

Chapter four: Training the trainer Toolkit - Revision and exam preparation

Introduction

This part of the toolkit is designed to help educational supervisors support other trainers in supporting trainees with preparation for and performance in exams. Although the content focuses on issues faced by trainees who have failed on at least one occasion, the content is relevant for supervisors working with any trainee. It provides a bite sized refresher on the learning process, particularly in relation to revision and professional examinations. It is during the examination process that differential attainment may be first noticed, when trainees are having to deal with the competing demands of learning/ revision and working long hours. Furthermore, exam preparation and performance can be influenced by previous educational experience, cultural and linguistic background, managing life events and work, and learning disabilities, such as dyslexia. Also, there are sometimes different cultural responses to failure which may affect subsequent performance in examinations.

Aims:

- to familiarise educational supervisors with trainees' challenges around exams
- to explore strategies to support enabling them to succeed

Learning outcomes:

- Recognise range of common challenges trainees have with revision and exams
- Identify strategies for improving trainees' approaches to learning and revision
- Identify strategies for improving trainees' exam performance
- Consider how to build trainees' confidence (particularly if they have previously been unsuccessful)
- Know where to refer trainees to for specialist support and additional resources

This section of the toolkit consists of an outline of a workshop for other educators (max 3 hours), with clear stages, timing and activities. This is followed by the trainer notes which provide more information and resources for each stage of the workshop, which is organised in 3 parts:

- Part 1: Learning and revision
- Part 2: Exam performance
- Part 3: Case studies

The workshop is designed to be interactive, giving participants the opportunity to share experience and expertise. Some of the individual activities could also be used in isolation with groups of educators, or even with trainees. Appendix 1 also offers an outline of a 3-hour workshop specifically for trainees.

Outline of Workshop plan:

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- to explore strategies to support them enabling them to succeed.

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- Know where to refer trainees to for specialist support and additional resources

Resources required: flip charts, pens, PowerPoint presentation facilities, revision examples, case studies, tips for managing exam performance task.

Introduction (10mins)

Introduce topic, the revision and examination process, and the importance of running this workshop. Talk through aims and learning outcomes and workshop timetable.

Part 1: Learning and revision – what are they, what are the differences? (1 hour 30mins)

Activity 1: Challenges with revision (15mins)

On flipcharts in groups, using the suggested questions below, brainstorm the challenges their trainees face in dealing with revision. Discuss in plenary.

- When do they revise and for how long at a time?
- What techniques do they use to revise?
- What types of questions do they find the most challenging?
- What types of barriers do they face to revision?

(Note, other questions could be substituted, but the idea is for them to consider their current revision strategies.)

Have a discussion about the answers, particularly the common response of doing exam questions, and reading and making notes. This will prepare for the next section on learning.

Input on learning and information processing (20mins)

Using ppts provided (Appendix 2), or other own materials / resources, talk through what learning is, and how the brain processes information in order to store it and aid retrieval under exam conditions. Also see trainer notes (Page 5) for theory and additional information.

Activity 2: Revision techniques (20mins)

Using materials in Appendix 3, or similar appropriate materials, individually ask participants to do the following:

- Choose a topic and a revision strategy
- Re-process the topic information using the chosen revision strategy
- Discuss the value of this approach to revision in pairs, and then plenary

Note: participants can do more than one topic and strategy if they finish at different times. You may want to allow pairs to find a quiet place to discuss, particularly if others are still working. In the discussion of pros and cons of each revision strategy the following points might be made:

- Strategies work well in combination
- Different strategies work well with different topics (eg a flow chart for a process, or a patient story for a specific condition)
- Variety and increasing the number of ways trainees process information increases the likelihood they will be able to remember and recall the information
- Variety makes revision- more creative and manageable.

See trainer notes (pages 8- 10) and appendix 2 on information processing, learning and revision to help with this discussion. There is not a 'right way' – personal choice and what is effective for the individual are key.

Note: if educators want to use this activity with trainees, encourage the trainees to try a strategy they have not used before and allow them time to tell each other what they learned from the content, without reference to their notes.

Input on using exam questions for revision (20mins)

Using ppts provided, or other materials of your choice, provide input and facilitate discussion on how to use exam questions for revision. Include MCQs, SBA, EMQs, short answer and long answer as appropriate. See trainer notes for more information.

Input on revision planning (15 mins)

Using ppts provided and trainer notes (page 11), or other materials of your choice, talk about the importance of planning, and suggest ways of approaching this. Allow opportunity for questions and find out what the participants have done in their own revision. Allow them to share their tips and ideas with each other.

Part 2: Exam performance (45mins)

Activity 3: Preparation for exam performance (15mins)

As in Part 1, using the questions below, ask groups to consider what challenges trainees face in preparing and coping with the day of the exam and record on flipchart. Allow groups to compare.

Discuss in plenary.

- How do you think trainees respond to exam conditions?
- What factors affect their performance?

Activity 4: Tips for managing and improving exam performance (20mins)

Give participants in small groups the statements (see trainer notes page 13 and appendix 4) about things to do prior to and during the exam. Ask them to decide which they agree with and which they do not. Ask them to sort the statements physically on their tables in order that other groups can see which statements belong in which category. Let groups compare their answers, and then have a discussion about what they agreed and disagreed with, and why, and also any which they were unsure of. Also ask them to add any of their own tips and add in your own also. (Note this activity can also be done with trainees.)

Input on rehearsing for the day and exam strategy (10mins)

Using ppt and trainer notes make short presentation on mock exam practice and strategy for tackling the exam. For example, timing, batching questions, doing the easiest questions first etc. Allow for questions and discussion and for participants to share their tips and strategies.

Part 3: Case studies (30mins)

Using the case studies provided (appendix 5), or others drawn from your experience and discipline, ask participants in groups to consider 1 or more of the case studies. The purpose of these case studies is to highlight issues that face trainees in preparing for and achieving in exams. Each case study touches on a different cause of differential attainment. Each case study has suggested questions for participants to consider:

- How would you help build confidence?
- What strategies would you suggest to improve the trainees' learning?
- What advice would you offer?
- What alternative support or resources would you suggest?

Follow this with plenary discussion. Draw on participants' own experience with trainees.

The 4 case studies provided focus on:

- Poor planning and over-revising
- Inability to focus in the exam
- Challenges with learning and memory

- Challenges in home environment

See trainer notes (page 17) for suggestions of other resources and specialist services, including advice on dyslexia and dyspraxia services.

Activity 5: Reflection and evaluation (5 mins)

Ask participants to identify one thing they have learned and an action they are going to take.

Trainer Notes

Part 1: Learning and revision

Before considering what learning is, it is worth spending some time considering how trainees experience with revision to date. The questions outlined in the workshop can be useful:

- When do they revise and for how long at a time?
- What techniques do they use to revise?
- What types of questions do they find the most challenging?
- What types of barriers do they face to revision?

This could be discussed in 2's or 3's, recorded on flipcharts, and then you could have a wider discussion with the whole group.

The second question can be quite revealing as they may well have a very limited range of techniques, such as using question banks or just reading and making notes. However, some of the techniques they learned and used in school could still be incorporated into their learning and revision as trainees. It is therefore worth asking educators to think about other techniques and if working with trainees to ask them what they used in other revision situations. For example, the use of spider grams and mind maps is often neglected as they have been advised to just focus on the examination questions – what worked in previous situations should work well again.

The third question allows for a preliminary discussion on exam strategy and indicates the need for familiarising themselves with the examination format and how the questions are phrased.

The fourth question focuses on the challenges of managing work, family life and revision, and links to the case studies used later in the workshop.

Learning, information processing, memory and revision

A simple definition of learning is: gaining knowledge and knowing how to use it. There are a multitude of learning theories and perspectives on learning. Below are some of the more commonly cited ones, which draw mainly on psychology:

- behavioural (Skinner)
- cognitive (Piaget)
- social constructivist (Vygotsky, Bandura)
- humanistic (Rogers)
- transformative (Mezirow)

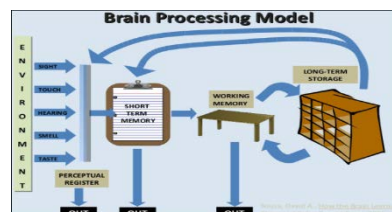
Despite the differences in theoretical perspectives, there is consensus that learning is a result of experience (implicit) and training or education (explicit). Learning is determined by the way we process information; the way we perceive, store and retrieve it. When we are presented with something unfamiliar through our senses, we attempt to make sense of it. We try to fit it to what we have already learned. If it fits easily, we do not have to make much adjustment to our understanding. If we do have to make some adjustment, we reshape our understanding

to fit. This is an incremental, constructive, contextual process. We constantly test, practice and reprocess to make the new information meaningful, with the aim of mastering it.

Rogers (1969) argues that humans are natural learners and are good at it, as is illustrated by the rate and way in which babies learn. Although, we process information differently as our experiences, genes, personality and environment are all unique to us, we all learn best in a multisensory way: using a combination of our senses at any one time. It is for this reason learning through experience can be so powerful, both in a positive and negative way. Good learning also occurs through trial and error, including failure. So, reflection on what has not gone well helps us improve. A supportive, safe space to do this is important. The points above are particularly relevant for those who have experienced failure. Reflection on what has gone well is also important, it builds self-belief and confidence.

There is much written on 'learning styles', with people claiming to learn better through visual stimuli while others prefer auditory channels. This is too simplistic as we all learn best in a multi-sensory way. Learning different information and skills may also require different senses, so it is important to encourage learners to not restrict their approaches to learning. Each learner needs to explore how best they process different types of information, remembering that variety is important. Teaching and learning from the age of 7 becomes predominantly word based in the education system. Charts, diagrams, pictures, mind maps etc may be less encouraged, meaning people do not develop sufficient confidence in using the full variety of tools and approaches to learning.

One of the most important mechanisms in our information processing system is our short term and working memory. This a much researched and discussed area in cognitive psychology. It is involved with the input and output of information; essentially it is the part of memory that receives and temporarily holds on to information long enough to process it, to enable storage



in the long-term memory system-see diagram above (Sousa 2011). It is also responsible for the retrieval of information from long term memory. This diagram is a simplistic model of the memory system, which is actually highly complex. However, it helps explain the process to learners, and illustrates that for learning to happen, and for retrieval of what is learned to be possible, the information coming in must be re-processed in some way. If it is just read, and nothing more is done with it, it is less likely to be stored effectively and hence not recalled. This is very important for participants to understand, if their usual method of trying to learn is reading over text or just doing exam questions that either of these methods involve sufficient processing. Whereas, thinking about, or playing with, the information, questioning it, making links and associations with previous knowledge enables it to pass effectively into long-term memory. The information is better understood, retained and has more channels for retrieval. These are reinforced through self-testing, which can provide the evidence for gaining knowledge and hence builds confidence and self-belief.

Learning and memory are closely connected. We remember best if we use a combination of channels. For example, seeing, hearing, saying, doing is more effective than just seeing. The more active the engagement with the information the more successful the learning is likely to be. A learner then has different possibilities for retrieving the information. For example, if you get up to go into another room to fetch something, get there and find you have forgotten what

you are doing, you can visualise. If that does not work, you can physically retrace your steps etc. For the purposes of exams learners need to be able to use retrieve information under stressful conditions, with no recourse to additional resources. Learners therefore need to maximise the number of ways in which they process information, so that if one route to retrieval fails, they have other options.

Clinical practice is a multi-sensory learning environment and it is essential that participants draw on this as much as possible. For example, they can relate much of their daily work to the exams, keeping a note of current procedures or relevant patients, explicitly considering how something in the workplace might be explored in the examination etc.

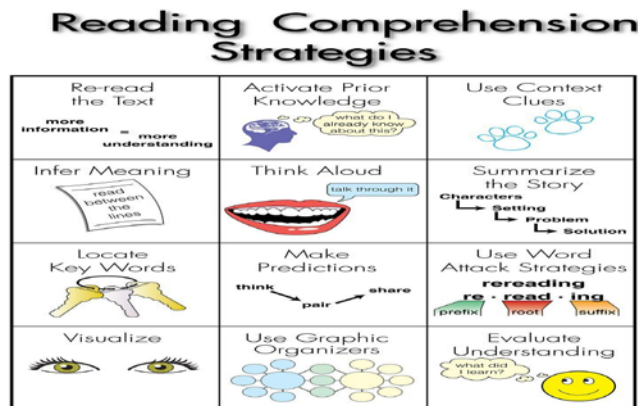
The chart below demonstrates the difference between active and passive learning. Many people become passive in their approach because they learn as they have been taught. They have never spent the time thinking about how they might do it more effectively, being more strategic about it- ‘how best can I do this’. It is also useful to remember and to show to trainees. The more active and strategic they are in their learning, the better it is learned.

What we remember		Level of involvement
10 to 20%	Reading hearing words	passive
30%	Watching a movie looking at an exhibition looking at pictures	passive
50%	watching a demonstration being on location	Passive
70%	Participating in the discussion Giving a talk	Active
90%	Doing a demonstration simulating the real thing doing the real thing	active

Source: Adapted from Dale (1969)

Learners also need to think about the nature of the information they are trying to process and remember, so that they choose the most appropriate strategies. For example, if there are 5 symptoms of a medical condition then a list 1-5 is the obvious choice. They would write these down, say them, count them off on their fingers, visualise what the 5 things look like. However, if they are learning a process, then a flow chart might be the most effective method. Again, drawing this, talking it through, visualising it are all important to help remember. Stories or life cycles are very common in medicine, so creating a patient story with an interesting character for who has all the relevant symptoms of a condition may be appropriate. This can be written, the characters drawn, given a name and a style of dress, all to create different routes to remembering and retrieval. A fictional family story demonstrating the differences of a condition across the ages can also be effective. Memory works well on elaboration and exaggeration. Some information, however, may just have to be subject to endless repetition – rote learning – such as formulae. Making these into a chant, something with rhythm can help, or pinning them to the wall and reciting them regularly. All learning is more effective if it is fun, creative and meaningful.

The chart below illustrates some of the multisensory processing strategies that aid reading comprehension. Many of these are equally effective when trying to understand and remember information



(Source: Pinterest)

Re- reading the text is only more effective if the material is questioned and clarified. Activating prior knowledge, that is identifying what you know, don't know and need to know (i.e. self-testing) before learning a topic also makes the learning process more interactive. The learner is deliberately adding to their previous knowledge base, rather than passively trying to absorb the material. Using context clues can help with retrieval as they act as a prompt. Word attack strategies can be particularly helpful with medical terminology and with topics such as anatomy. They can be helpful for doctors where English is not their first language. Evaluating understanding and learning increases confidence, but also aids revision planning as it highlights which facts or areas of knowledge may need to be revisited.

A meta-cognitive memory strategy: The 4 M's – how can I make it

- **Meaningful** - look for the logic, the story, what you already know, does it make sense?
- **Manageable** - plan it, look for the structure, break it into bits, set goal, tick them off
- **Multi-sensory**- use a variety of methods incorporating the senses
- **Use Memory aids** – techniques should be *task specific* based on the type of information to be learned

The importance of using clinical experience

Many doctors have considerable clinical experience. They have the knowledge that they will have gained while at college and in training, and they will have had practice in some of the areas in their place of work. Arguably they are continuously gaining medical expertise. This is a huge resource for learning and recall. Furthermore, most clinicians recognise that if they have seen a patient with a specific condition, it is easier to recall most of the information associated with it. Treating patients is therefore the ultimate in multi-sensory learning. Suggesting that trainees make up patients with a whole range of clinical conditions can be a very effective tool, as it draws on their expertise.

Equally it is important that trainees acknowledge their clinical strengths, that they should not be defined by success or failure in an examination. If trainees perform well in the clinical setting, lack of success in exams usually means it is a matter of examination practice, so

ultimately, they should succeed. However, if they are not competent in a clinical setting or examinations then other avenues should be explored.

Written examinations test knowledge. Oral examinations such as the CSA attempt to assess clinical practice. Both types of examination are conducted under specific unfamiliar circumstances, which do not relate to actual clinical settings and performance. Supervisors can therefore play an important role in maintaining a trainee's confidence and self-belief. Failure in an examination can undermine these key components to success. Being good at professional examinations does not necessarily lead to be a good clinician. It just means they are good at taking examinations!

Revision techniques

Revision should be a process of *revisiting* information. If something has not yet been learned, it cannot be revised. As mentioned previously, just reading notes or exam questions is a passive **recognition** process, not an active practice of **developing understanding and practising recall**.

Often the favoured method of revision is to do question banks, particularly as successful trainees report that this is their strategy. There are trainees who can revise in this form, as in fact they engage very actively with the questions, but for many it is not effective as they are not using them to learn. 'Revision' implies re-visiting learning, and learning requires more engagement with material and a variety of ways of processing it than working through question banks encourages.

Below are a list of suggested alternative and additional strategies for trainees to use for revision. Each of these offers trainees a way of processing information in an active manner, which increases the likelihood that they will remember it and be able to recall it on demand. If working with trainees, you could suggest they try a couple of these strategies that they have not used before and see if they work. Increasing the range of strategies also provides variety, which is also key to learning, and provides trainees with strategies for different types of information.

1. Write a fictional patient case using the condition described in the text
2. Create flashcards on the material in the text
3. Create a diagrammatic summary of the material in the text e.g. mind map, flow chart, cartoon etc.
4. Choose their own approach to processing the information, and then convey it to someone else without reference to the original information
5. Write their own exam questions

Using exam questions- the written examinations

Practising exam questions is clearly important as preparation for the exam itself. Trainees must be familiar with the format and the speed at which they need to work. However, exam questions can also be used as a revision aid.

Firstly, there are different types of questions, which aim to test different types of information. Trainees need to recognise how the questions are structured, what is behind the type of

question, what language is commonly used, which bits of information are key for a relevant answer.

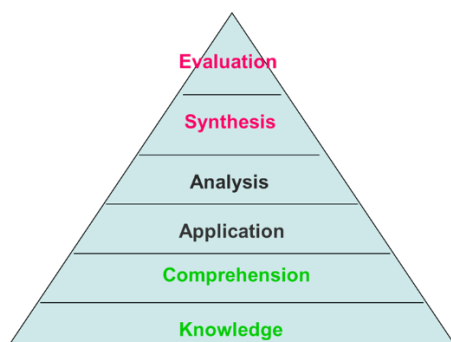
Across the different disciplines there are many different exam formats and questions. These include: written

- Multiple choice questions (MCQs);
- Extended matching (EMQs),
- Single best answer (SBAs),
- Short answer,
- Long answer (one question per hour of the examination).

All formats are designed to test knowledge, the application and synthesis of that knowledge. The first 4 question formats also test differential diagnosis skills. Some questions are scenario based, while others are looking for information and the understanding of processes. Understanding the questions at this structural level should contribute to quicker processing of the knowledge that is required.

One commonly known theory that can help to explain the different types of information and processes that are involved in examination questions is that of Bloom's taxonomy (Bloom et al 1956). Many educational assessments and assignments are based on the is model. Arguably, it is also resembles thought processes doctors use in clinical practice. Talking this through with learners can help them interpret the question more accurately. In Bloom's taxonomy (see below) the various levels illustrate that different types of processing involved. The bottom two are straightforward acquisition and understanding of information. When trainees are advised to 'just do' questions, it maybe that these are the only levels required or being used. In contrast, the application and analysis of knowledge demonstrates that the information is fully understood, can be utilised across a range of situations. To answer some questions this information must be synthesised in relation to the scenario presented. Factors such as age, gender, presenting symptoms, history, and environment of the patient all influence the clinical reasoning and ultimate diagnosis or treatment.

Bloom's Taxonomy



LEVEL	DEFINITION	EXAMPLE
Evaluation	Appraise, assess, judge	Determining the value or utility of synthesis
Synthesis	Imagine, compose, design, infer	Weaving together all the knowledge into a coherent whole i.e diagnosis or management plan
Analysis	Analyze, contrast, distinguish, deduce	Discovering and differentiating the component parts of a larger whole
Application	Practice, calculate, apply	The capacity to transfer knowledge from one setting to another
Comprehension	Summarize, discuss, explain	The ability to translate, paraphrase, interpret, or extrapolate material
Knowledge	Define, label recall	Rote memory skills: knowing facts, terms, procedures, classification systems

Using the exam questions as a basis for revisiting the information

A revision strategy that develops familiarity with the questions such as the MCQs and subject matter is as follows:

1. Read the question sentence first (ie the sentence that has the question mark after it). What is it asking for: information, diagnosis, management treatment?
2. Cover the answers if possible and do not read them.
3. If it is a factual question, try and come up with a potential answer. Check this against the list of answers to find the one that matches.
4. If it is scenario-based, then read the scenario with the question sentence in mind. Look for the key variables which affect potential answers: age, gender, environment, symptoms, previous history. Construct a mental image of a patient.
5. Answer the question without looking at the answers.
6. See if your answer is right. If it is, look to see why. Tick, circle, highlight the elements of the scenario that gave you that correct answer. If it is wrong, look at the question again. Identify the bits of information in the scenario you missed that were key for the correct answer.
7. Look at all the other potential answers. Ask yourself: Why are they wrong? When would they be right (eg if it was a different gender, age etc patient)?
8. Create new questions to match the other potential answers.

This can seem laborious, but it is more effective as a tool for learning and revision, than just marking exam questions.

For short and especially long answer questions, again question analysis is essential. Attention should be paid to the process words i.e. discuss, outline. Then learners need as much practice as possible on doing quick plans, before answering questions. It is a test of recall and good practice for examination. Planning before answering questions alleviates the load on working memory and allows for more concise relevant responses.

Practising for the oral examinations

There are the verbal/ oral examinations such as OSCEs, PACES, Vivas and the practical examinations. Many clinicians find these easier as what is required is closer to their clinical practice, therefore they have more experience and confidence in their performance. They are also interactive and therefore there are more implicit and explicit memory prompts. Furthermore, trainee doctors also often have opportunities to practice this with supervisors and colleagues. We would suggest that trainees do practise as much as possible, much as a performer practices and rehearses for a performance. Using white boards, imaginary patients, imaginary or stand-in panels of examiners (such as family and friends) can be useful. Also reflecting on their clinical performance and treating their clinical practice like a CSA enables them to develop techniques and strategies that should enable them to perform more effectively on the day.

Each of these examination formats requires different revision /preparation methods. Understanding what the examination demands means that revision is more targeted, and trainees are more familiar and better prepared for what is to come.

The importance of revision planning

It is widely acknowledged that planning and preparation improve performance. Planning for revision ensures that all (much) knowledge is learned or refreshed, it improves recall of information, and flexible planning leads to increased confidence. So, it is surprising how many trainees do not do this effectively, if at all. The reasons for lack of planning given include not knowing where to start or how to do it; fear as it identifies what is not known; not having the time; never managing to stick to the plan, therefore it is a waste of time. Interestingly, when asked if they plan prior to seeing a patient, the answer is nearly always yes. When asked the reason for this planning, the answers include comments such as, 'it helps me do a better job', 'I feel better prepared', 'I know what I'm doing' or 'I can get the information I need from my patient more quickly'.

One of the differences between pre-patient preparation and revision planning is that pre-patient planning is seen as a positive and flexible guide, whereas revision planning is seen as a rigid timetable. While a timetable can greatly help some people, if they are able to maintain it, for many it can induce a sense of anxiety and failure before they take the exam. This obviously must be avoided. The value of the revision plan is as a guide. It must be adaptable to accommodate changes, family distractions, energy levels. Having a plan and setting goals means people can be more flexible in their approach to their revision. If the revision is made manageable, i.e. divided into sections according to level of difficulty and interest, time required, and method of note-making / recall trigger, then trainees can select what they want to revise, when best they can do it. Furthermore, the very act of setting goals usually leads to more being achieved. Working to pre-set, realistic goals for short periods means processing information more effectively. The focus of attention is better even if tired after a busy day's work. Setting small achievable goals and working for short focussed periods and then taking a brief break leads to greater success. For example, setting specific goals to be achieved in a 30-minute session can be the most effective. This focused, specific timespan of concentration can then be used as a time marker in the actual examination.

It is also essential that people get enough rest and relaxation. Working long hours during the day or coping with night shifts and being on call means that it is even more important to make the best use of the time available. Revising when tired often means processing is not effective, there is less interacting and engagement with the material, attention cannot be maintained.

Revising for long hours into the middle of the night can be counterproductive, stress and anxiety build up, learning is not achieved.

A planning strategy

1. Look at the curriculum, evaluate your knowledge base, ask What are my areas of strength? What needs to be covered?
2. Make a list of what needs to be learned: level of difficulty, interest, and type of information
3. Break the work into manageable chunks. Try and determine the task specific method, e.g. is it a process? Therefore, create a flowchart. Find a variety of ways. Estimate how long it might take.
4. Set goals. Be realistic. Put in a weekly / monthly diary or outlook calendar.
5. Implement your strategy and evaluate each learning session. Date and tick off the work when done and move on. Don't dwell on what was not achieved.
6. If the plan is not working, then change it. Make it more realistic or flexible or even ditch it. It is a tool to give confidence not undermine it

7. Try and enjoy it. More learning contributes to greater knowledge base and more confidence in clinical settings.
8. Also try working with others and setting goals with your supervisor.

Part 2: Exam performance

Before looking at ways to improve exam performance, it is important to find out what experience trainees have and what they find challenging about the exams. Obviously, not all educators will be aware of what their trainees experience, so this is an exploratory set of questions. If you are working directly with a group of trainees, you can ask them more specific questions about what they do in the exam at the start and draw on their experience to date.

Ask educators to consider the following questions in 2's or 3's, record them on flipcharts, and then open the discussion to the whole group.

- How do you think trainees respond to exam conditions?
- What factors affect their performance?

Many people have rituals around performance, such as sports men and women who won't step on the lines, or who wear their lucky socks. Although, such behaviours have little to do with the person's ability to perform, they help put the performer in the correct state of mind. Doing an exam is a kind of performance, particularly OSCEs, Vivas etc. It is important for trainees to get themselves into performance mode for all exams, being nervous enough to perform well, but not so nervous that they cripple themselves with anxiety.

A fun activity to do with groups of trainees is to consider which strategies for exam preparation and performance they agree with. It encourages them to consider what they need to do to work well and plan for the day. Although some of these we would suggest are definite positive strategies and some to be avoided, there are enough options in the list below to generate discussion and to help trainees consider what is best for them. To do this as a group activity either with educators or with trainees, write each statement on a piece of paper, give each small group all the statements and ask them to sort them into those they agree with and those they don't, then compare each group and have a plenary discussion. Ask participants if they have any other ideas to add.

Strategies for exam preparation and performance

- Do the questions in the order on the paper
- Pack your bag the night before
- If you are taking longer than planned on one question, move onto the next
- Drink tea or coffee in the hour before
- Look over your notes on route to the exam
- Take the day off the day before the exam
- If you finish early, go over your questions again
- Do a post-mortem with other candidates after the exam
- Talk to other candidates before about how their revision has been going Look over your notes on route to the exam
- Wear a suit
- Read the whole exam paper before you begin
- Get to the venue an hour early
- Go to bed early the night before

- Eat a large meal the evening before
- Go to the gym the day before
- Look to see how other candidates are doing
- Plan your timing for completing the exam paper
- Spray some perfume on your wrist to sniff during the exam
- Plan in breaks at regular intervals in the exam
- Revise the evening before

We would recommend that definite positive strategies relate to getting a good night's sleep, eating properly, being prepared the day before, knowing where they are going and leaving enough time to get there. Definite Don'ts are pre and post-mortems with other candidates. The others are up to the individual.

In responses to the list trainees often say that they do not wear work type clothes to a written exam, aiming instead for feeling relaxed. It is worth pointing out that being too relaxed does not suggest preparation for a performance. Thinking about the exam as work related, as a professional activity, as requiring a performance mindset can help. The perfume example might seem odd to some, but sniffing perfume requires taking a deep breath and breathing slowly is important for managing feelings of panic.

Rehearsing for the day

Many trainees like to do a mock examination. This can be a useful as rehearsal is good. It allows trainees to practice their time management and any exam strategy. But it should be viewed with caution. It should build confidence. A mock examination does not take place not under real exam conditions, so performance will not necessarily be the same as on the day. It should be used as a familiarisation process, rather than a test of how the real event will go. The strategies below should be used to help on the day.

1. A recall warm up strategy for the first few minutes of the examination

Some information often requires rote learning, such as facts or formulae. This type of information can be hard to recall under exam pressure. In the absence of other strategies, rote learning and automatic recall may be the best method. This involves practice, making a list of the formulae, constant repetition, writing it down at speed for about 5 minutes on a regular basis, in the weeks prior to the exam date, to develop automaticity of recall. Then on the day, at the beginning of the exam, before doing anything else, using the whiteboard or paper provided, once again rewrite the list. This serves several purposes:

- it can decrease nerves as it is a familiar and successful activity,
- the fact crib sheet is there for the entire examination to be used when needed,
- it relieves the pressure on memory thereby enabling the focus to be on recalling other information.

2. The gold, silver, bronze method of question selection

- Go through the paper in batches: 25/ 30 or so questions at a time if there are 100+ questions
- Of the 25/30 do all the easy to answer questions first (gold).
- Go through a second time doing the ones that require a bit of thinking (silver).
- Leave the few tricky ones till last. Flag them and put in the best guess to return to at the end (bronze)

- Take a short break
- Repeat process for next 30 questions

This strategy can be adapted in many ways for individual preferences. It can reduce errors at the end on easy questions and examinees can pace themselves. It does need practice. If the answers are recorded on a separate grid sheet, then using a ruler to ensure the response is recorded on the correct line is advised.

Some trainees have high levels of anxiety and may need some targeted help. They can be referred to the PSU for specific support.

Keys to success in an examination are thorough preparation, confidence and self-belief. Effective revision, planning and strategies build knowledge confidence and self-belief, the latter two are also built through the support and encouragement of those around them, particularly their supervisors. Supervisors who found revision and exams easy, may need to reflect on precisely what strategies they used in order to be successful, in order then to advise trainees.

Part 3: Case studies

Below are some case studies based on trainees' experiences which illustrate some of the challenges they face in preparing for and performing in exams. For each consider the following questions:

- How would you help build the trainee's confidence?
- What strategies would you suggest to improve the trainee's learning?
- What other advice would you offer?
- What alternative support or resources would you suggest?

Case study 1

Anil is a 30-year old surgeon and he re-taking his MRCS Part 1. Anil uses every spare moment to revise, snatching time on the tube or bus, reading over notes during lunch hours, spending all day at the weekends looking at books and doing exam questions. However, this does not seem to make him feel any less anxious about the exam and when he tests himself on the exam questions he does not do as well as he anticipates. He likes to pick topics at random to work on. He sometimes finds he has spent 20 mins reading something, but can't remember what he has read afterwards, particularly when studying in the evenings. Anil used to go to a swimming session once a week but has given that up to concentrate on preparing for the next exam, which is 3 months away.

Case study 2

Joyce is a haematologist. She finds learning for the exams relatively enjoyable. She has failed her Part 1 exam 3 times. She has a good revision plan that is not too ambitious. She has a supportive family who block time for her to revise and practice at weekends. Her educational supervisor finds her approach to revision positive and is confident that Joyce's knowledge is sufficient to pass. Joyce, however, finds the nerves start the week before the exam, leaving her unable to sleep and panicky about not being ready. On the day she gets to the venue 2

hours early and sits and fidgets. She gets her notes out, looks at them, puts them away again, tries to read the paper, then returns to her notes. In the exam, she finds every noise distracting, notices everything the other candidates are doing and generally finds it difficult to concentrate. This has the result of slowing her progress so that she does not cover all the questions in the time set. She then panics as to how best to complete everything.

Case study 3

Fatima is a trainee GP in stage 3. She works full time. She passed her Applied Knowledge Test (AKT) on the third attempt but is now struggling with the Clinical Skills Assessment (CSA). She has failed it twice, once for knowledge and once for patient interaction and management. This has surprised everyone as she is well thought of in her surgery, she is generally well organised and works hard. She has good rapport with her patients, although she always takes longer than 10 minutes with her appointments and is slow when writing up patients notes. She is very nervous on the day. English is her second language, and she thinks her accent lets her down. She also runs out of time, finding it hard to recall all the NICE guidelines. She panics when reading the station scenarios and worries she cannot talk to the patient and conduct an examination at the same time.

Case study 4

Len is a MRCP doctor, working full time. He is married with 2 children of 5 and 7 but has recently been through a divorce. It was quite amicable, but he is in the process of moving out and shares the childcare arrangements on an ad hoc basis i.e. whenever it suits either parent. He works on a two-week rotation and has failed the Part 1 exam three times. On the first occasion he did not really plan or prepare. Everyone told him his knowledge and clinical practice were sufficient, so to give it a go. He failed by 3 marks. The second time his marriage was breaking up and he failed by 10 marks. On the third occasion, he did some revision when he could, mainly focusing on exam questions but failed again. He said that his confidence has gone, and he is really worried about failing it again.

Further resources for exam preparation

There are a variety of examination question banks and revision courses commonly used including:

MRCS/FRCS/MRCP/MRCGP

- <https://www.onexamination.com>
- <https://www.passmedicine.com/>

Additional resources for MRCGP

- <https://www.rcgp.org.uk/publications/innovait.aspx>
- <https://aroramedicaleducation.co.uk/>
- <https://www.fourteenfish.com/>

Glossary

- MCQ: multiple choice questions
- SBA : single best answer
- EMQ: extended matching questions

- MRCS: membership of the Royal College of Surgeons
- MRCP: membership of the Royal College of physicians
- FRCS: Fellowship of the Royal College of Surgeons
- MRCGP membership of the Royal College of General Practitioners

Dealing with continued examination failure

There are a variety of reasons for continued examination failure. As suggested previously they include: coping with very demanding jobs, managing to find sufficient time and energy to study, maintaining motivation, overall competency (some people do reach the limit of their capabilities), changing family circumstances, cultural and linguistic differences, life events, and specific learning difficulties. Reasons for any failure should be explored, having an explanation enables people to move on. See other sections in this toolkit on having difficult conversations, linguistic support, coaching and careers. The first two reasons are often addressed through additional attempts, the rest may require other solutions including time out and additional coaching or specialist assessment

Signposting for specialist services/ assessment

If there is continuing failure in the examinations and this is **inconsistent** with clinical practice, it may be worth considering that there is an undiagnosed specific learning difficulty, i.e. dyslexia, dyspraxia, attention deficit disorder. They are all misunderstood in adulthood, as they are still often seen as childhood problems. Dyslexia can best be defined in this context as an information processing difference/ difficulty. This processing problem is a result of weaker phonological processing skill that impacts on the working memory system resulting in additional difficulties with organisation, planning, memory recall, speed of processing particularly symbolic text i.e. reading and writing.

Dyspraxia is more of a coordination difficulty leading to problems with organisation of thought, ideas and planning, motor coordination difficulties are often less obvious in adulthood.

Attention deficit disorder is better understood, it is difficulty in maintaining concentration. It has to be noted that working at this level indicates that people with specific difficulties have the ability to do their job and they have largely developed the skills and strategies to manage their problems. However, under certain circumstances, such as in examination settings, these strategies are not sufficient and need refinement and extra time.

The characteristics below are some of the indicators, in addition to examination failure, that suggest referral for further investigation.

- Recall of information, names under examination conditions
- Working very long hours to revise
- Poor concentration
- Not completing the examination paper in time
- Slow at reading or frequently re-reading to comprehend
- Difficulties with planning and or time estimation
- Taking longer to complete paperwork
- Inconsistency in performance – good at clinical work -not good in assessment settings

To learn more educational supervisors and trainees can seek advice and support from the HEE Professional Support Unit.

Alternatively, the individual may prefer to find out about these difficulties on their own. General and screening advice can be found at:

<http://www.dyslexia-idc.org/>

<https://www.bdadyslexia.org.uk/screening>

However, caution is advised with online screening, they can be a good resource to start a conversation but there is also the risk of false positive and negative results. A full diagnostic assessment is advised. This assessment should provide a review of the skills and abilities, an explanation for the specific difficulties, and suggest recommendations and solutions. Greater understanding of the nature and impact of the difficulties on performance enables people to develop the skills they need to become more successful.

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Appendix 1: Workshop plan for use with trainees

Note that much of this mirrors the workshop plan for educators, with the exception of the case studies, which are replaced by practice exam questions, and slightly different diagnostic questions at the start of each section. The trainer notes provided in this toolkit also support this workshop plan for trainees, so all that is included below is the outline of the workshop, with the different questions included. The process for running the activities is the same as for the educators.

Total time: 4 hours

Aim:

- to assist trainees to prepare more effectively for their higher exams

Learning objectives:

By the end of the workshop you will have:

- Reflected on aids and barriers to your learning for higher exams
- Developed an effective revision strategy
- Considered a variety of exam techniques
- Identified support for managing performance anxiety
- Been briefly introduced to issues related to adult dyslexia, when to consider it, and how to obtain an assessment and support

The workshop is divided into two parts.

- Part 1: Learning and revision
- Part 2: Exam performance

Pre-course information

Request in advance a list of participants, their specialisms and any other information you consider useful.

Handouts and resources

Copies of slides from the presentations and the handout for them to fill out, blank flash cards and paper for the activities, the text for the revision activities. Copies of statements for exam strategies - one set per group.

Introductions and aims of the workshop (10 mins)

Each facilitator introduces themselves. Do a 'getting to know you exercise'. For example, ask each participant to say who they are, where they work and identify one thing, they are proud of in their work as a clinician.

Go through aim and learning objectives.

Part 1: Learning and revision (1 hour 30mins)

Activity 1: Challenges with revision (15mins)

This is a diagnostic exercise.

Ask participants in small groups 2 / 3s to answer on flipcharts the following questions about exam preparation:

- When do you revise and for how long at a time?
- What techniques do you use to revise?
- What techniques did you use when you were studying at school?
- What types of questions do you find the most challenging?

Plenary discussion.

Input on learning and information processing (20mins)

Explain there will be a short input on learning and information processing. Before doing this, give participants the blank handout (appendix 6), and ask them to write 2 or 3 questions they would like answered about learning/exam preparation. Explain the purpose of the handout is to make them identify what they want to know and to be more active in listening, a key aspect of effective learning.

Using ppts provided (Appendix 2), or other own materials / resources, talk through what learning is, and how the brain processes information in order to store it and aid retrieval under exam conditions. See trainer notes for theory and additional information.

Activity 2: Revision techniques (20mins)

Using materials in Appendix 3, or similar appropriate materials, individually ask participants to do the following:

- Choose a topic and a revision strategy
- Re-process the topic information using the chosen revision strategy
- Discuss the value of this approach to revision in pairs, and then plenary

The strategies include:

- Process the text so that they can relay the information to someone else
- Write a fictional patient case using the condition described in the text
- Create flashcards on the material in the text
- Create a diagrammatic summary of the material in the text e.g. mind map, flow chart, cartoon etc.
- Write an exam question

Input on using exam questions for revision (20mins)

Using ppts provided, or your own material, provide input and facilitate discussion on how to use exam questions for revision. Include MCQs, SBA, EMQs, short answer and long answer as appropriate. See trainer notes for more information.

Input on revision planning (15 mins)

Using ppts provided, or other materials of your choice, talk about the importance of planning, and suggest ways of approaching this. Allow opportunity for questions and find out what the participants have done in their own revision. Allow them to share their tips and ideas with each other.

Part 2: Exam performance and exam question practice (Total time: 1 hour 15mins)

Activity 3: Preparation for exam performance (15mins)

Again, as a diagnostic activity, ask participants in small groups 2 / 3s to answer on flipcharts the following questions about exam technique:

- How do you respond to exam conditions?
- What do you do at the beginning of an exam?
- What other factors affect your performance in exams?

Move straight on to the next activity and have a plenary discussion for both this and the next activity afterwards.

Activity 4: Tips for managing and improving exam performance (20mins)

Give participants in small groups the statements (appendix 4) about things to do prior to and during the exam. Ask them to decide which they agree with and which they do not. Ask them to sort the statements physically on their tables in order that other groups can see which statements belong in which category. Let groups compare their answers, and then have a discussion about what they agreed and disagreed with, and why, and also any which they were unsure of. Also ask them to add any of their own tips and add in your own also.

Input on rehearsing for the day and exam strategy (10mins)

Using ppt and trainer notes make short presentation on mock exam practice and strategy for tackling the exam. For example, timing, batching questions, doing the easiest questions first etc. Allow for questions and discussion and for participants to share their tips and strategies.

Activity 3: Exam question practice (25mins)

Using ppts and exam question examples, go through how best to tackle the different types of exam questions. For example, covering up the answers in MCQs and just answering the question, then finding the answer that matches. Or going straight to the question SBA questions and working out what the key information is going to be: is it a management question, what key features of the patient are going to be important etc?

Get the group to have a go at different questions, using these strategies.

Finally, provide some links to sources of support. These can include ideas from the group, plus other services. Suggested links include the St Andrews website, “14 Fish” for AKT, and

other resources. Have some discussion about health, relaxation, family support, rest. Point them to other resources including dyslexia support.

Activity 4: Reflection (5 mins)

Ask each participant for one 'take-home' message for them from attending the workshop and one action they are going to take.

Evaluation (5 mins)

Ask participants to fill in an evaluation form

Appendix 2: PowerPoint slides – Workshop on Revision and Examinations to be used in conjunction with the trainer notes



HEE DA Trainer
Toolkit workshop 22.1

Appendix 3

Activity 2: Revision techniques

Please choose one of the samples of text. Then choose 2 of the following revision tasks to try, on your own and then be prepared to tell someone else what you have learned, without reference to your notes:

1. Read and understand the text, and prepare to relay the information in it to someone else, without reading from the original
2. Write a fictional patient case using the information in the text
3. Create a diagrammatic summary of the information in the text (eg mind map, picture, flow chart etc)
4. Create some flashcards based on the information in the text. (A flashcard has a word or phrase on one side, and the explanation of it on the other)
5. Invent an exam question. This could be a SBA, MCQ, for example.

Initial drug treatment for Type 2 Diabetes – Step 1

Offer standard-release metformin as the initial drug treatment for adults with type 2 diabetes. Gradually increase the dose over several weeks to minimise the risk of gastrointestinal side-effects. If an adult with type 2 diabetes experiences gastrointestinal side effects with standard-release metformin, consider a trial of modified-release metformin.

In adults with type 2 diabetes, review the dose of metformin if the eGFR is below 45 ml/minute/1.73m². Stop metformin if the eGFR is below 30 ml/minute/1.73m². Prescribe metformin with caution for those at risk of a sudden deterioration in kidney function and those at risk of eGFR falling below 45ml/minute/1.73m².

If metformin is contra-indicated or not tolerated, consider initial drug treatment with a dipeptidyl peptidase-4 (DPP-4) inhibitor or pioglitazone or a sulfonylurea. Do not offer or continue pioglitazone if they have any of the following:

- Heart failure or history of heart failure.
- Hepatic impairment.
- Diabetic ketoacidosis (DKA).
- Current, or a history of, bladder cancer.
- Uninvestigated macroscopic haematuria.

<https://patient.info/doctor/antihyperglycaemic-agents-used-for-type-2-diabetes>

Cardiac type chest pain presenting in primary care -Assessment for possible acute coronary syndrome (ACS)

Consider the history of the pain, any cardiovascular risk factors, history of ischaemic heart disease and any previous treatment, and previous investigations for chest pain.

Symptoms that may indicate ACS include:

- Pain in the chest and/or other areas (e.g., the arms, back or jaw) lasting longer than 15 minutes.
- Chest pain with nausea and vomiting, marked sweating and/or breathlessness, or haemodynamic instability.
- New-onset chest pain, or abrupt deterioration instable angina, with recurrent pain occurring frequently with little or no exertion and often lasting longer than 15 minutes.

The response to glyceryl trinitrate (GTN) should not be used to make a diagnosis and symptoms should not be assessed differently in men and women or among different ethnic groups.

Patients with pre-existing angina should be advised that when an attack of angina occurs, they should:[4]

- Stop what they are doing and rest.
- Use GTN spray or tablets as instructed.
- Take a second dose of GTN after 5 minutes if the pain has not eased.
- Take a third dose of GTN after a further 5 minutes if the pain has still not eased.
- Call 999/112/911 for an ambulance if the pain has not eased after another 5 minutes (i.e. 15 minutes after onset of pain), or earlier if the pain is intensifying or the person is unwell.

<https://patient.info/doctor/cardiac-type-chest-pain-presenting-in-primary-care#ref-6>

Chronic Persistent Cough in Adults

Cough is a nonspecific reaction to irritation anywhere from the pharynx to the lungs. Cough can be divided into acute self-limiting cough, lasting less than three weeks, or chronic persistent cough, which usually lasts for more than eight weeks. Cough lasting for an intermediate period of 3-8 weeks is called subacute cough. Unexplained chronic cough causes significant impairments in quality of life.

Epidemiology

- Chronic cough lasting for more than eight weeks is common in the community. Chronic cough is reported by 10-20% of adults.
- Risk factors include atopy and smoking. Cough may be work-related, and a thorough occupation history is very important in assessment.
- Despite thorough investigation and empirical management, a considerable proportion of people with subacute and chronic cough have unexplained cough, for which treatment options are limited.

Aetiology

Most cases of troublesome cough reflect the presence of an aggravant (asthma, drugs, environmental, gastro-oesophageal reflux, upper airway pathology) in a susceptible individual. The most common causes of chronic cough, other than smoking in adults, are postnasal drip, asthma and gastro-oesophageal reflux disease (GORD). Chronic refractory cough also often occurs after a viral infection.

<https://patient.info/doctor/chronic-persistent-cough-in-adults>

Management of Inguinal Hernia in Adults

If the hernia is small, the patient may only need reassurance. However, there is always the chance of it becoming a surgical emergency through obstruction and incarceration. Episodes of pain and tenderness suggest the need for urgent treatment but when these become prolonged and severe then emergency surgery is indicated for possible strangulation. The fundamentals of indirect inguinal hernia repair are the same regardless of the patient's age. Reduction or excision of the sac and closure of the defect with minimal tension are the essential steps in any hernia repair.

- Conventional surgery was based on Bassini's operation; this consisted of apposition of the transversus abdominis and transversalis fascia and the lateral rectus sheath to the inguinal ligament. The Shouldice technique uses two layers of running suture in a similar fashion.
- However, the Lichtenstein technique is widely used, where a piece of open-weave polypropylene mesh is used to repair and reinforce the abdominal wall. This operation is easier to learn, gives earlier mobility and has a very low recurrence rate. The standard repair now uses prostheses, usually polypropylene mesh. It is, however, associated with a slightly increased risk of infection but this can be combated by administering a single dose of intravenous antibiotic 30 minutes before the procedure. Oral antibiotics can also be used. First-line cephalosporins give the best results.
- Some of the traditional meshes are heavy and associated with postoperative stiffness and pain. This has led to the development of lighter meshes. A systematic review has failed to find any differences in long-term and short-term complications between the two.
- Bilateral hernias are best repaired laparoscopically. There is less postoperative pain, full recovery is better and return to work is faster. However, the price is increased compared with the conventional approach and there appears to be a higher number of serious complications of visceral (especially bladder) and vascular injuries.
- There are two approaches: either the transabdominal preperitoneal (TAPP) or the totally extraperitoneal (TEP) procedure. In TAPP, the surgeon goes into the peritoneal cavity and places a mesh through a peritoneal incision over possible hernia sites. TEP is different, as the peritoneal cavity is not entered, and mesh is used to seal the hernia from outside the peritoneum. The mesh, where used, becomes incorporated by fibrous tissue.
- Meta-analyses found that laparoscopic and open mesh repairs for recurrent inguinal hernias were equivalent in most of the analysed outcomes.

- Preferences in surgical techniques vary across the world. In the USA and some parts of Europe, laparoscopic repair is becoming the first-line option for all types of hernias. In the UK, open surgery is still preferred for uncomplicated unilateral hernias. Much depends on cost-effectiveness and the availability of expertise.
- Surgery can be performed on a day-case basis; for seven days afterwards, the patient should avoid driving and lifting. The patient should be able to resume normal activities over the subsequent 2-3 weeks but, with a heavy job, it can take up to six weeks to return to work.
- A truss may be required where surgery is inadvisable or refused; however, it can be difficult for patients to manage and cannot be recommended as a definitive form of treatment.

<https://patient.info/doctor/inguinal-hernias>

Risk factors for suicide

- Previous suicide attempt or previous self-harm.
- Male gender (three times more likely than women).
- Age (currently highest in the age group 40-44 years).
- Concurrent mental disorders or previous psychiatric treatment. (See 'Mental disorders and risk of suicide', below)
- Unemployment.
- Homelessness
- Alcohol and drug abuse.
- Physically disabling or painful illness, including chronic pain.
- Low socio-economic status, loss of a job.
- Certain professions - this has changed in recent years. Historically, professions with the means/knowledge to kill themselves (vets, doctors, dentists, pharmacists, farmers) had the highest rates of suicide. More recently, rates in these professions have reduced significantly (although remaining comparatively high) and higher numbers are seen amongst manual occupations such as construction workers and plant/machine operatives.
- Low social support/living alone.
- Significant life events - bereavement, family breakdown.
- Institutionalised - e.g., prisons, army.
- Bullying (sometimes a factor in children and adolescents where social media and/or pro-suicide websites play a part).

<https://patient.info/doctor/suicide-risk-assessment-and-threats-of-suicide>

Appendix 4: Tips for managing and improving exam performance
(These can be printed and cut up for the activity.)

Go to bed early the night before

Eat a large meal the evening before

Go to the gym the day before

Read the whole exam paper before you begin

Look to see how other candidates are doing

Plan your timing for completing the exam paper

If you finish early, go over your questions again

Revise the evening before

Look over your notes on route to the exam

Talk to other candidates before about how their revision has been going

Do a post-mortem with other candidates after the exam

Wear a suit

Get to the venue an hour early

Drink tea or coffee in the hour before

Take the day off the day before the exam

If you are taking longer than planned on one question, move onto the next

Do the questions in the order on the paper

Wear your lucky socks

Pack your bag the night before

Plan your timing for completing the exam paper

Spray some perfume on your wrist to sniff during the exam

Plan in breaks at regular intervals in the exam

Appendix 5: Handout for learning and exam preparation

Write down 1 or 2 questions you would like answered about the links between learning and exam preparation. Leave enough space for notes under each one. If your questions are not answered during the short presentation, then ask them at the end and we will discuss them as a group.

Question 1

Space for notes

Question 2

Space for notes

Key learning points

Appendix 6: Case studies and advice notes

The advice notes below should be seen as a starting point for discussion. Trainers (and trainees) may well have many other helpful suggestions

Case study 1

Anil is a 30-year old surgeon and he re-taking his MRCS Part 1. Anil uses every spare moment to revise, snatching time on the tube or bus, reading over notes during lunch hours, spending all day at the weekends looking at books and doing exam questions. However, this does not seem to make him feel any less anxious about the exam and when he tests himself on the exam questions he does not do as well as he anticipates. He likes to pick topics at random to work on. He sometimes finds he has spent 20 mins reading something, but can't remember what he has read afterwards, particularly when studying in the evenings. Anil used to go to a swimming session once a week but has given that up to concentrate on preparing for the next exam, which is 3 months away.

Advice notes for Anil

Anil's revision techniques are poor. He needs to be better organised. He should be more systematic and constructive building on a body of knowledge that he feels confident with. He is struggling with learning effectively, due to the demands of his job. Revising when tired means information is not processed well. Just spending all the time working means he will go stale. He may experience revision burnout. His anxiety should decrease, if he makes a realistic plan which should definitely include time to go swimming at least once a week. It should also include a variety of learning and memory strategies to improve his recall. He needs to ensure that he focusses on understanding and retaining the information. He should beware the recognition trap. He may like to keep a study log of what he has covered and when, to aid his recall. It should be emphasised that the revision plan is a flexible guide not a fixed rigid thing that will cause him more stress. Few people manage to stick to their plan and most people pass their examinations. Good flexible planning increases confidence! If he is unable to develop planning strategies, he should seek further advice.

Case study 2

Joyce is a haematologist. She finds learning for the exams relatively enjoyable. She has failed her Part 1 exam 3 times. She has a good revision plan that is not too ambitious. She has a supportive family who block time for her to revise and practice at weekends. Her educational supervisor finds her approach to revision positive and is confident that Joyce's knowledge is sufficient to pass. Joyce, however, finds the nerves start the week before the exam, leaving her unable to sleep and panicky about not being ready. She gets to the venue 2 hours early on the day and sits and fidgets. She gets her notes out, looks at them, puts them away again, tries to read the paper, then returns to her notes. In the exam, she finds every noise distracting, notices everything the other candidates are doing and generally finds it difficult to concentrate. This has the result of slowing her progress so that she does not cover all the questions in the time set. She then panics as to how best to complete everything.

Advice notes for Joyce

Joyce experiences examination anxiety. She would benefit from developing strategies that will help her on the exam day. In her revision she could include rote learning formulae and regularly writing them out so that she develops automaticity of recall. When she gets into the examination, she should rewrite the formula to calm her nerves and get her in the zone. Her

revision although effective could be more multisensory and active, so it holds her attention more. In the week before she should take exercise and even go to work to remind her what she is good at, she obviously concentrates well at work. On the day she should have a clear timing plan and /or use the gold silver bronze- or similar method – to ensure she covers the questions she knows first. Ear plugs can decrease distraction. She should use them in revision, so she becomes familiar with them. She should try to sit near a wall. She could develop some mindfulness techniques while revising to use in the examination. If the anxiety continues, she should seek further help.

Case study 3

Fatima is a trainee GP in stage 3. She works full time. She passed her Applied Knowledge Test (AKT) on the third attempt but is now struggling with the Clinical Skills Assessment (CSA). She has failed it twice, once for knowledge and once for patient interaction and management. This has surprised everyone as she is well thought of in her surgery, she is generally well organised and works hard. She has good rapport with her patients, although she always takes longer than 10 minutes with her appointments and is slow when writing up patients notes. She is very nervous on the day. English is her second language, and she thinks her accent lets her down. She also runs out of time, finding it hard to recall all the NICE guidelines. She panics when reading the station scenarios and worries she cannot talk to the patient and conduct an examination at the same time.

Advice notes for Fatima

Fatima's performance may well be affected by English being her second language, however she has additional indicators of a specific difficulty. She is slow with processing the information with her patients, and struggles with writing up her notes. She has trouble with multi-tasking i.e. conducting an examination and speaking. She has problems with recall. But she is good in a clinical setting. It is possible that she is dyslexic. The topic of a learning difficulty such as dyslexia could be introduced. It may be a surprise to her as she has not necessarily thought about it, because she has passed exams previously and she can read and write well, albeit slowly. She should consider seeking advice. Also, her revision and planning techniques should be explored. She should also develop a CSA strategy blocking her time and making notes in three sections. She should draw on her clinical practice identifying the phrases she uses to reassure her patients in her surgery, so she does so in the CSA. Plenty of rehearsal and practice with others would also help develop her confidence.

Case study 4

Len is a MRCP doctor, working full time. He is married with 2 children of 5 and 7 years old but has recently been through a divorce. It was quite amicable, but he is in the process of moving out and shares the childcare arrangements on an ad hoc basis i.e. whenever it suits either parent. He works on a two-week rotation and has failed the Part 1 exam three times. On the first occasion he did not really plan or prepare. Everyone told him his knowledge and clinical practice were sufficient, so to give it a go. He failed by 3 marks. The second time his marriage was breaking up and he failed by 10 marks. On the third occasion, he did some revision when he could, mainly focusing on exam questions but failed again. He said that his confidence has gone, and he is really worried about failing it again.

Advice notes for Len

Len has been through a very difficult time. He would benefit from the pressure being taken off him, possibly some time out, and a discussion about when he should take the examination. His life should be more settled, so that he has the time to plan his revision, causes of failure could be explored. It is not knowledge or problems with clinical practice. It is most likely that all the demands on his time and emotional upheaval make it very hard to revise effectively. He should aim to have a realistic systematic revision plan that is constructive and builds on his knowledge and clinical practice. He should change some of his revision methods i.e making better use of the examination questions to revise from, using a variety of different methods i.e making them more visual and do a lot of self-testing and working with others to build his confidence.