



AUSTRALASIAN COLLEGE FOR EMERGENCY MEDICINE 43rd FELLOWSHIP EXAMINATION REPORT February / May 2009

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
- Board of Education
- Fellowship Examination Committee

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 2009.1 as held on 18 February (written sections – all regions) and on 2 and 3 May (clinical sections – Brisbane). The clinicals were held at 1 site (Royal Brisbane & Women's Hospital for the Long Cases, Short Cases and the SCEs)

Overall, 47 candidates passed the examination from the 81 who sat the written sections (overall pass rate 58%). 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

Sylvia Andrew-Starkey
Tonia Nicholson

Anne-Maree Kelly
Iren Rotenko

Lindsay Murray

Clinicals only

Jenny Brookes
Sheila Bryan
Betty Chan
Matthew Chu

Bob Dunn
Tim Gray
David Kirkpatrick
David Lightfoot

Lewis Macken
Andrew Singer
Kim Yates

Writtens and Clinicals

Peter Aitken
Philip Aplin
Neil Banham
Michael Bastick
George Braitberg
Simon Brown
Adam Chan
Bernard Foley
Chris Gavaghan

David Green
Richard Harrod
Wayne Hazell
Trevor Jackson
Tony Joseph
Debbie Leach
David Lewis-Driver
Paul Mark
Jennie Martin

Greg McDonald
Bhavani Peddinti
Paul Pielage
Stephen Priestley
Drew Richardson
Ian Rogers
Mark Smith
David Symmons
Graeme Thomson



Peer Support Examiners

Allen Yuen

Bryan Walpole

George Braitberg

Observer Examiners

Lou Finnell

Anthony Lawler

Yuresh Naidoo

Ruth Hew

Sally McCarthy

3. OBSERVERS

The official observers were Doctors:

Greg Hollis (The Canberra Hospital)

Sam Scanlan (The Canberra Hospital)

Don Liew (John Fawkner Hospital)

4. MULTIPLE CHOICE QUESTIONS

69/81 (85.2%) 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)
10	1
9	0
8	14
7	14
6	25
5	15
4	9
3	3

5. SHORT ANSWER QUESTIONS

48/81 (59.3%) 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)
9	2
8	1
7	7
6	21
5	17
4	20
3	7
2	3
1	3

SAQ 1

Write a guideline for the assessment of first trimester bleeding. (100%)

The overall pass rate for this question was 45/81 (55.6%).

Successful responses in this question addressed definitions, inclusion/exclusion criteria, quantification of bleeding/pain, haemodynamic status, abdominal/vaginal examination findings, B HCG levels, ultrasound indications and Rh status.

Failed answers suggested inadequate history/examination/tests or strayed into management issues.

SAQ 2

A 68 year old morbidly obese woman with chronic airway limitation and ischaemic heart disease is brought to your emergency department with severe abdominal pain. There is a strong clinical suspicion of pancreatitis.

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

The overall pass rate for this question was 58/81 (71.6%).

Comprehensive answers provided appropriate rule in/out criteria of pancreatitis including differentials, assessment of physiological status and an evidence based approach to risk stratification. Poor answers featured incomplete history/investigations and failure to consider the stated co-morbidities.

SAQ 3

A 47 year old man with a history of hypertension and depression has presented to your emergency department following deliberate self poisoning approximately 3hrs ago with 20 x 240mg slow release verapamil tablets.

His initial vital signs are:

GCS	15	
HR	50	/min
BP	115 / 70	
RR	16	/min
SaO ₂	99%	room air

Describe your management of this patient. (100%)

The overall pass rate for this question was 62/81 (76.5%).

The examiners felt that this was a good toxicology question. Comprehensive answers took into context the time of presentation and utilized whole bowel irrigation as the decontamination method of choice plus discussed the evidence for other therapies such as activated charcoal, glucose/insulin and glucagon. Appropriate disposition, including psychiatric assessment, was deemed mandatory also. Poor answers failed to address the critical nature of this presentation and the indication for whole bowel irrigation.

SAQ 4

A 55 year old man is brought to hospital by ambulance complaining of severe headache, vomiting and blurred vision. On initial examination his BP is 260 / 145, similar in both arms. His Glasgow Coma Score is 14.

CT scan reveals no abnormality.

Discuss the pharmacological treatment options for the treatment of his hypertension. (100%)

The overall pass rate for this question was 63/81 (78%).

The examiner pair felt that this was an excellent question on a core EM presentation. Pass criteria included nominating an appropriate range of medications with appropriate dosages and routes of administration within the context of close physiological monitoring and safe BP reductions. Inadequate answers suggested oral administration or inappropriate dosages.

SAQ 5

A 9 month old girl with a fever of 39⁰ Celsius attends your emergency department with her mother.

What features on assessment would need to be present for this child to be discharged? (100%)

The overall pass rate for this question was 59/81 (72.8%).

This was felt to be a valid EM question by the examiners. Pass criteria related to assessment features identifying the unwell child and a structure for allowing safe discharge. Failed answers provided incorrect factual information to the mother or lacked sufficient detail on assessment.

SAQ 6

What modifications to basic and advanced cardiac life support are required in an adult patient with a cardiac arrest secondary to unintentional (environmental) hypothermia? (100%)

The overall pass rate for this question was 54/81 (66.7%).

A core EM topic. Pass criteria were a sound knowledge of accepted BLS/ALS algorithms and addressing the specific differences related to a hypothermic patient. Failed candidates showed lack of knowledge re ALS or specifics related to airway management, defibrillation and drug administration in the cold patient.

SAQ 7

A 53 year old previously well man presents with a 6 hour history of palpitations. He is otherwise asymptomatic.

His vitals signs are:

BP 120 / 80
RR 22 /min

ECG reveals atrial fibrillation with a rate of 130 /minute.
His assessment does not reveal a cause for his arrhythmia.

Discuss the management options for this patient. (100%)

The overall pass rate for this question was 60/81 (74.1%).

Pass criteria were addressing the options of no treatment, rate control, cardioversion (chemical/electrical) and anticoagulation. Poor answers failed to discuss these issues in the context of this presentation or missed a major criterion altogether.

SAQ 8

A 28 year old gas worker is brought to your emergency department having been injured in an explosion at work. On arrival in the emergency department he has the following vital signs:

GCS 10
HR 120 /min
BP 125 / 75

Describe your assessment of this patient. (100%)

The overall pass rate for this question was 45/81 (55.6%).

Pass criterion was an assessment based on the wide spectrum of injury possible with an explosion. Candidates were expected to look for blunt/penetrating trauma, barotrauma, airway trauma, burns and toxicological exposures. Poor answers failed to address these criteria.

6. VISUAL AID QUESTIONS

58/81 (55.6%) 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	7
6	13
5	23
4	24
3	8
2	2
1	1

VAQ 1

A 72 year old woman is brought to your emergency department after a syncopal episode.

- a. Describe and interpret her ECG (50%)
- b. Outline your disposition considerations (50%)

The overall pass rate for this question was 26/81 (32.1%).

ECG showing first degree heart block, left axis deviation and RBBB.

The examiner pair felt that this was a core EM scenario that was done very poorly by the majority of candidates. Pass criteria were to identify the ECG features above plus appreciate the conduction implications of this in the presence of syncope with need for monitoring and potentially pacing.

VAQ 2

A previously well 23 year old man is brought to your emergency department acutely short of breath after developing right sided chest pain at work. On arrival, he appeared pale and sweaty and was hypotensive. A Chest X-ray was taken immediately after a procedure was performed to stabilise his condition. His vital signs are now normal.

- a. Describe and interpret his Chest X-ray (30%)
- b. Outline your treatment options (70%)

The overall pass rate for this question was 71/81 (87.7%).

Chest X-ray showing a large R side pneumothorax with needle thoracostomy catheter in situ and no evidence of radiological tension.

The examiners viewed this as a good prop investigating a core emergent condition. Pass criteria were to identify the X-ray features, institute definitive drainage and organize appropriate inpatient disposition. Fail criteria included failure to adequately describe the X-ray, treating the remaining pneumothorax conservatively and sending the patient home.

VAQ 3

An 86 year old woman is brought to your emergency department from her nursing home with two days of drowsiness and decreased oral intake.

Describe and interpret her investigations (100%)

Haematology and biochemical results

			Reference Range
Haemoglobin	129	gm/L	115-160
WCC	15.3	x 10 ⁹ /L	4-11
Platelets	221	x 10 ⁹ /L	150-400
Neutrophils	11.5	x 10 ⁹ /L	2.0 –7.5
Na ⁺	138	mmol/L	134-146
K ⁺	5.4	mmol/L	3.4-5
Cl ⁻	94	mmol/L	98-106
HCO ₃ ⁻	24	mmol/L	22-32
Urea	25.8	mmol/L	3-8

Creatinine	352	mmol/L	45-90
Glucose	7.4	mmol/L	3.5-5.5
Total Protein	72	g/L	60-80
Albumin	15	g/L	35-50
Globulins	57	g/L	23-35
Total bilirubin	146	µmol/L	< 20
ALT	38	U/L	< 35
ALP	2590	U/L	35-135
GGT	1020	U/L	< 40

The overall pass rate for this question was 62/81 (76.5%).

The examiners felt that this was fair and straight forward question that was poorly answered by a relatively large number of candidates. Pass criteria were recognition of the raised WCC with neutrophilia, impaired renal function, obstructive liver function test abnormalities and the likelihood of underlying sepsis. Poor answers failed to synthesise the abnormalities into likely differential diagnoses.

VAQ 4

This 25 year old man has been brought in to your emergency department after he crashed into a fence on his motorcycle. He did not sustain loss of consciousness, but has left sided chest pain and laboured breathing.

His observations are:

HR	110	/min
BP	100/70	mmHg supine
RR	28	/ min
GCS	15	

a. Describe and interpret his photograph. (30%)

Your secondary survey does not reveal any other injury

b. List your immediate management priorities (70%)

The overall pass rate for this question was 46/81 (57%).

Clinical photograph showing open chest wound with rib on view.

Poorly answered question by a large number of candidates. Pass criteria were an adequate description of the injury plus including potential underlying injuries, management priorities of closing the wound, insertion of an intercostal catheter, analgesia, IV fluids/antibiotics and appropriate referral.

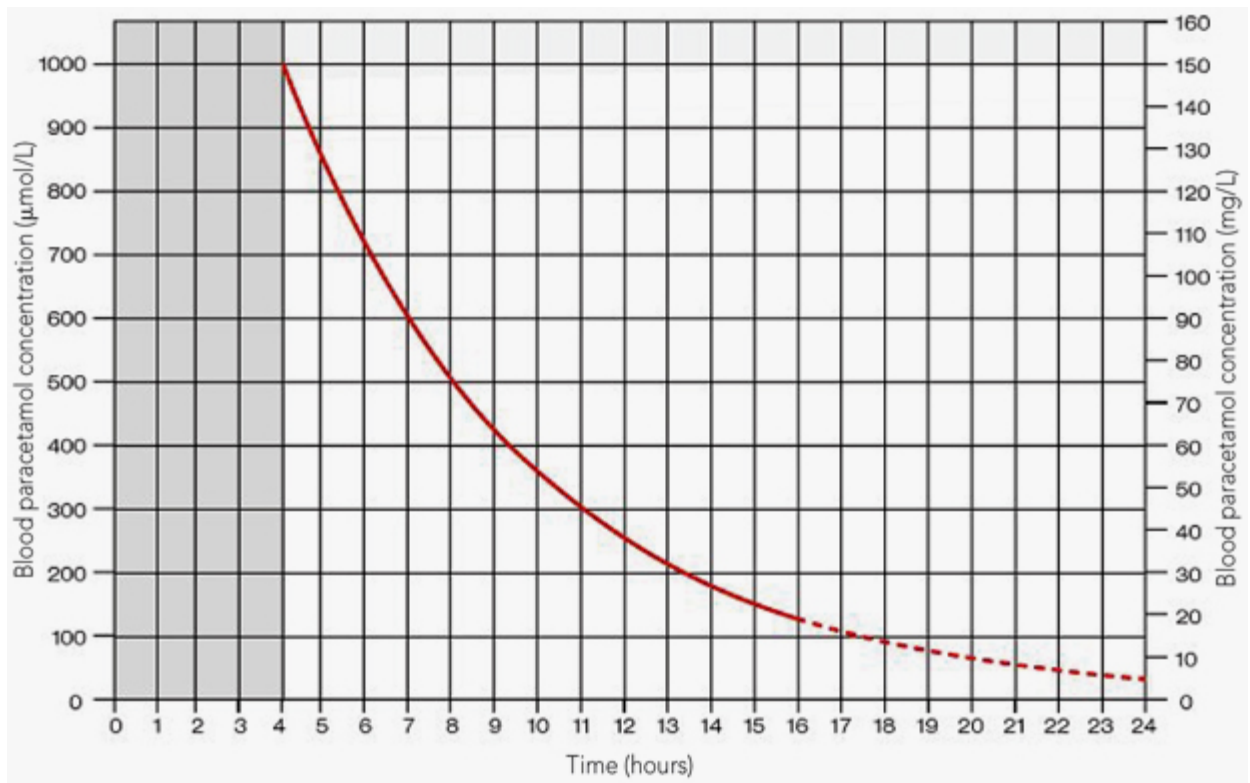
VAQ 5

A previously well 2 year old boy is brought to your emergency department by his mother after he ingested 1.8g of liquid Paracetamol at 0700 hours. Serum biochemical investigations were performed four hours after the ingestion; it is now 1200 hours. He is asymptomatic with normal vital signs.

- Discuss the utility of the nomogram shown opposite in this patient (50%)
- Outline your disposition (50%)

Serum biochemistry results

Paracetamol	30	mg/L	Normal range
Alanine aminotransferase (ALT)	10	U/L	< 24



The overall pass rate for this question was 48/81 (59.3%).

The examiners felt that this was a good question requiring core EM knowledge. They were disappointed with the standard of replies. Pass criteria were to recognise that the nomogram was reliable in a situation of a known ingestion dose at a specific time and that the ingested dose was sub-toxic. Fail criteria were treatment with NAC and admission based on the nomogram results.

VAQ 6

A 25 year old man is brought to your emergency department after a motorcycle accident. His only complaint is severe left arm pain.

- a. Describe and interpret his X-ray (30%)
- b. Outline your management (70%)

The overall pass rate for this question was 50/81 (61.7%)

X-ray showing a comminuted, displaced, angulated fracture of radius with dislocation of the distal radio-ulnar joint.

Pass criteria were an accurate description of all the injuries plus a management plan addressing analgesia, potential neurovascular complications and early operative intervention.

VAQ 7

A 35 year old man is brought to your emergency department following two seizures.

His observations are:

GCS 8
BP 75/40 mmHg supine

Describe and interpret his ECG (100%)

The overall pass rate for this question was 52/81 (64.2%).

ECG showing regular broad complex tachycardia with widened QRS and abnormal terminal R wave in aVR

Again the examiners were disappointed with the response to this straight forward question. Pass criteria were identifying the abnormalities listed plus considering toxic ingestion (espec TCA) as a cause in this scenario. Fail criteria were absence of the above.

VAQ 8

An 89 year old woman presents to your emergency department with a two week history of several falls and new right sided weakness.

A non-contrast CT head scan is performed

Describe and interpret her CT scan. (100%)

The overall pass rate for this question was 68/81 (84%).

Cerebral CT scan showing a subacute/chronic subdural haematoma with mass effect and midline shift.

Pass criteria on this question were an adequate description of the CT scan and interpretation in light of the clinical history. Failed answers did not adequately describe the scan, misdiagnosed the condition or viewed the haemorrhage as acute.

7. CLINICAL EXAMINATIONS

These were held in Brisbane on Saturday May 2 and Sunday May 3, 2009.

Clinical exam coordination at the Royal Brisbane & Women's Hospital (Jamie Thomas & Philip Richardson). A total number of 54 candidates were invited to the clinical section.

7.1. LONG CASES

48/54 (88.9%) passed the long cases. The pass mark is 5/10. The grade frequencies were:

Grade (/ 10)	Frequency (N)
9	1
8	8
7	19
6	10
5	10
4	5
3	1

7.2. SHORT CASES

41/54 (75.9%) 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)
7	4
6	17
5	20
4	12
3	1

7.3. SCEs

51/54 (94.4%) 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	2
9	9
8	3
7	17
6	11
5	9
4	1
2	1

SCE 1

It is a Friday evening in your regional ED. Your patient is Mrs Thelma Brown, a 72 yo woman brought in by her daughter with a one week history of respiratory tract infection. Her daughter states that she can no longer look after her mother at home.

- History: A widow with early dementia; nil else relevant. No medications or allergies. She usually lives alone at home but for 2 days her mobility has required two persons' assistance.
- Examination: vital signs normal; bi-basal crackles.
- Investigations: relevant blood tests normal; CXR reveals minor bi-basal changes consistent with bronchopneumonia.

Your management plan includes admission, oral antibiotics, no supplemental oxygen. In this hospital there are available medical beds but there is NO Short Stay Unit or Hospital-in-the Home service. Patients must be accepted by an inpatient unit prior to admission.

The on-call general physician, Dr Troy Young, whom you've not met before, is in the ED. You are going to refer Mrs Brown to Dr Young.

Dr Young, ROLE PLAYED by an actor, is waiting for you in a private office.

Other people in this scenario will NOT be present. Examiners will NOT be interacting with you or the actor.

Overall pass rate for this question was 47/54 (87%)

This SCE emulated a common scenario in Emergency Medicine. The FEC and Examiners regard communication as a core competency and expected high standards from candidates. Failed candidates did not demonstrate consultant-level communication skills required for interacting with a senior peer in a challenging scenario.

SCE 2

A 28 yo female is brought by ambulance to your tertiary ED. She was the front seat passenger involved in a medium speed motor vehicle accident less than one hour ago. She is 32 weeks pregnant. The patient is in your resuscitation room, with full cardio-respiratory monitoring and spinal immobilization. The trauma team is assembled.

On examination:

GCS	15/15	
HR	128	bpm
BP	92/48	mmHg
RR	22	bpm
O2 Saturation	99%	On 6 L/min O2

- What are the key features of your initial examination?
- The patient has abdominal tenderness. DISCUSS the options for pelvic / abdominal imaging for this patient.
- There is persistent foetal bradycardia. Describe your management.

Overall pass rate for this question was 40/54 (74.1%)

Examiners regarded this as a discriminating SCE.

Failed candidates undertook a poorly structured approach to the assessment and/or management of an obstetric trauma patient. This includes consideration of pregnancy-related patho-physiological changes and foetal well-being.

SCE 3

You are on duty in your regional Emergency Department.

The aero-medical retrieval service has brought in a 23 yo male from the bush, who was probably bitten on the lower leg by a snake 4 hours ago. He walked out of the bush to a local first-aid station where a nurse applied a pressure immobilisation bandage.

Currently he is complaining of a headache, but no weakness or blurred vision.

On examination:

GCS	15	
HR	88	bpm
BP	135/80	mmHg
RR	20	bpm

- Outline your approach to this patient.
- The patient has been stable since arriving, except for a worsening headache. The initial blood results are available. Interpret these results.

Full Blood Examination			Reference	Clotting Profile			Reference
Hb	128	g / L	130 - 170	PT	> 150	sec	11 - 18
White Cell Count	10.2	x 10 ⁹ / L	3.9 - 9.9	APTT	> 150	sec	25 - 36
Platelets	88	x 10 ⁹ / L	150 - 400	INR	> 15		0.9 - 1.1
				D-Dimer	positive		
				Fibrinogen	< 60	mg / L	180 - 440

- It is 2 hours post arrival of the patient. Antivenom treatment is underway. The patient now complains of diplopia and mild dyspnoea. He has a new ptosis and is oozing blood from his gums and IV sites. HR 120; BP 90/60; spO₂ 88% on 4 L/min O₂.
- Outline your response.
- In general, DISCUSS the role of the Venom Detection Kit (VDK) in assessment of suspected snakebite.

Overall pass rate for this question was 43/54 (79.6%)

This SCE was considered discriminating between high-level candidates, who demonstrated a comprehensive approach to the risk stratification and management of an envenomed patient. Poorly performing candidates demonstrated poor understanding of this topic, particularly in the assessment of potential snake-bite

SCE 4

A 30yo man visiting from interstate presents to your ED with a one hour history of palpitations and dizziness. He is pale and diaphoretic.

Vital signs: BP 80/55 mmHg; GCS 15.

An initial ECG is taken.

- Describe and interpret the ECG.
- The patient is appropriately sedated. Describe your procedure for cardioversion.
- At the first attempt, there is no muscle contraction or other evidence of current delivery; the cardiac rhythm remains unchanged. Outline your response.
- The patient is successfully reverted. Describe and interpret this post reversion ECG.
- Twelve hours later, the patient is clinically well and stable and wants to go home. He plans to return interstate the following day, by a 3-hour flight. Describe your discharge procedure.

Overall pass rate for this question was 49/54 (90.7%)

Examiners regarded this as a moderately discriminating SCE, which tested important topics in emergency cardiology. Failed candidates described and interpreted ECGs poorly, and/or did not demonstrate consultant-level familiarity with electrical cardioversion.

SCE 5

A 58 year old man is brought to your Emergency Department by the ambulance service after spontaneous epistaxis for the last 3 hours. The ambulance officers report that he vomited at least 500ml of fresh blood at the scene. They also report that there were a number of empty alcohol bottles at his house, which was in a dilapidated state. They have been maintaining pressure to his anterior nose. His GCS is 15/15.

- The patient is in a resuscitation area with comprehensive monitoring. Outline the key features in your history and examination with respect to his epistaxis.
- He is clinically shocked and fluid resuscitation has been initiated. There is evidence of significant active nasopharyngeal bleeding. The charge nurse has laid out a set of equipment, please demonstrate how you would perform posterior packing of his nose.
- Despite the nasal packing, the bleeding has not been controlled. ENT is taking him to theatre urgently. The results of some initial investigations are now available.

Hb	95	(120 - 180)
WCC	10.2	(3.5 - 11.0)
Plt	155	(140 - 400)
INR	2.5	(0.8-1.3)
APTT	36	(26 - 41)
Fibrinogen	0.4	(1.7 – 4.5)
D-Dimer	< 0.40	(< 0.40)

- (Supplementary): Blood products are now ready for transfusion. This man has known severe aortic stenosis. How would this affect your resuscitation?

Overall pass rate for this question was 53/54 (98.1%)

This SCE assessed a core skill in emergency otolaryngology, and high-level responses were expected of candidates. Poorly performing candidates demonstrated only basic knowledge of relevant ENT procedures

SCE 6

A 4 month-old girl is referred to your urban district ED by a GP, after a fall. She is accompanied by her mother, but details of the fall are not clear. The baby appears normal except for a left parietal scalp haematoma.

- Describe the key points in your history and examination.
- The child has no other obvious injuries, but you are concerned the haematoma is a non-accidental injury. DISCUSS the role of imaging for this patient.
- A CT brain of this child has been performed. Describe and interpret this CT.
- Before you can undertake further assessment, the mother wants to take the child home, refusing to stay. Outline your response to this situation

Overall pass rate for this question was 50/54 (92.6%)

The FEC and Examiners regard Non-Accidental Injury as a core topic in Paediatric Emergency Medicine and expected high standards from candidates. Those who performed poorly demonstrated an unstructured approach to risk stratification of the potential child at risk, poor use of CT terminology, or lack of consultant-level response to a challenging clinical scenario.

8. SUMMARY PASS RATES

MCQ	69/81	(85.2%)
SAQ	48/81	(59.3%)
VAQ	40/81	(55.6%)

63/81 passed 2 or more sections and were invited to the clinicals

LC	48/54	(88.9%)
SC	41/54	(75.9%)
SCE	51/54	(94.4%)

At the examiners meeting, of the 54 candidates at the clinicals

- 47 candidates passed automatically
- none were discussed
- meaning 47/54(%) of those attending the clinicals passed.

So the overall pass rate was 47/ 81 (58%)

9. 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 Jamie Thomas and Philip Richardson 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.

Dr Mark Gillett
Chair, Fellowship Examination Committee