

MCQ Assessment

ASSESSMENT PUBLIC REPORT

2024A

Purpose

This public report provides information for candidates, supervisors, educators and training organisations and is produced following each Multiple-Choice Question (MCQ) exam. It includes information on the conduct, outcome, statistics and commentary for the most recent delivery of the exam. Past public reports are available on the [ACRRM website](#).

Introduction

The MCQ is a written assessment which assesses recall, reasoning and applied clinical knowledge. In particular it focuses on assessing the ability to manage medical care in a rural or remote environment. The assessment aims to cover all domains of rural and remote practice and is one of the summative assessments for CGT.

The 2024A MCQ was held on 7 February 2024.

Overall Outcome

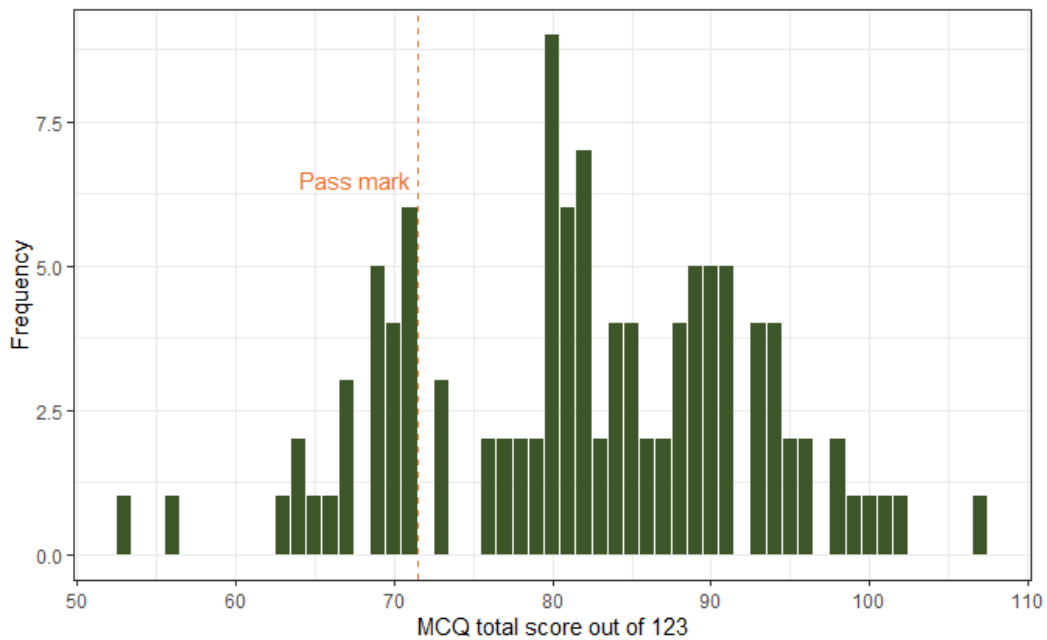
A total of 110 candidates sat the 2024A MCQ exam. 85 of the 110 candidates passed. The overall pass rate was 77.3%.

Assessment Statistics

All 125 questions were evaluated using psychometrics, resulting in 2 questions being identified as poor performing and hence removed.

The Angoff cut score was recalculated and grades were calculated accordingly. Below is a summary of the assessment statistics:

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|----------------------|----------------|---------------|-------------------|-------------------------------------|-----------------|
| number of candidates | 110 | mean | 82.06/123 (66.7%) | standard error of measurement | 4.59/123 (3.7%) |
| number of questions | 123 | median | 82/123 (66.7%) | test reliability (Cronbach's Alpha) | 0.807 |
| time allowed | 3 hours | pass mark | 72/123 (58.5%) | Pass rate | 85/110 (77.3%) |
| minimum score | 53/123 (43.1%) | maximum score | 107/123 (87%) | range of scores | 54/123 (43.9%) |



Cronbach Alpha (desirable if in the range 0.7-0.9) is the measurement of reliability and internal consistency, the effect of measurement error on the observed score of a student cohort rather than on an individual student.

2024A Cronbach Alpha = 0.807 (consistent with previous exams)

Standard error of measurement (SEM; smaller = better) is a measure of the “spread” of scores within a student had that had been tested repeatedly; the effect of measurement error on the observed score of an individual student.

2024A SEM = 4.59/123 = 3.7% (consistent with previous exams)

Conduct of the Exam

The 2024A exam was held on 7 February 2024 and was delivered online. A total of 110 candidates completed this attempt and were located across Australia in their own locations.

Venues and invigilators were required to be officially approved by ACRRM and met the standards required for MCQ exams.

The examination is conducted over three hours and 125 multiple choice questions are presented. There are no negative marks for incorrect answers.

Questions mostly consist of a clinical case presentation, a brief targeted lead-in question and four options from which candidates are required to choose the single best option. The stem of the clinical case may include text and images. Sample questions may be found on the ACRRM website.

Further information may be found in the [Handbook for Fellowship Assessment](#).

Overview Grading and Scoring

The pass mark is set using the Modified Angoff method; therefore, the pass mark varies between each exam depending on the difficulty of the questions. Standard post-examination analysis is performed to identify and manage statistically poorly performing questions.

Curriculum Blueprint

ACRRM Domains:

1. Provide expert medical care in all rural contexts
2. Provide primary care
3. Provide secondary medical care

4. Respond to medical emergencies
5. Apply a population health approach
6. Work with Aboriginal, Torres Strait Islander, and other culturally diverse communities to improve health and wellbeing
7. Practise medicine within an ethical, intellectual, and professional framework
8. Provide safe medical care while working in geographic and professional isolation

The table below provides a brief overview of the 2024A questions and percentage of candidates who passed the question. Note the exam composition, the domains of the curriculum assessed and percentage of candidates who passed the question may vary between exams.

| Curriculum Learning Areas | Topics covered by questions on the 2023B Exam | % Correct |
|-----------------------------------------------------------|------------------------------------------------------------------------------|-----------|
| Aboriginal and Torres Strait Islander Health (ATSI) | Closing the Gap strategies | 75% |
| | Management of skin rash | 92% |
| Addictive Behaviours (ADD) | Clinical assessment of stages of change in smoking cessation | 96% |
| | Management of cannabis addiction | 95% |
| Adult Internal Medicine (AIM) | Bell's Palsy | 95% |
| | Cessation of anticoagulants | 73% |
| | Complications of COCP | 87% |
| | Diagnosis of CCF | 70% |
| | Diagnosis of polycythaemia | 19% |
| | Euglycemic Ketoacidosis | 94% |
| | Investigation of headaches with visual changes | 87% |
| | Investigation of iron deficiency | 72% |
| | Investigation of newly diagnosed renal failure | 95% |
| | Investigation of nipple discharge | 39% |
| | Investigation of recurrent mouth ulcers | 26% |
| | Investigation of the jaundiced patient | 92% |
| | Investigation of tiredness and lethargy | 98% |
| | Investigation or multinodular goitre | 50% |
| | Management of Hypertension in a patient with diabetes | 67% |
| | Management of acute tachyarrhythmia | 87% |
| | Management of complications of Parkinson's disease | 48% |
| | Management of complications of diabetes medications | 78% |
| | Management of complications of thrombolysis | 43% |
| | Management of menopausal symptoms in a patient with breast cancer | 53% |
| Management of suspected statin-associated muscle symptoms | 38% | |
| Management of tremor | 55% | |
| Adult Internal Medicine (AIM) | Peripheral neuropathy in Parkinson's disease | 55% |
| | Skin manifestations of diabetes | 78% |
| | Treatment of AF | 75% |
| | Treatment of multiple sclerosis | 90% |
| Aged Care (AGE) | Appropriate management of asymptomatic bacteriuria in a nursing home patient | 15% |
| | Capacity for consent in cognitive decline | 83% |
| | Management of acute confusional state | 82% |
| | Management of delirium in a nursing home patient | 34% |
| | Rational prescribing on nursing home patients | 68% |

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|----------------------------------------------|-----------------------------------------------------------|------------------------------------|
| Anaesthetics (ANA) | Monitoring of Childhood sedation in emergency department | 76% |
| | Airway assessment | 30% |
| | End tidal CO2 | 41% |
| | Complications of regional nerve block | 85% |
| | Management of complications of spinal anaesthetic | 76% |
| Chronic Disease (CHRON) | Complications of diabetes | 67% |
| | Management of resistant hypertension | 77% |
| Dermatology (DERM) | Diagnosis of chronic bilateral lower leg rash | 90% |
| | Diagnosis of cutaneous manifestations of systemic disease | 94% |
| | Diagnosis of guttate psoriasis | 82% |
| | Diagnosis of hair loss in a young female | 50% |
| | Diagnosis of itchy rash on torso | 68% |
| | Focused investigation of chronic urticaria | 51% |
| | Management of facial rash | 51% |
| | Management of hirsutism | 83% |
| | Management of recurrent groin rash | 90% |
| | Treatment of rash on arm of teenager | 55% |
| Emergency Medicine (EM) | Acute management of head injury | 45% |
| | Chest pain investigation | 63% |
| | Diagnosis of blistering rash | 88% |
| | Diagnosis of tachyarrhythmia | 50% |
| | Interpretation of blood gas in emergency | 73% |
| | Management of acutely swollen upper limb | 89% |
| | Management of complications of end stage renal failure | 90% |
| | Management of concussion | 75% |
| | Management of hyponatraemia | 67% |
| | Management of nonspecific abdominal pain | 61% |
| | Management of nosebleed | 48% |
| | Management of trigeminal neuralgia | 79% |
| | Acute management of pelvic fracture | 95% |
| | Mental Health (MH) | Diagnosis of personality disorders |
| Management of bipolar disorder | | 40% |
| Monitoring of patients taking antipsychotics | | 89% |
| Pharmaceutical management of panic attacks | | 11% |
| Side effects of Lithium | | 90% |
| Musculoskeletal (MSK) | Appropriate investigation for ankylosing spondylitis | 25% |
| | Diagnosis of acute knee injury | 97% |
| | Diagnosis of acute shoulder pain | 75% |
| | Diagnosis of hand pain | 48% |
| | Evidence based treatment of tennis elbow | 25% |
| | Investigation of joint pains | 89% |
| | Investigation of recurring shoulder pain | 84% |
| | Management of acute gout | 61% |
| | Management of fibromyalgia | 83% |
| | Management of gout in the acute setting | 89% |
| Management of Dupuytren's contracture | 64% | |

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|----------------------------------|-----------------------------------------------------------------|-----|
| Obstetrics and Gynaecology (O&G) | Antenatal care routine | 55% |
| | Antenatal care - obesity | 44% |
| | Contraception | 27% |
| | Diagnosis of post coital bleeding | 74% |
| | First trimester antenatal investigations | 77% |
| | First trimester bleeding | 93% |
| | Investigation of PCOS | 43% |
| | Management of Pre-eclampsia | 70% |
| | Management of complications of COCP | 52% |
| | Management of menopause symptoms | 48% |
| | Prepregnancy screening | 66% |
| Ophthalmology (OPH) | Diagnosis of acute red eye | 83% |
| | Diagnosis of eyelid disorders | 75% |
| | Management of chemical burn to eye | 44% |
| Oral Health (ORAL) | Risk factors for oral cancer | 77% |
| Paediatrics (PAED) | Emergency assessment of unwell child | 95% |
| | Appropriate Investigation of red flags in a paediatric patient | 58% |
| | Diagnosis of diarrhoea in a toddler | 73% |
| | Diagnosis of murmur in a child | 52% |
| | Food intolerance | 56% |
| | Investigation of neonatal jaundice | 42% |
| | Management of Parvo virus B 19 | 89% |
| | Management of paediatric foreign body ingestion | 65% |
| | Management of phimosis | 55% |
| Prevention of food allergies | 93% | |
| Palliative Care (PALL) | End of life care and appropriate withdrawal of care | 93% |
| | Management of acute obstruction in a palliative care patient | 21% |
| | Management of end stage COPD | 50% |
| | Management of neurological emergency | 98% |
| | Role of midazolam in palliative care | 55% |
| Pharmaceuticals (PHARM) | Causes of a dry mouth | 45% |
| | Dose change when changing opioids | 46% |
| Population Health (POP) | Prevention of Herpes Zoster | 62% |
| Scholar (SCH) | Interpretation of statistical terms I | 71% |
| | Interpretation of statistical terms II | 90% |
| Sexual Health (SEXH) | Investigation of dysuria in a patient with a new sexual partner | 82% |
| Surgery (SURG) | Clinical assessment of obstructive urinary symptoms in a man | 38% |
| | Management of anal fissure | 63% |
| | Management of fractured nose | 71% |
| | Management of ruptured tympanic membrane | 63% |
| | Pharmaceutical management of premature ejaculation | 81% |

Candidates and Educators guidance

The commentary is provided to assist candidates in preparation for this exam and educators who are supporting candidates. Brief individualised feedback (coaching reports) is routinely provided.

All enrolled MCQ candidates receive access to the 125 question Multiple Choice Question Familiarisation Activity (MCQFA) approximately one month prior to the MCQ exam.

The MCQFA was last updated in December 2023 and now contains references and rationale for correct and incorrect answer options. The questions appearing in the MCQFA have previously appeared on summative MCQ exams. The 125 MCQFA now more closely resembles a summative MCQ examination, with respect to the level of difficulty and content assessed.

In addition, ACRRM's "Introduction to MCQ Assessment" online module on Canvas, available all year round to people with access to ACRRM's online learning portal, was first made available in January 2020. This module gives insight into how an exam is assembled, how individual questions are structured, and offers guidelines to developing practice MCQs.

Evaluation

Following the assessment, candidates are encouraged to provide feedback via an online survey. Feedback is reviewed and considered accordingly and may be used to drive continuous improvement and improve candidate and examiner experience for future assessments.

Based on feedback of candidates from the 2024A cohort, the following themes were identified:

- The information provided by ACRRM was timely and clear, including understanding the process for enrolling, finding an appropriate venue and invigilator.
- The information provided by ACRRM was sufficient to understand the College's new assessment management system for the delivery of the MCQ online. The Assessment team's technical support and information to assist in setting up the online assessment was sufficient. The new MCQ online platform was easy to use.
- Invigilators are strongly supported and equipped with the necessary information necessary to assist with the assessment requirements.
- The questions ensured a broad coverage of the curriculum and was set at the appropriate level of difficult.
- Candidates who used the MCQFA exam found the tool useful as preparation for the assessment but also to become familiar with the MCQ online assessment platform.

Acknowledgements

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