical Science, Faculty of Medicine and Health Sciences

### **Student Support**

Head of Student Administration, Portfolio of the Deputy Vice-Chancellor (Students and registrar)  
Manager, Allied Health – Campus Wellbeing  
Program Manager, Education and Faculty Initiatives  
Student Services Manager  
Team Leader, Student Services

### **Clinical Librarians**

Clinical Librarians

## **MindSpot Clinic**

Director

Clinic Director

Consultant Psychiatrist

## **Vertical Integration - Leads**

Clinical Communication

Scientific Scholarship

Clinical Practitioner

Ethical and reflective practice

Medical Science

Pathology

Physiology

Biochemistry and genetics

Pharmacology

Microbiology and immunology

Anatomy, histology, cell biology & embryology

Public health and health systems

Research Skills and Project

Team work

## **Evaluation**

Associate Dean – Learning & Teaching and Chair, Faculty Education Committee

Executive Dean, Faculty of Medicine and Health Sciences

Program Manager, Education & Faculty Initiatives

## **External Stakeholders**

Dean, Sydney Medical School

Associate Dean, Northern Clinical School, University of Sydney

Director, Medical Services – Royal North Shore Hospital

## **NSW Health**

Executive Director, Workforce Planning and Development

Medical Advisor

Policy Officer

Principal Allied Health Officer, Workforce Planning and Development





