



AUSTRALASIAN COLLEGE FOR EMERGENCY MEDICINE 41st FELLOWSHIP EXAMINATION REPORT February/May 2008

This report is circulated to:

- candidates – successful and unsuccessful
- examiners involved in the exam – written, clinical and observers
- DEMTs across Australasia
- official observers (listed on Page 2)
- clinical site organisers for this exam

The report is not confidential and its wide dissemination is encouraged.

The questions alone (without examiner comments or answers) are published in Past Papers, which are available to all trainees from the College. Recent previous exam reports are available on the college website.

1. INTRODUCTION

The 2008.1 exam was held on 20 February (written sections – all regions) and on 3 and 4 May (clinical sections – Auckland). The clinicals were held at 2 sites (Manukau Super Clinic and Auckland City Hospital for the Long and Short Cases and Manukau Super Clinic for the SCEs)

Overall, 46 candidates passed the examination from the 62 who sat the written sections (overall pass rate 74.2%). More detailed analysis of pass rates is included in subsequent sections of this report.

2. EXAMINERS

Examining in the fellowship exam is a substantial commitment in time. All of the examiners are thanked for their efforts. The examiners were:

Writtens only

Chris Curry
Bernard Foley

Anne Maree Kelly
Lindsay Murray

Bhavani Peddinti
James Taylor

Clinicals only

Neil Banham
Jennifer Brookes
Adam Chan
Matthew Chu

Linda Dann
Bob Dunn
Gordian Fulde
Christopher Gavaghan

Trevor Jackson
Debbie Leach
Mark Smith
Kim Yates

Writtens and Clinicals

Peter Aitken
Sylvia Andrew-Starkey
Michael Bastick
Simon Brown
Sheila Bryan
Peter Cameron
Bill Croker
David Eddey

Timothy Gray
Richard Harrod
Craig Hore
Diane King
John Maguire
Paul Mark
Jennie Martin
Scott Pearson

Drew Richardson
John Roberts
Irene Rotenko
Andrew Singer
Graeme Thomson
Mark Webb
Garry Wilkes

Peer Support Examiners



George Braitberg

Ian Rogers

Allen Yuen

3. OBSERVERS

The official observers were Doctors:

Jason Armstrong (Sir Charles Gairdner Hospital)
Yuresh Naidoo (Joondalup Health Campus)
Don Liew (Royal Melbourne Hospital)
David Richards (Christchurch Hospital)
Tonia Nicholson (Waikato Hospital)
David Symmons (The Townsville Hospital)
James Collier (Princess Alexandra Hospital)

4. MULTIPLE CHOICE QUESTIONS

52/62 (83.9%) candidates passed the MCQ section of the exam. To achieve this a candidate has to pass 33/60 questions (55%). The mean score obtained was 38.7 (SD \pm 5.7). The grade frequencies were:

Grade (/ 10)	Frequency (N)
8	8
7	9
6	20
5	15
4	7
3	2
0	1

5. SHORT ANSWER QUESTIONS

52/62 (83.9%) candidates passed the SAQ section of the exam. To achieve this a candidate has to pass 5 or more of the 8 questions with a total mark of at least 40 / 80. The grade frequencies were:

Grade (/ 10)	Frequency (N)
8	1
7	12
6	16
5	23
4	5
3	3
0	2

SAQ 1

A 68 year old woman has collapsed with a brief loss of consciousness in church this morning. She has been transported by ambulance to your emergency department and is currently asymptomatic.

Describe your assessment and risk stratification of this patient. (100%)

The overall pass rate for this question was 48/62 (77.4%).

The examiners described this as a straight forward question on a common presentation. Good answers directed their assessment to the common potential causes in the given scenario. Poor answers either failed to answer the question by listing causes only or produced a textbook answer in isolation to the scenario.

SAQ 2

A 20 year-old man has been intubated in the emergency department the previous evening after ingesting an unknown quantity of alcohol and benzodiazepines.

At 0800 hours, his observations are:

Temp	36	°C
HR	80	/min
BP	110/70	mmHg
SpO ₂	100	%
FiO ₂	1.0	

Describe

- a. Your criteria for extubation (30%)
- b. The process of extubating this patient (70%)

The overall pass rate for this question was 58/62 (93.5%).

The examiners felt that this was a basic question that was a mid level discriminator. Good answers for Part a) displayed knowledge of the indications and contra-indications for extubation including patient, staff, equipment and departmental issues. Part b) required a safe and systematic approach pre, during and post procedure. Failed answers did not answer the question, failed to provide adequate detail or suggested potentially dangerous practice.

SAQ 3

Compare and contrast the assessment features of Measles and Kawasaki's Disease.

(100%)

The overall pass rate for this question was 42/62 (67.7%).

This question was described by the examiners as a highly discriminative question. Good answers emphasised the differentiating diagnostic criteria for both the conditions in their comparison. Some answers showed very good knowledge. Poor answers failed to compare/contrast or showed no knowledge of the criteria for diagnosis of Kawasaki's Disease in particular.

SAQ 4

A 7 year old girl is brought to your emergency department by ambulance following a moderate speed motor vehicle accident. She complains of a sore neck and tingling in her hands. She is currently lying on the stretcher crying, distressed and hyperventilating with no cervical immobilisation. The girl's uninjured mother has accompanied her in the ambulance.

Discuss the possible approaches to protecting her cervical spine pending further assessment.

(100%)

The overall pass rate for this question was 28/62 (45.2%).

Examiners felt that this question allowed the candidates to show consultant level judgement/reasoning as well as more basic clinical knowledge. Good answers demonstrated a thorough knowledge of the principles of spinal immobilisation and how to apply this to a difficult situation using an escalating plan involving re-assurance, parental input, analgesia and sedation. Poor answers were deficient in their knowledge of one or other technique or failed to deal with the specific difficulties of this common scenario.

SAQ 5

Write a set of guidelines for the use of physical restraints on a patient in the emergency department.

(100%)

The overall pass rate for this question was 51/62 (82.3%).

This was considered a good discriminator allowing good discussion of the pros and cons of this modality and the actual techniques themselves.

SAQ 6

A 19 year old woman is brought to the emergency department by her concerned parents with a two day history of irritability and headache. She has a history of developmental delay and a ventriculo-peritoneal shunt for congenital hydrocephalus.

Her Glasgow Coma Score is 15. Her vital signs are normal.

Describe your assessment.

(100%)

The overall pass rate for this question was 55/62 (8.7%).

The question was felt to deal with a topical Emergency Dept presentation. Good answers dealt with a systematic approach to the assessment of the possible shunt and non-shunt related causes of this presentation. Poor answers failed to adequately examine the shunt itself and failed to fully assess for non-shunt related conditions.

SAQ 7

You are the Director of Emergency Medicine in a 150 bed district hospital. Your Chief Executive Officer is concerned about your 'did not wait' (DNW) rate of 15%.

Describe your approach to this situation.

(100%)

The overall pass rate for this question was 52/62 (83.9%).

The examiners felt that most candidates who had a good structure addressing the major causes of this problem would pass. Candidates who thought beyond the issue of access block scored well. Poor answers lacked structure or seemed to run out of time as witnessed by paucity of content.

SAQ 8

A 58 year old woman presents to the emergency department complaining of a 5 day history of sore throat and progressive difficulty in swallowing.

Examination reveals she is febrile with stridor at rest. Oropharyngeal examination does not reveal an overt diagnosis.

Describe your management.

(100%)

The overall pass rate for this question was 52/62 (83.9%).

The examiners felt that this was a good high level discriminator which required the consideration of a number of possible options. Although most candidates demonstrated a safe approach to the management of the airway, few conveyed the understanding that not all such patients need to be intubated straight away. Poor answers failed to deal with the basics of airway management in such

a situation, failed to consider administering antibiotics and suggested potentially dangerous interventions such as CT scanning.

6. VISUAL AID QUESTIONS

46/62 (74.2%) candidates passed the VAQ section of the exam. To achieve this a candidate has to pass 5 or more of the 8 questions with a total mark of at least 40 / 80. The grade frequencies were:

Grade (/ 10)	Frequency (N)
8	2
7	5
6	18
5	21
4	8
3	4
2	2
0	2

VAQ 1

A 78 year old man is brought to your emergency department after collapsing at the local shopping centre that morning. He is now alert with no memory of the event. His observations are normal.

- Describe and interpret his ECG. (50%)
- Outline the investigations prompted by his ECG. (50%)

ECG showing showing intermittently paced rhythm with underlying complete heart block.

The overall pass rate for this question was 49/62 (79.0%).

The examiners felt that this was an excellent question and prop which tested appropriate knowledge. Good answers in part a) described the presence of a pacemaker, underlying high level heart block and intermittent pacemaker failure. Satisfactory answers to part b) had to include a discussion of the investigation of a failing pacemaker. Poor answers failed to identify the presence of a pacemaker and its intermittent failure.

VAQ 2

An 80 year old male pedestrian is brought to your emergency department 30 minutes after being struck by a motorcycle at high speed.

His observations on arrival in the trauma bay are:

GCS	15	
HR	105	/min
BP	105/80	mmHg (supine)
RR	28	/min
O ₂ saturation	95%	Oxygen 15 L/minute via non-rebreathing mask

Describe and interpret his Chest X-ray. (100%)

Chest X-ray of trauma patient showing multiple rib fractures and underlying area of pulmonary contusion or haemothorax.

The overall pass rate for this question was 34/62 (54.8%).

Good answers showed a systematic approach to reading an X-ray, identified the key abnormalities, commented on relevant negatives and suggested the possibility of a flail segment. Poor answers missed major findings or showed lack of a systematic approach.

VAQ 3

A 62 year old, previously well woman is referred to your emergency department with a letter from her doctor that states:

"She has a 6 week history of increasing lethargy, malaise, weight gain and peripheral oedema. BP 180/120. See electrolyte results enclosed. She is currently taking no medication."

Describe and interpret the results of her investigations. (100%).

Serum biochemical results

			Reference Range
Na ⁺	151	mmol/L	(134-146)
K ⁺	2	mmol/L	(3.4-5)
Cl ⁻	98	mmol/L	(98-106)
Bicarbonate	40	mmol/L	(22-28)
Urea	5.8	mmol/L	(3-8)
Creatinine	0.06	mmol/L	(0.06 – 0.12)
Glucose	16	mmol/L	(3.5-5.5)

The overall pass rate for this question was 49/62 (79.0%).

Both examiners felt that this was a very good question. Good responses identified the multiple abnormalities, stressed the potentially life threatening hypokalaemia, suggested mineralocorticoid excess as a potential cause and integrated the findings into relevant differential diagnoses. Poor answers failed to address one or more of the above facets.

VAQ 4

An intoxicated 34 year old man sustains an isolated knee injury after a fall.

- Describe and interpret this man's photograph. (30%)
- List the major issues to be addressed in the next four hours. (70%)

Clinical photograph showing major knee dislocation.

The overall pass rate for this question was 31/62 (50.0%).

The examiners commented that this was a good quality clinical photograph which raised many consultant level issues. It was highly discriminative with marks ranging from 2 to 8. Most candidates described the photo adequately. High quality answers to Part b) addressed immediate reduction of the knee, appropriate methods of sedation/analgesia including RSI and suggested appropriate assessment for possible accompanying vascular and neurological injury. Poor answers failed to address the above areas or described assessment for injuries to other regions of the body despite this having been defined in the question as “an isolated knee injury”

VAQ 5

An 80 year old woman presents with pain in her left axilla and arm four days after the elective insertion of a permanent pacemaker.

Her observations are:

BP	160/80	mmHg (supine)
RR	24	/min
O ₂ saturation	94%	room air
Temperature	37.8	°C

Describe and interpret her photograph. (100%)

Clinical photograph of a bruised and swollen left upper arm plus subcutaneous pacemaker box swelling in pectoral region.

The overall pass rate for this question was 47/62 (75.8%).

This was thought to be an excellent question by the two examiners. A satisfactory answer required identification of the old bruising around the PPM box surgical site plus description of the separate upper arm swelling and bruising. Interpretation included possibilities of subclavian/axillary vein thrombosis, infection, arterial injury and haemorrhage. Poor answers failed to identify the swollen upper arm or put forward a poor differential diagnosis.

VAQ 6

A 32 year old woman is brought to your emergency department by her friend who believes her to have taken a deliberate overdose earlier that morning. The patient is drowsy and denies this. Her observations are normal.

a. Describe and interpret her ECG. (50%)

b. What drugs would you consider as potential ingestants? (50%)

ECG showing markedly prolonged QT interval.

The overall pass rate for this question was 54/62 (87.1%)

The examiners felt that this was a basic question on a core ECG area that should have been well handled by most well prepared candidates. Despite this, a large number of candidates failed to diagnose the prolonged QT/QTc and/or failed to realise its significance. Failed candidates tended to provide an incorrect or non specific list of potentially causative drugs.

VAQ 7

A 27 year old motorcyclist sustains an isolated injury to his right wrist in a motor vehicle accident.

- a. Describe and interpret his X-ray. (50%)
- b. List the acute complications of this injury. (50%)

X-ray showing a dislocated lunate and a fractured radial styloid process.

The overall pass rate for this question was 49/62 (75.8%).

This was a basic question done very poorly by a number of candidates. Satisfactory answers required the diagnosis of the dislocation and fracture plus identification in Part b) of the common complications of this injury. Poor answers missed the radial fracture, misdiagnosed perilunate dislocation and/or did not mention median nerve injury as a potential complication.

VAQ 8

This 8 year old girl has been brought in to your emergency department after being injured by a cat.

- a. Describe and interpret her photograph. (30%)
- b. Outline your management. (70%)

Clinical photograph showing an eyelid laceration close to inner canthus plus small corneal abrasion.

The overall pass rate for this question was 48/62 (77.4%).

The examiners felt that this was again a good question featuring a clear photographic prop and inviting an answer showing knowledge of the anatomy of this area especially the lacrimal apparatus and identifying need for antibiotics and ophthalmic consultation. Poor answers showed lack of knowledge of the anatomy of this region, failed to consider infection risk in this case and/or administered inappropriate antibiotics eg tetracyclines in a child. Some candidates also failed to obtain ophthalmologic consultation.

7. CLINICAL EXAMINATIONS

These were held in Auckland on Saturday May 3rd and Sunday May 4th 2008.

Clinical exam coordination at the (Manukau Super Clinic), Lou Finnel and (Auckland City Hospital) Andy McClelland. A total number of 52 candidates were invited to the clinical section.

7.1. LONG CASES

47/52 (90.4%) passed the long cases. The pass mark is 5/10. The grade frequencies were:

Grade (/ 10)	Frequency (N)
9	4
8	13
7	10
6	9
5	11
4	5

7.2. SHORT CASES

44/52 (84.6%) passed the short cases. The pass mark is a mark of 5/10, which can be obtained by passing 3 cases with an aggregate of 15-18/40 inclusive or at least 2 of 4 cases with an aggregate of 19/40 or more. The grade frequencies were:

Grade (/ 10)	Frequency (N)
8	1
7	8
6	17
5	18
4	8

7.3. SCEs

50/52 (96.2%) passed the SCEs. To pass, a candidate needs to score 30/60 and pass at least 4 stations. The grade frequencies were:

Grade (/ 10)	Frequency (N)
10	3
9	8
8	13
7	12
6	6
5	8
3	1
1	1

SCE 1

You are the duty Consultant in your rural ED. You receive ambulance notification regarding 2 paediatric patients with burn injuries. Estimated time of arrival is 5 minutes. Both children were playing in the kitchen. One of them grabbed the handle of a large pot of boiling oil, tipping its contents over both of them.

- Patient 1: 2 year old girl. Burns to her face, head, chest, abdomen, back and legs.
- Patient 2: 4 year old boy. Burns to the same areas but apparently less severe.
Both patients have cold saline soaks over the injuries. Neither have intravenous access; no observations are known.
- Describe your preparation for the arrival of these 2 patients.
- Here are 2 photos of the 2 year old girl. Describe and interpret these photos.
- The 4 yr old boy has minor injuries is ably managed by your registrar. The 2 yr old girl has 30% TBSA burns, and no other injuries. Outline your management of this girl.
- The IV cannula has been displaced, and your staff are unable to re-establish intravenous access. You opt to insert an intraosseous (IO) needle. Describe and demonstrate your technique on this model of a tibia.

Overall pass rate for this question was 45/52 (86.5%).

Examiners regarded this as a good SCE. Failed candidates did not demonstrate familiarity with burns assessment and management, or a basic clinical procedure.

SCE 2

It is 0750hrs on a weekday at your urban emergency department. You are about to commence day shift as the duty consultant. There are 23 patients in the ED, and 6 waiting to be seen.

You are asked by the night registrar to help manage a newly arrived 64 yo man.

He was brought in by ambulance with dizziness.

The registrar shows you the patient's ECG rhythm strip.

- Describe and interpret the ECG rhythm strip.
- The patient is alert, with a BP of 130/80. Outline your actions.
- The patient is stable following initial treatment. The morning staff have arrived. What are the objectives of clinical handover in general terms?
- Discuss the methods for optimising clinical handover in the Emergency Department
- All treatment spaces are now occupied. What action will you take now?

Overall pass rate for this question was 50/52 (96.2%).

This SCE examined a basic administrative topic, in a clinical setting. Examiners regarded the handover component as an important and discriminatory element. Failed candidates performed poorly in that area.

SCE 3

You are asked to attend to a 40 year old man in your emergency department waiting room. He is agitated and verbally abusive towards triage staff. He is morbidly obese.

- Outline the key issues in management of this situation.
- Outline your approach to verbal de-escalation of this patient.
- Despite your attempts, the patient remains agitated and aggressive. It's evident he is delirious. What do you do now?
- The patient is now in the ED. Describe and interpret these initial results.
- Outline the issues in managing this patient's hyponatraemia.

Overall pass rate for this question was 50/52 (96.2%).

This SCE examined candidates' approach to a delirious, disruptive patient. Examiners felt it dealt with basic topics. Failed candidates performed poorly with management of hyponatraemia.

SCE 4

You assess a 28 year old woman who collapsed two hours ago. She complained of dysuria for one week.

She has a past history of recurrent urinary tract infections and bipolar affective disorder.

On examination: confused and tremulous. Temp 37.4°C BP 100/65 mmHg. HR 110. RR 20. SpO2 95% on room air.

Investigations:

			<i>Ref</i>
Na	143	mmol / L	135 - 145
K	3.8	mmol / L	3.5 - 5.5
Cl	116	mmol / L	95 - 110
HCO ₃	20	mmol / L	22 - 30
Glucose	9.8	mmol / L	3.3 - 7.7
Urea	11	mmol / L	2.5 - 8.3
Creatinine	307	mcmol / L	50 - 90

- Describe and interpret the serum results.
- List your differential diagnoses
- Her serum Li level on arrival is 2.2 mmol/L (0.8 – 1.0). Please interpret this, given her presentation.
- Describe your management.-
- Eventually the patient will need a formal mental health assessment. When would this be appropriate?

Overall pass rate for this question was 41/52 (78.8%).

Examiners regarded this SCE as a good discriminator. It well identified candidates who were unfamiliar with assessment and management of Lithium toxicity, and therefore failed.

SCE 5

The nurse shows you an x-ray of a 9 year old boy with a right elbow injury. He fell from playground equipment at school, and was brought by his teacher. There are no other injuries and the child is otherwise well.

- Describe and interpret the x-ray.
- On reviewing the patient, you find the injured arm is dusky and cold. Describe your immediate management.
- The OT will be unavailable for hours. Discuss your options for procedural sedation to facilitate reduction in the ED.
- The patient has now left the ED and is under the care of the Orthopaedic team. This patient was sent to X ray directly from triage. What other issues do you need to consider?
- His mother has arrived, and is angry that she was not informed about his treatment. Outline the principles of your communication with her.

Overall pass rate for this question was 48/52 (92.3%).

Examiners regarded this SCE as a good discriminator. It examined core topics in paediatric emergency medicine. Failed candidates failed to demonstrate familiarity with a common injury, or the agents used for procedural sedation.

SCE 6

A 53 yo man is brought to your tertiary level Emergency Department (ED) by his wife with 90 minutes of dull chest pain. During the trip in he felt weak and lightheaded. His wife reports he looked pale and clammy.

He is triaged to an appropriate area in your ED.

He looks unwell; pale and diaphoretic. GCS 15; BP 85/50; P 50. His ECG is shown to you.

- Describe and interpret the ECG.
- Outline your management.
- Prior to transfer to the cardiac catheter lab, he becomes unconscious. The cardiac monitor shows Ventricular Fibrillation. Outline your response. (NB: the patient will not regain spontaneous circulation until the third series of shocks with 4 cycles of 3-min resus)
- The patient has return of spontaneous circulation, but remains unconscious. He is intubated and ventilated. Discuss the use of induced hypothermia in this patient.

Overall pass rate for this question was 48/52 (92.3%).

This SCE examined a core topic in resuscitation, and high-level responses were expected of candidates by the examiners. They regarded this as a good SCE.

8. SUMMARY PASS RATES

MCQ	52/62	(83.9%)
SAQ	52/62	(83.9%)
VAQ	46/62	(74.2%)

53/77 passed 2 or more sections and were invited to the clinicals

LC	47/52	(90.4%)
SC	44/52	(84.6%)
SCE	50/52	(96.2%)

At the examiners meeting, of the 52 candidates at the clinicals

- 46 candidates passed automatically
- none were discussed
- meaning 46 / 52 (88.5%) of those attending the clinicals passed.

So the overall pass rate was 46 / 62 (74.2%)

9. MATTERS ARISING

1. There were no major issues arising from the written papers
2. Consensus was that both the Auckland and Super Clinic sites worked well from an exam perspective. Examiners commented that short and long cases at both sites were of high quality.
3. Patellar hammers have now been re-added to the Site Organisers list of equipment

10. ACKNOWLEDGEMENTS

As always the Fellowship exam is a huge logistical undertaking and the effort required in running it should not be underestimated. Acknowledging the help provided by all of the many doctors, nurses, clerical staff and orderlies in running the exam is best done in this exam by noting that this was a real team effort. I would like in particular to thank Drs Lou Finnel and Andrew McClelland for their work as the site coordinators.

I wish to further acknowledge the tireless and meticulous work with regards to the logistics of the exam at the College secretariat level. In particular I wish to thank our Fellowship Exam Officer, Virginia Cunsolo for her tireless activity in bringing this examination to a successful conclusion. I would also like to acknowledge our college Chief Executive Officer Jenny Freeman for her support in the lead up to and running of this examination

Dr Mark Gillett
Chair, Fellowship Examination Committee