Guide to revising for the Acute Internal Medicine specialty certificate examination

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Introduction

Despite having taken several exams successfully in the past, most specialty trainees have never been taught effective study skills, and they may be unsure about the content of the specialty certificate exam (SCE). This guide is designed to help you prepare for the AIM SCE.

What's in the exam?

The exam covers the AIM curriculum

The AIM SCE tests the AIM curriculum – not the content of your everyday work. This is an important distinction to understand. You therefore need to read the syllabus section of the AIM curriculum document, which can be found on the JRCPTB website. For example, for 'syncope/pre-syncope' the following knowledge is required:

Syncope & Pre-syncope *AIM*

The trainee will be able to assess a patient presenting with syncope to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also ' blackouts/collapse')

Knowledge	Assessment Methods	GMP Domains
Outline the specific indications for 24 hour ECG monitoring, loop recording, echo and tilt testing	CbD, mini-CEX, SCE	1
Outline the ECG diagnostic criteria for syncope thought to be due to cardiac arrhythmia	ACAT, CbD, mini-CEX, SCE	1
Understand the pathophysiological response to head up tilting.	CbD, SCE	1
Outline the protocol for head up tilt testing.	CbD, SCE	1
Interpret the head up tilt test and classify the types of positive responses.	CbD, SCE	1
Understand the pathophysiological response to carotid sinus massage.	CbD, SCE	1
Outline the protocol for carotid sinus massage.	CbD, SCE	1
Interpret the positive response to carotid sinus massage.	CbD, SCE	1
Outline the indications for cardiac loop recorder	CbD, SCE	1

How well do you think you could recall the above knowledge?

The exam blueprint ensures the entire curriculum is sampled

There is an exam blueprint that describes how many questions from each subject area will be included in the exam. This ensures that the entire curriculum is sampled. The blueprint is shown on the next page.

AIM SCE blueprint:

Exam topic	*No of Qs in exam*
Cancer/pall care/haematology	10
Care of critically ill patient (ICU, ALS, sepsis)	10
Cardiology	20
Clinical pharm/poisoning	10
Diabetes/endocrine	14
Gastro/hep	20
Infectious Diseases	14
Geriatric Medicine	18
Musculoskeletal	12
Neurology/ophthalmology	20
Renal	10
Respiratory	20
Other (allergy/immunology, dermatology, mental health etc., patient safety and quality)	22

Are the exam questions mainly testing knowledge of guidelines?

No. To answer many questions successfully, you need to have a sound knowledge of guidelines relevant to Acute Internal Medicine, e.g. cardiac arrest (ALS), anaphylaxis (NICE), management of a large unilateral pleural effusion (BTS), but many questions have to be answered based on best practice and your understanding of the medical condition being described rather than any national guideline.

However, you do need to know that the SCE regulations stipulate that where NICE guidance exists for a condition, that is considered to be the 'correct' answer **for the purposes of the examination.**

For candidates who are not practising in the UK, or for those in Scotland, some questions test your knowledge of legislation, for example rules about driving (UK DVLA), and the Mental Health Act and Mental Capacity Act (England & Wales).

Effective study skills

Start studying well in advance

By far the best way to study for the SCE is during your everyday clinical work. Rather than 'going through the motions' with cases or taking what your Consultants or other colleagues say at face value, you must ask yourself questions and then go and find out the answer:

- How **should** we investigate iron deficiency anaemia?
- What does the **NICE guidance** say about the investigation and management of DVT?
- What is the **correct** management of hyponatraemia?

All too often we *assume* we know what we should be doing, when in fact we do not. Work-based learning is effective, takes less time, and importantly helps to conceptualise learning because it is associated in long-term memory with real cases. This is more effective than trying to memorise random facts for an exam.

Cramming is less likely to be effective for the SCE. If you decide to start studying for the exam at home, you should map out a revision timetable that works for your individual circumstances using the syllabus and blueprint above. The time you will need for study will be a lot longer than you realise! But make sure you **interleave** your exam topics – see below.

Practice as many exam questions as possible

The SCE is written in a 'best of five' MCQ format. Practicing as many exam questions as possible is an effective study strategy and you can find example questions on the MRCP(UK) website:
https://www.mrcpuk.org/acute-medicine-sample-questions

There is currently only one book that has been published to help candidates prepare for the exam:
Lane N, Powter P and Patel S. Best of five MCQs for the Acute Medicine SCE. OUP, 2016.

Work out an effective exam technique

Effective exam technique is important. Here are some tips.

1. After reading a question, try to summarise as **precisely** as possible, 'What is this question about?' For example:

   A 60-year-old man was admitted after an episode of transient loss of consciousness. He and his wife described walking down the street and then him 'just going down' with a minimal few seconds warning of 'feeling a bit queer' beforehand. He did not injure himself and recovered quickly. This has happened 6 times in the last 18 months, always while standing or walking.

   [PMH and clinical examination follows. He has a normal clinical examination, normal 12-lead ECG, normal bloods and no postural drop in blood pressure].

   Lead-in: What is the next best step in management?

You should understand that this question is asking about recurrent syncope in a 60-year-old with no structural heart disease. Remember, your answer in the exam should always be based on a relevant national guideline where one exists (NICE first, even though this only applies to England and Wales, *then* specialist society guidelines). Don't get distracted by what you do in 'real life' or what resources are available in your hospital.

2. Try to answer the question without looking at the answer options. Then look at the answer options – you can usually narrow the correct answer down to two options.

3. To decide which of the remaining options it could be, read the lead-in again carefully. For example:

   What is the most appropriate immediate treatment?
   (i.e. what is the thing you should do first?)
   Or
   What is the best diagnostic test to perform?
   (i.e. which of the options makes the diagnosis, rather than simply adds information)
   Or
   What is the most likely diagnosis?
   (i.e. common things are common, so what is literally most likely, given these symptoms and signs and results?)

Finally, don't spend ages dwelling on one question – there are 99 more to get through!

Use evidence-based studying strategies

For more information about evidence-based studying strategies, please visit the Learning Scientists website at www.learningscientists.org . Most people use familiar but ineffective study strategies, such as re-reading material, highlighting, or making notes. Such techniques give the illusion of learning, but material is not effectively stored in long-term memory. That means it is less able to be retrieved when it comes to an exam.

All the evidence is that real learning feels more difficult, or more awkward. **This is a sign of effort, not failure.** The following are proven strategies to make learning more effective, and recall at a later date much more likely:

1. Space out your studying over time – allowing a little forgetting to set in before coming back to something again helps embed topics in long term memory.
2. Combine words and visuals when you study (dual coding).
3. Interleave – switch between topics when you study. Don't study topics in blocks.
4. Use concrete examples to understand abstract ideas.
5. Elaborate – explain and describe ideas with as much detail as possible in your own words.
6. Practice retrieving facts – quizzing yourself, asking yourself what you already know about a topic, or practicing exam questions is a powerful learning strategy.

What does this mean?

Rather than sitting down to read papers, guidelines or a textbook related to a single topic, mix things up (interleave). Do a 'virtual ward round' in your study time. Imagine a seeing an

older person who has fallen, then a 50-year-old admitted with cardiac sounding chest pain at rest, then a person with a single episode of prolonged vertigo, then being called to the Resuscitation Room to see an unconscious patient who has taken a tricyclic overdose …

For each example, read a paper, guideline or textbook relevant to the case or topic, but don't re-read, highlight or write notes. Instead, ask yourself what you already know about the topic first (retrieval practice), draw a 'concept map' or pretend you are designing a clinical guideline in the form of a flow chart while you study (dual coding, elaboration). If you are learning about a more abstract topic, for example 'complex partial seizures' – use concrete examples: describe how a person might present with this problem, what the eye-witness might describe, or look for examples on YouTube. Finally, elaborate: imagine you are teaching a more junior colleague about this topic and explain and describe ideas with as much detail as possible – but in your own words.

An example of a concept map is show below:

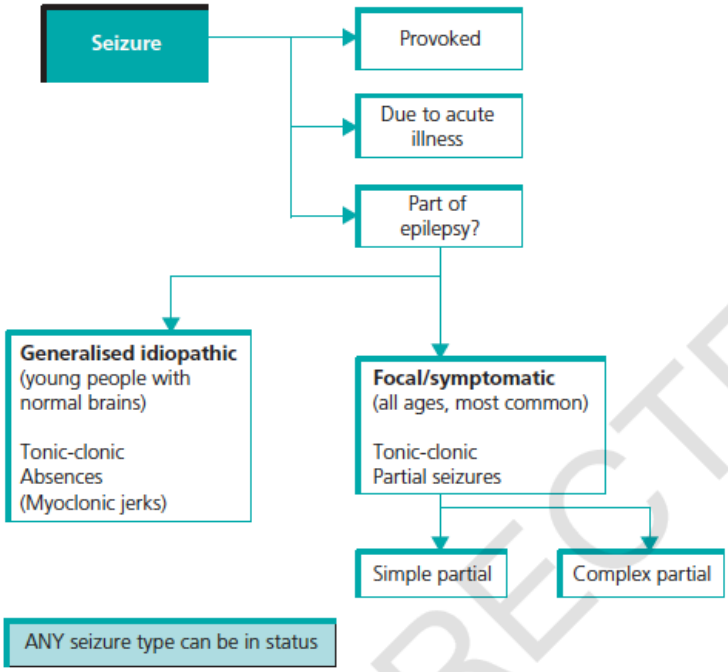

Figure 9.4 An example of a concept map (or tree) used in teaching, to facilitate organised learning and memory in what can appear to be a complex clinical topic.

These are proven study strategies. You can read more about these and the evidence behind them in the book: Brown PC, Roediger HL III, McDaniel MA. Make it stick: the science of successful learning. Harvard University Press, 2014.

'Memory is the mother of all wisdom.'

You can also find study material at the unofficial East Midlands AIM training day website: www.internalmedicineteaching.org/resources.html

Good luck!