



Assessment Public Report

Multiple Choice Question (MCQ)

2022B

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.

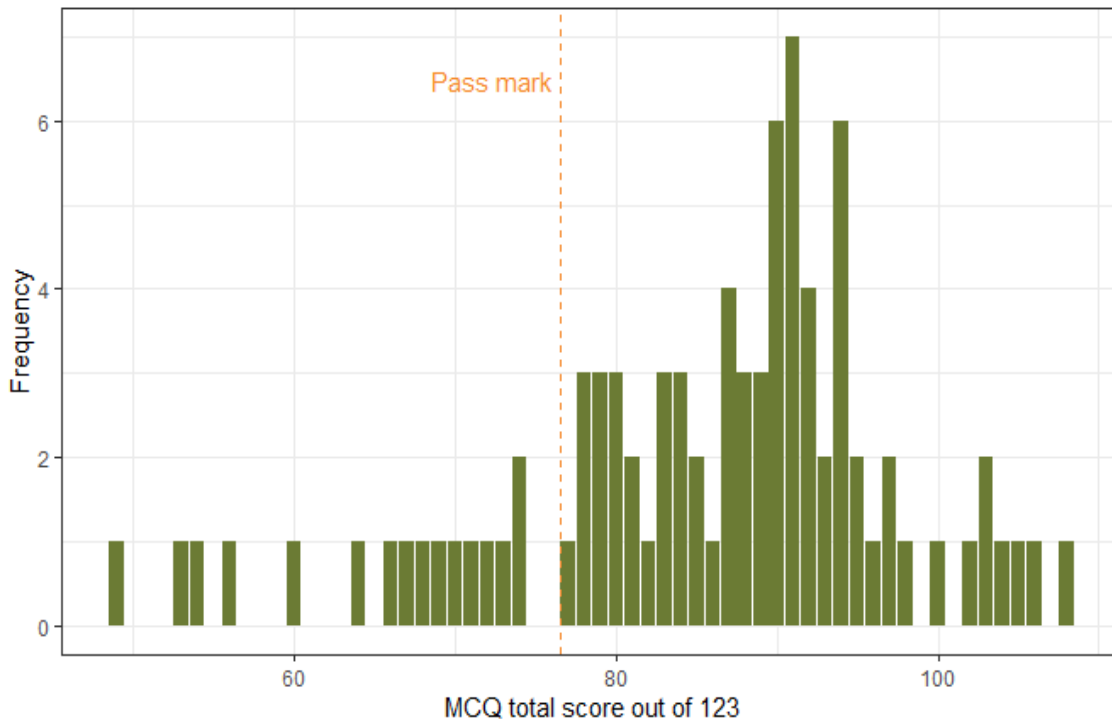
Overall Outcome

A total of 87 candidates sat the 2022B MCQ exam. 71 of the 87 candidates passed. The overall pass rate was 81.6%.

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:

number of candidates	87	mean	85.2/123 (69.3%)	standard error of measurement	4.58/123 (3.7%)
number of questions	123	median	88/123 (71.5%)	test reliability (Cronbach's Alpha)	0.859
time allowed	3 hours	pass mark	77/123 (62.6%)	pass rate	71/87 (81.6%)
minimum score	49/123 (39.8%)	maximum score	108/123 (87.8%)	range of scores	59/123 (48%)



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.

2022B Cronbach Alpha = 0.859 (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.

2022B SEM = $4.58/123 = 3.7\%$ (consistent with previous exams)

Conduct of the Exam

The 2022B exam was held on 20 July 2022 and was delivered in pencil and paper format. A total of 87 candidates were registered for this exam and completed this attempt.

Candidates based in Australia undertook the exam remotely in their own locations rather than central exam centres due to ongoing COVID-19 requirements.

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 on page 4 provides a brief overview of the 2022B 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 2022B Exam	% Correct
Addictive Behaviours (ADD)	Alcohol dependence	74.7%
Aged Care (AGE)	Ischemic colitis	90.8%
	Fitness to drive	47.1%
	Type 2 Diabetes	57.5%
	Capacity assessment	88.5%
	Chronic abdominal pain	97.7%
	Recurrent UTI	44.8%
	Driving	52.9%
Adult Internal Medicine (AIM)	Hepatitis B Serology	69.0%
	Parotiditis	37.9%
	Myasthenia Gravis	82.8%
	Type 2 DM	78.2%
	Q fever	98.9%
	Orf	71.3%
	Haemochromatosis	95.4%
	Hypercalcemia	75.9%
	Vitamin D Deficiency	46.0%
	Diabetes pharmacology	79.3%
	COPD Palliative Care	86.2%



Curriculum Statement	Topics covered by questions on the 2022B Exam	% Correct
Adult Internal Medicine (AIM)	Cluster headache	83.9%
	Multifocal atrial tachycardia	62.1%
	HFREF	87.4%
	Sarcoidosis	47.1%
	TIA	58.6%
	IBS	66.7%
	Syncope	83.9%
	Gout	75.9%
	Restless leg syndrome	64.4%
	Hypertension	79.3%
	SIADH	88.5%
	Sleep apnoea	95.4%
Anaesthetics (ANA)	Malignant hyperthermia	18.4%
	Pain management	80.5%
Aboriginal and Torres Strait Islander Health (ATS)	Indigenous Health Care Plan	75.9%
	Neonatal conjunctivitis	82.8%
	Rheumatic fever	49.4%
	Impetigo	67.8%
Communicator (COM)	Bed bugs (Snake bite?)	63.2%
Dermatology (DERM)	Head Lice	39.1%
	Keloid Scarring	86.2%
	Molluscum	96.6%
	Pityriasis	75.9%
	Psoriasis treatment	73.6%
	Pompholyx	79.3%
	Melanoma	60.9%
Emergency Medicine (EM)	COPD management	67.8%
	Aspirin ingestion	58.6%
	Tick bite	81.6%
	Sepsis	73.6%
	Venous blood gas interpretation	81.6%
	Myocarditis - Covid Vaccination	62.1%
	Subdural haematoma	81.6%
	Hyperkalemia	86.2%
	Wellens Syndrome	41.4%
	Thrombolysis contraindications	54.0%



Curriculum Statement	Topics covered by questions on the 2022B Exam	% Correct
Emergency Medicine (EM)	Snakebite	81.6%
	Retrieval	78.2%
	Burns	31.0%
Physical Examination (Ex)	Cardiac murmur	83.9%
General (GEN)	Skin biopsy	9.2%
Investigations (Ix)	Radiation from investigations	85.1%
Mental Health (MH)	Antipsychotic ingestion	64.4%
	Lithium TDM	67.8%
	Premenstrual dysphoric disorder	70.1%
	Serotonergic syndrome	71.3%
	Acute behavioural disturbance	83.9%
	BPAD management	95.4%
Musculoskeletal Medicine (MSK)	Paget's Disease	67.8%
	Haglund's Deformity	65.5%
	SUFE	86.2%
	Tibialis Posterior Rupture	56.3%
	Fifth metacarpal fracture	51.7%
	Rheumatoid Arthritis	60.9%
	Reactive Arthritis	69.0%
Obstetrics and Gynaecology (O&G)	Normal delivery	89.7%
	Breast feeding - cessation	58.6%
	Menopause - vasomotor symptoms	71.3%
	Contraception	74.7%
	Contraception	85.1%
	Neonatal Resus	86.2%
	Normal pregnancy	47.1%
	Preeclampsia	77.0%
	Contraception	54.0%
	PPH	67.8%
	Post coital bleeding	64.4%
Ophthalmology (OPH)	Scleritis	62.1%
	Acute glaucoma	93.1%
	Amsler Grid	64.4%
	Retinal detachment	94.3%
	Periorbital cellulitis	48.3%
	Posterior vitreous tear	75.9%



Curriculum Statement	Topics covered by questions on the 2022B Exam	% Correct
Ophthalmology (OPH)	Giant cell arteritis	28.7%
Oral Health (ORAL)	Torus	42.5%
Paediatrics (PAED)	Henoch Scholin Purpura	78.2%
	Neonatal jaundice	63.2%
	Tooth avulsion	69.0%
	Paediatric constipation	72.4%
	Child Development	83.9%
	Enuresis	67.8%
	Paediatric asthma	31.0%
	Kawasaki Disease	64.4%
	Radial Head Subluxation	82.8%
	Infantile colic	73.6%
	Paediatric fluid management	54.0%
	Nasolacrimal duct obstruction	95.4%
	CHD	96.6%
	Undescended Testicle	67.8%
Palliative Care (PAL)	Palliative Care - pain management	63.2%
Pharmaceuticals (PHARM)	Erectile Dysfunction	94.3%
	Paracetamol dose	67.8%
	Statin Myopathy	17.2%
	Dystonic reaction	96.6%
	Paracetamol PBS	27.6%
Population Health (POP)	Qualitative research	78.2%
Professional (PRO)	Medicare	78.2%
Rehabilitation (REH)	Post MI	69.0%
Sexual Health (SEXH)	Primary syphilis	86.2%
	HIV PREP	70.1%
Surgery (SURG)	Breast cyst	77.0%
	Small bowel obstruction	75.9%
	Post cholecystectomy diarrhoea	85.1%
	Prostate Ca Screening	27.6%
	Colorectal cancer screening	35.6%



Questions answered correctly by Curriculum Area and Year – 2022B

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 17 examined areas. This cohort of 87 candidates showed strengths in Adult internal Medicine (AIM) and Paediatrics (PAED). The law of small number statistics should be applied as some areas of the curriculum have fewer than three questions, Investigations (Ix) & Physical Examination (Ex).

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

- Suggestion to increase MCQ related practical sessions or material available
- Organisation and delivery were exceptional
- The ACRRM Assessment team is professional, responsive and thorough
- The time allocated for the assessment was sufficient
- The FAQs and information session on the ACRRM website is very helpful

Acknowledgements

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