

MCQ Assessment

ASSESSMENT PUBLIC REPORT

2023B

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 Core Generalist Training (CGT).

The 2023B MCQ was held on 5 July 2023.

Overall Outcome

A total of 88 candidates sat the 2023B exam. 71 of the 88 candidates passed. The overall pass rate was 80.7%.

Assessment Statistics

All 125 questions were evaluated using psychometrics, resulting in 8 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:

number of candidates	88	mean	75.72/117 (64.7%)	standard error of measurement	4.65/117 (4%)
number of questions	117	median	75.5/117 (64.5%)	test reliability (Cronbach's Alpha)	0.797
time allowed	3 hours	pass mark	67/117 (57.3%)	pass rate	71/88 (80.7%)
minimum score	53/117 (45.3%)	maximum score	102/117 (87.2%)	range of scores	49/117 (41.9%)

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.

- 2023B Cronbach Alpha = 0.797 (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.

- 2023B SEM = $4.65/117 = 4\%$ (consistent with previous exams).

Conduct of the Exam

The assessment was delivered in pencil and paper format according to the previously established processes for MCQ delivery.

Candidates undertook the MCQ exam in approved venues across Australia in their own locations rather than central exam centres. Venues and invigilators were approved by ACRRM and met the standards required for MCQ exams.

The assessment 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.

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

Grading and Scoring Overview

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 2023B MCQ 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)	Interpretation of tympanogram	38%
	Public health management of anaemia	49%
	Diagnosis of chronic cough in a young Aboriginal patient	51%
	Management of otitis media in a remote setting	74%
Addictive Behaviours (ADD)	Therapies used in Addiction	56%
	Medications used for treatment alcohol abuse	73%
Adult Internal Medicine (AIM)	Management of neuropathic pain	23%
	Q fever vaccination	28%
	Medication changes in management of COPD	47%
	Management of hyperlipidaemia	50%
	Management of restless legs in a patient with renal failure	50%
	Management of symptomatic arrhythmia	58%
	Management of congestive cardiac failure	60%
	Causes of acute diarrhoea	61%
	Management of needle stick injury	61%
	Diagnosis of irritable bowel syndrome	67%
	Adjustment of medication in renal failure	72%
	Management of recurrent UTI	76%
	Treatment of temporal arteritis	78%
	Community acquired pneumonia management	80%
	Management of acute renal failure	80%
	Management of tension headache	82%
	Medications indicated for restless syndrome	83%
	Causes of hypokalaemia	84%
	Management of complications of CCF	84%
	prevention of complications of tachyarrhythmia	89%
Medication changes in treatment of HT	93%	
Polypharmacy	93%	
Aged Care (AGE)	Complications of dementia	42%
	Management of asymptomatic bacteria	47%
	Diagnosis of memory impairment	59%
	Deprescribing	66%
	Falls risk	82%
	Complications of medications to treatment dementia	88%
Anaesthetics (ANA)	Management of anaesthetic intraoperative complications	63%
	Oropharyngeal airway	84%
	Analgesic management of fracture	95%
	Post operative complications of anaesthetic drugs	97%
Chronic Disease (CHRON)	Antiviral treatment for Hepatitis C	34%
	Treatment of irritable bowel syndrome	55%

Curriculum Learning Areas	Topics covered by questions on the 2023B Exam	% Correct
Dermatology (DERM)	Axillary rash management	18%
	Solar keratoses management	18%
	Management of alopecia	35%
	Interpretation of histopathology report	43%
	Treatment of acne	43%
	Management of chronic itchy rash	47%
	Complications of psoriasis	63%
	Diagnosis of itchy chronic rash	90%
Diagnostic Imaging (IMAG)	Interpretation of abnormal x-ray and subsequent investigation	20%
	Interpretation of radiological findings in a patient with shoulder trauma	51%
	Xray interpretation of shoulder injury	65%
Emergency Medicine (EM)	Recognition of ischaemia in a lower limb and AF being a possible cause	41%
	Diagnosis of acute diarrhoea in a patient who is immunosuppressed	48%
	Thrombophlebitis management in the GP setting	53%
	Management of post operative complication of orthopaedic surgery	59%
	Management of accidental overdose	63%
	Management of acute LOC	70%
	Management of sepsis	72%
	Management of spider bite	73%
	Risk assessment tool in CVA and TIA	74%
	Immediate management of tachyarrhythmia	76%
	Management of respiratory distress in a child	78%
	Crush injury complications	92%
	Management of collapse and LOC	97%
Investigations (Ix)	Screening for prostate cancer	44%
	Appropriate investigations in a patient with polycythaemia	47%
	Appropriate investigation for acute confusional state	56%
	Appropriate investigation of low libido	57%
	Evidence based preventive care in a middle-aged man	64%
	Preventive activities in GP	66%
	Interpretation of hepatitis serology	68%
	Investigation in acute abdomen	95%
Mental Health (MH)	Choosing appropriate antidepressant	60%
	Management of self-harm in GP setting	74%
	Depression in the post operative setting	88%
Musculoskeletal (MSK)	Seronegative arthritis treatment	59%
	Orthopaedic complications of long-term steroids	70%
	Clinical examination findings in complicated fracture wrist	73%
	Management of de Quervain's syndrome	88%
	Management of hip pain in an adolescent	98%
Obstetrics and Gynaecology (O&G)	Diagnosis of post coital bleeding	58%
	Treatment of candidiasis	58%
	Management of labour complications	86%

Curriculum Learning Areas	Topics covered by questions on the 2023B Exam	% Correct
Ophthalmology (OPH)	Diagnosis of acute visual disturbance	66%
	Diagnosis of acute visual disturbance (2)	85%
Oral Health (ORAL)	Investigations in patient with recurring mouth ulcers	20%
Paediatrics (PAED)	Management of asthma	30%
	Management of nocturnal enuresis	32%
	Diagnosis of neonatal rash	49%
	Appropriate investigation of abdominal pain	50%
	Management of impetigo	51%
	Risk factors for UTI in children	53%
	Causes of Neonatal jaundice	64%
	Complications of febrile illness with rash	64%
	Behaviour concerns	64%
	Management of watery eye in a neonate	88%
Palliative Care (PALL)	End of life care	72%
	Ascites at end of life	94%
Pharmaceuticals (PHARM)	Complications of prescribing antibiotics	66%
	Complications of therapy to aid in smoking cessation	95%
	Management of Parkinson's disease	56%
	Medication adjustment in a patient with renal failure	61%
Physical Examination (Ex)	Examination findings in acute knee injuries	82%
Population Health (POP)	Measles contact	65%
	Screening for chronic disease in GP	83%
Professional (PRO)	Knowledge of systems of general practice and referral pathways	52%
	Medicare legibility and telehealth	58%
	Standards of General practice and patient identification	97%
Scholar (SCH)	Bias recognition in research	88%
Sexual Health (SEXH)	Conservative management of STI	58%
Surgery (SURG)	Diagnosis of acute abdomen	39%
	Diagnosis of testicular swelling	49%
	Diagnosis of acute abdomen	43%
	Otitis external assessment	75%
	Renal colic management	92%

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 to all candidates.

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

The MCQFA was last updated in December 2019 and provides correct answer options. The questions appearing in the MCQFA have previously appeared on summative MCQ exams. The 125-question familiarisation activity closely resembles a summative MCQ assessment, 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 developed, how individual questions are structured and offers guidelines to developing practice MCQs.

Evaluation

Following each 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 2023B cohort, the following themes were identified:

- Ease of enrolment process and provision of sufficient information to make an informed decision to enrol.
- The information provided by ACRRM was timely and clear, however more assistance to better support candidates locating an appropriate venue and invigilator should be considered.
- The ability to sit the exam close to home is beneficial to candidates, however the College should consider moving away from pencil and paper delivery.
- The information and Q&A sessions were found to be very useful to understand the pencil and paper-delivery.
- Invigilators are strongly supported and equipped with the necessary information necessary to assist with the assessment requirements.
- The MCQFA should be released earlier to assist with preparation, in addition more resources should be offered.
- The number of questions ensured a broad coverage of the curriculum, however there seemed to be an imbalance of level of difficulty.

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