Assessment Public Report

Multiple Choice Question (MCQ)

2023A

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.
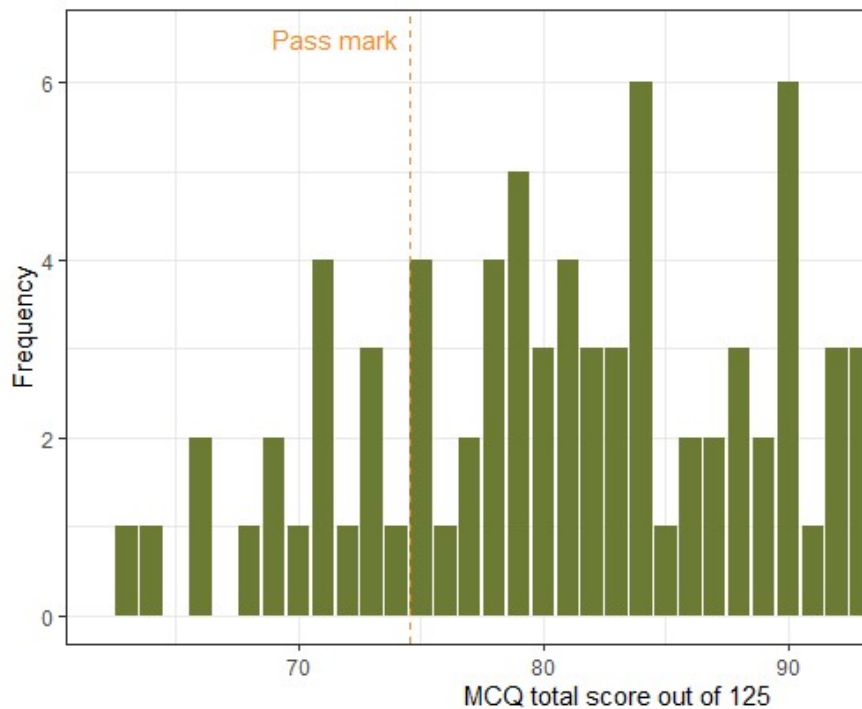
Overall Outcome

A total of 88 candidates sat the 2023A MCQ 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 0 questions being identified as poor performing and no questions were removed from the examination. The Angoff cut score was applied. Below is a summary of the assessment statistics:

number of candidates	88	mean	82.94/125 (66.4%)	standard error of measurement	4.61/125 (3.7%)
number of questions	125	median	83/125 (66.4%)	test reliability (Cronbach's Alpha)	0.751
time allowed	3 hours	pass mark	75/125 (60%)	pass rate	71/88 (80.7%)
minimum score	63/125 (50.4%)	maximum score	103/125 (82.4%)	range of scores	40/125 (32%)

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.

2023A Cronbach Alpha = 0.751 (higher than previous exams)

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

2023A SEM = 4.61/125 = 3.7% (consistent with previous exams)

Conduct of the Exam

The 2023A exam was held on 22 February 2023 and was delivered in pencil and paper format. A total of 88 candidates were registered for this exam and completed this attempt.

Candidates based in Australia, and remotely around the world undertook the exam remotely in their own locations rather than central exam centres.

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

The examination was 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 2023A 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 Statement	Topics covered by questions on the 2023A Exam		% Correct
Addictive Behaviours (ADD)	1	Alcohol dependence	76.1%
Adult Internal Medicine (AIM)	1	Fibromyalgia - pharmacologic treatment	89.8%
	2	Q Fever	78.4%
	3	Malignant otitis externa	64.8%
	4	Rheumatic fever	63.6%
	5	Myopathy	86.4%
	6	Vestibular neuronitis	13.6%
	7	COPD - pharmacological management	71.6%
	8	SLE	55.7%
	9	Polycythaemia	27.3%
	10	Falls	55.7%
	11	Inflammatory bowel disease	71.6%
	12	Oesophagitis	36.4%
	13	Irritable bowel disease	56.8%
	14	Restless legs	36.4%
	15	Certification of death	68.2%
	16	UTI	67.0%
	17	Myeloma	88.6%
	18	Rectal bleeding	90.9%
	19	Multiple sclerosis	19.3%

Curriculum Statement		Topics covered by questions on the 2023A Exam	% Correct
Adult Internal Medicine (AIM)	20	Premature ejaculation - pharmacological management	95.5%
	21	COVID 19 - pharmacologic management	38.6%
	22	Von Willebrand Disease	71.6%
	23	Silicosis	83.0%
	24	SIADH	63.6%
	25	Transient visual loss	67.0%
	26	Hypertension	77.3%
	27	Menopause replacement treatment	61.4%
	28	Heart block	77.3%
	29	Rheumatic fever	84.1%
	30	Porphyria	78.4%
	31	Gout - management	83.0%
	32	FOBT screening	94.3%
	33	Microscopic haematuria	40.9%
	34	Alcoholic liver disease	44.3%
	35	HOCM	81.8%
Anaesthetics (ANA)	1	Regional intravenous anaesthesia	62.5%
Chronic Disease (CHRON)	1	HRrEF	92.0%
	2	Dementia	13.6%
	3	Chronic renal impairment	54.5%
	4	HRrEF	83.0%
	5	Dementia	28.4%
Dermatology (DERM)	1	Pyogenic granuloma	88.6%
	2	Recurrent skin infections	50.0%
	3	Pityriasis rosea	63.6%
	4	Rosacea	71.6%
	5	Lice	90.9%
	6	BCC	73.9%
	7	Psoriasis	40.9%
	8	Ramsay Hunt Syndrome	100.0%
Emergency (EM)	1	Croup	97.7%
	2	Haematemesis	64.8%
	3	SVT	94.3%
	4	Pancreatitis	93.2%
	5	Methanol poisoning	68.2%
	6	Tension pneumothorax	86.4%
	7	Hyperkalaemia	98.9%
	8	Pericarditis	71.6%
	9	Benzodiazepine ingestion	92.0%
	10	Fracture Base of Skull	95.5%
	11	Renal colic management	85.2%

Curriculum Statement		Topics covered by questions on the 2023A Exam	% Correct
Emergency (EM)	12	Hand injury	84.1%
	13	Heart block	50.0%
	14	STEMI	52.3%
	15	Envenomation - snake	43.2%
	16	Purpuric sepsis	38.6%
	17	Myocardial ischaemia	69.3%
	18	Necrotising fascitis	93.2%
Investigations (Ix)	1	Choosing Wisely - Investigations	65.9%
Mental Health (MH)	1	Depression	69.3%
	2	Anxiety - non pharmacologic management	44.3%
	3	Anorexia	87.5%
	4	PTSD management	39.8%
	5	Bipolar disease - pharmacological management	54.5%
	6	Depression	17.0%
	7	Depression	73.9%
	8	Mania	83.0%
Musculoskeletal (MSK)	1	MCL sprain	85.2%
	2	Tibialis posterior tendinopathy	48.9%
	3	Nerve root	50.0%
	4	Osteoarthritis knee	93.2%
	5	Carpal tunnel syndrome	86.4%
	6	Pain management	98.9%
	7	Lateral epicondylitis	48.9%
	8	Osgood Schlatter Disease	75.0%
	9	Ulnar nerve neuropathy	56.8%
Obstetrics & Gynaecology (O&G)	1	Antenatal care	94.3%
	2	PCOS	68.2%
	3	Antenatal care	77.3%
	4	Depression and prenatal counselling	21.6%
	5	Menorrhagia management	67.0%
	6	Menopause	79.5%
	7	GDM	70.5%
	8	Lichen sclerosis	26.1%
	9	Vomiting in early pregnancy	67.0%
Opthalmology (OPH)	1	Corneal FB	70.5%
	2	Dry eyes	58.0%
	3	Retinal detachment	94.3%
Paediatrics (PAED)	1	Assessing capacity	93.2%
	2	Impetigo	87.5%
	3	Pertussis	21.6%
	4	Intussusception	54.5%
	5	Parvovirus	90.9%

Curriculum Statement		Topics covered by questions on the 2023A Exam	% Correct
Palliative Care (PALL)	1	Palliative Care	9.1%
	2	Palliative care - symptom control	54.5%
Pharmaceuticals (PHARM)	1	Serotonergic syndrome	95.5%
	2	Nitrous oxide toxicity	48.9%
	3	Cannabidiol prescribing	19.3%
	4	Calcium channel blockers - adverse reactions	27.3%
	5	Angio - oedema	76.1%
	6	Polypharmacy	51.1%
Procedural Skills (PROC)	1	Telehealth and opiate prescribing	92.0%
	2	Work Cover	62.5%
Scholar (SCH)	1	Qualitative research	35.2%
	2	Quantitative research	59.1%
Sexual Health (SEXH)	1	Trichomonas vaginalis	67.0%
	2	Syphilis	60.2%
	3	Genital herpes	51.1%
	4	Erectile dysfunction	94.3%
Surgery (SURG)	1	BCC	44.3%
	2	Abdominal pain	67.0%
	3	Wound infection	69.3%
	4	Pilonidal abscess	62.5%
	5	TMJ Dysfunction	95.5%
	6	Mesenteric ischaemia	79.5%

Questions answered correctly by Curriculum Area and Year – 2023A

Another way to compare cohorts is to review the percentage of questions answered correctly for each curriculum area, to see if any particular cohort is/was unexpectedly stronger or weaker in the 34 examined areas. This cohort of 88 candidates showed strengths in ADD, DERM, EM, MSK, OPH, PAED, PRO and SURG. The law of small number statistics should be applied as some areas of the curriculum have fewer than three questions.

		# MCQs per exam	MCQ Exam																Average
			2023A	2022B	2022A	2021B	2021A	2020D	2020C	2020B	2020A	2019B	2019A	2018B	2018A	2017B	2017A	2016B	
1	ACAD	n/a	n/a	n/a	44%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	44%
2	ADD	1	76%	75%	n/a	61%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	71%
3	AGE	n/a	n/a	68%	67%	80%	58%	63%	62%	64%	61%	73%	55%	58%	62%	48%	55%	42%	61%
4	AIM	35	65%	75%	75%	68%	63%	61%	65%	58%	68%	67%	64%	53%	62%	57%	57%	51%	63%
5	ANA	1	63%	49%	83%	0%	75%	69%	79%	61%	56%	63%	65%	51%	74%	64%	55%	59%	60%
6	ATS	n/a	n/a	69%	66%	68%	62%	49%	58%	55%	55%	60%	60%	57%	48%	36%	55%	47%	56%
7	BPM	n/a	n/a	n/a	n/a	n/a	37%	51%	69%	38%	62%	63%	38%	56%	56%	58%	65%	52%	54%
8	CAH	n/a	n/a	n/a	n/a	n/a	61%	64%	71%	62%	71%	64%	55%	68%	71%	54%	63%	47%	63%
9	CHRON	5	54%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	54%
10	COM	n/a	n/a	63%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	63%
11	DERM	8	72%	73%	58%	50%	73%	64%	58%	52%	41%	50%	42%	58%	77%	50%	43%	49%	57%
12	DIG	n/a	n/a	n/a	52%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52%
13	EM	18	77%	68%	77%	75%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	74%
14	Ex	n/a	n/a	84%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	84%
15	GEN	n/a	n/a	9%	70%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	40%
16	IMAG	n/a	n/a	n/a	n/a	n/a	61%	73%	66%	47%	44%	74%	68%	46%	73%	29%	65%	37%	57%
17	IMIT	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	#DIV/0!
18	Ix	1	66%	85%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	75%
19	MH	8	59%	75%	70%	64%	61%	60%	69%	81%	67%	71%	77%	56%	60%	67%	59%	58%	66%
20	MSK	9	71%	65%	75%	64%	63%	76%	79%	56%	68%	76%	65%	53%	73%	72%	67%	56%	67%
21	O&G	9	64%	71%	65%	65%	67%	54%	50%	64%	69%	78%	59%	52%	55%	46%	67%	49%	61%
22	OCC	n/a	n/a	n/a	n/a	80%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	80%
23	OPH	3	74%	67%	79%	61%	26%	58%	78%	62%	61%	45%	85%	60%	42%	65%	52%	67%	61%
24	ORAL	n/a	n/a	43%	n/a	98%	67%	62%	49%	47%	62%	56%	52%	36%	65%	64%	55%	52%	58%
25	PAED	5	70%	71%	73%	81%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	74%
26	PAL	2	32%	63%	70%	77%	60%	80%	61%	77%	56%	60%	61%	56%	86%	69%	45%	69%	64%
27	PHARM	6	53%	61%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57%
28	POP	n/a	n/a	78%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	78%
29	PRO	2	77%	78%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	78%
30	R&T	n/a	n/a	n/a	n/a	0%	64%	49%	69%	47%	24%	70%	50%	40%	75%	56%	78%	56%	52%
31	REH	n/a	n/a	69%	n/a	36%	63%	57%	87%	32%	52%	69%	32%	64%	73%	41%	34%	46%	54%
32	SCH	2	47%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	47%
33	SEXH	4	68%	78%	70%	74%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	73%
34	SURG	6	70%	60%	74%	69%	56%	58%	67%	52%	65%	71%	71%	76%	63%	55%	60%	60%	64%

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) are 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 2019 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 2023A cohort, the following themes were identified:

- The information provided by ACRRM was timely and clear, including understanding the process for locating an appropriate venue and invigilator.
- Not having to travel to sit assessments is preferred by the candidates.
- Ease of enrolment process and provision of sufficient information to make an informed decision to enrol.
- The information and Q&A sessions were found to be very useful to understand the pencil and paper delivery.
- Invigilators continue to be supported and equipped with the necessary information to assist with the assessment requirements and support ACRRM Registrars.

Acknowledgements

ACRRM would like to thank everyone who contributed to this assessment including the Lead Assessor, Writers, Angoff experts, ACRRM staff, invigilators and organisations who provided the venues.

The College would also like to thank the Registrars who participated and the Educators who assisted in preparing them for this assessment.