

Planning for success in Stage B. Guidance for registrars

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In your training to be an occupational and environmental physician, you generally interact less frequently with your supervisor than happens in hospital-based specialties. This guide for AFOEM registrars offers ideas for topics that you can discuss with your supervisor to help you maximise the effectiveness of the time that you spend together in person or online.

Learning to think like an expert

The AFOEM training curriculum, in its 300 pages, circumscribes the extent of knowledge and skills expected of a registrar at the completion of each stage of the training program.

Yet knowledge is *not* enough on its own. The people who engage the services of an occupational physician expect the physician to be an expert – someone who can *apply* their knowledge with effect and efficiency to a new problem. An expert quickly perceives features of a new situation that are important and knows what questions to ask. How does your supervisor help you to *think like an expert*?

The teaching of knowledge is not the prime responsibility of a supervisor in AFOEM. Knowledge comes from your postgraduate university studies. The special role of your supervisor is to help you to *think like an expert*. To do this, your supervisor should:

- Display ethical behaviour.
- Create the expectation of conducting *work-based assessments* – mini-CEX, case-based discussion, DOFS – even more than are required by the training manual.
- Encourage you to make decisions that have *real consequences*. We shall say more about this below.
- Be on hand (whether over-the-shoulder or online) to give **feedback** on such decisions, on work-based assessments, and on your report writing.
- Reveal the *hidden curriculum* of the practice of OEM. The hidden curriculum is the implicit social and cultural messages, unwritten rules, unspoken expectations, unofficial norms, behaviours and values in how things are commonly done.

In hospital practice, decisions *frequently* have real consequences, e.g. decisions on investigating and treating chest pain, clouded consciousness or pyrexia in a child. Of course, in the practice of occupational medicine, a worker may react strongly to what they perceive as an unfavourable decision on return to work. But, quite often, you may not be told, praised or challenged for the consequences of a decision about, say, a person's fitness for work; or, if you do find out, it can be so long coming as to soften its impact. There is cognitive delight and much satisfaction gained by learning how to make decisions well. If you don't routinely know whether a decision has had its intended effect or whether a report has communicated what you intended, there is no whetstone on which to hone your cognitive performance. As a result, some registrars come to assessment with good knowledge but little expertise.

You do need time to gain experience in their field of medicine and hone your knowledge. What we offer here are some ideas, some tools if you like, to aid you and your supervisor in your quest to think like an expert. We frame this in terms of your getting ready to sit for your Stage B written and practical exams.

Tools

A. Study plan based on the curriculum

Do have a plan. Develop it early with your supervisor. Base your study plan on the AFOEM curriculum, ensuring that it captures all areas of the curriculum and targets gaps in your knowledge. The goals that you set in your plan should be **specific, measurable, attainable**,

realistic and time limited (s.m.a.r.t). The plan can always be adapted as you go along. The process of developing a plan will help you to work out what needs to be learnt and a timeline for this learning. Making the plan also alerts you to the resources needed to help you to learn these things. You may need to talk with your supervisor about sorting out some resources, e.g. through sharing with other supervisors. No supervisor has to hand enough resources to do it all on their own. Networks of registrars and supervisors enhance access to resources. **Study groups of registrars facilitate learning.**

Use the three appendices to this document to guide the breadth of knowledge you require and to build a way for you to think like an expert.

B. Frameworks and templates to help answer questions and approach problems in occupational & environmental medicine

Frameworks can be applied to many situations to build your confidence to respond to questions. Use of a framework when answering a question makes you less likely to omit key issues.

Develop well thought-out frameworks/templates for the following topics:

- fitness to work;
- return to work;
- hazard identification and risk mitigation (incorporating the hierarchy of controls);
- risk assessment of a workplace with persuasive communication to the person(s) with the responsibility to make necessary change;
- health surveillance.

Develop these templates *early* in Stage B and discuss them with your supervisor and other registrars in your study group. By devising a framework *for yourself* you will construct it in a familiar way with language you understand. Your supervisor may then help you to identify gaps, to later extend your framework to different situations, and to cross-reference the framework when it is applied across a complex problem (e.g. assessing workplace hazard, developing health surveillance or communicating effectively to employer/employee).

In developing frameworks, it may help you to think of your worst days at work – complex, difficult patients in high-risk roles with awful work culture and lots of co-morbidities, then later use your framework to discuss critical analysis, risk assessments and management plans.

Demonstrating to your supervisor your competent application of frameworks and systematic thought in direct observation of field skills (DOFS) encounters and case-based discussion (CbD) will help show your readiness to take the exams.

Of course, although you may demonstrate that you can apply frameworks to DOFS and CbD encounters, such formative requirements *alone* are insufficient to demonstrate exam preparedness.

An example of using the framework together with Appendix 1 (of this guide) could be:

1. Early exam preparation: You ask your supervisor to set you two or three questions. You prepare responses to these questions using 'open book' to check your knowledge, then use your framework or template to demonstrate how you approached your response to each question. You and your supervisor would then discuss your responses and review and revise your framework as needed.
2. Later stage exam preparation: Your supervisor sets you exam questions on topics that you feel confident you are prepared in. Then review as above.
3. Pre-exam preparation: Your supervisor sets you questions in an exam type setting. There is *no* open book and your attempt is timed. Review as above.

C. Cases for case-based discussion (CbD)

1. Your supervisor uses some of his or her own (redacted) independent medical examiner reports. These provide the background and occupational/medical history for the discussion. Your supervisor invites you to discuss the fitness to work and/or return to work. Perhaps suggest a role play where your supervisor acts in the role of the patient from a medico-legal case or fitness for duty assessment. You take a history from your supervisor in this role. This affords practice for the history-taking part of your practical exam as well as giving your supervisor an entry to discuss with you return to work or fitness for duty determinations.
2. You present a case of one of your own patients. Your supervisor would expect this to be a good quality CbD where you make a clear, concise presentation with systematic thinking of essential factors and fluent use of the relevant framework.
3. You show your ability to apply multiple frameworks in a particular situation. For example, you assess an injured worker's fitness to work, then develop a return to work program. This type of approach mirrors exam questions which have a scenario with several parts that are each taken from different areas of the curriculum. Doing this demonstrates your readiness to manage complex occupational medicine situations.

D. Opportunities for direct observation of field skills (DOFS)

Direct Observation of Field Skills (DOFS) is a *formative* assessment. A formative assessment is an appraisal of learning that happens *during* an extended episode of learning. Its purpose is to assist you to identify strengths and weaknesses and, as a result, to direct the focus of further learning. It is inappropriate to speak of "passing" a formative assessment. Instead you could say: "As a result of the outcome of this assessment, I shall strive to better understand"

The aim of a DOFS encounter is for your supervisor (or another Fellow) to appraise the knowledge and skills that you use when purposefully visiting a workplace or an environmental situation (e.g. a contaminated site). It relates to Domains 20, 80 and 90 of the AFOEM training curriculum and applies in Stages B and C

The ability to medically assess a person's suitability for employment is a distinguishing feature of the practice of occupational medicine; it is part of what puts 'occupational' into occupational medicine. Quite often, such assessments can be made entirely from a doctor's office. Sometimes, however, where a worker's medical status or employment situation is complex, the medical assessor of fitness can form an opinion that is reliable *only* by visiting a workplace. Every occupational physician must be prepared to do this.

A DOFS encounter requires a nominated purpose, such as:

- assessment of modified duties offered by an employer to assist return to work of a worker who has been injured or ill;
- assessment of duties to assess whether pre-placement or periodical screening of workers with those duties meets legislative requirements or accepted convention;
- review of occupational health practices or risk management following an incident in a workplace;
- assessment of the likely health effects (if any) that could be expected among people in the neighbourhood of a contaminated site or a large fire or spill.

As a registrar in Stages B or C, you must undertake at least one DOFS encounter each semester, ideally with your supervisor. Some registrars instead use the AFOEM/ANZSOM conference workplace visits to fulfill this requirement. Such visits certainly increase the scope of workplaces and industries that you get to see, but the nature of the visit generally does *not* typically allow you the chance to show how well you can assess occupational medicine problems at a workplace, and so does less than you might think to ready you for your exams.

Some registrars find it hard to get to workplaces. Apart from actual workplace visits, we suggest you and your supervisor consider virtual workplace visits, pictures of workplaces, and use one worksite with multiple different scenarios to help you show competence to approach an occupational medicine problem in a workplace. Another resource is YouTube. There are many good videos of processes. These could be observed by you and your supervisor and discussed using your frameworks.

Try to attend the workplaces of your injured workers as much as possible. You may need to do this in your own time and with no remuneration as part of your training – although there are WorkCover billing codes for this. Discuss the purpose of the visit with your supervisor to maximise its value to you, to the injured worker and to the employer. Your supervisor may not be able to attend all of the workplace visits but can discuss them with you.

The AFOEM Stage B exams – what's in them?

The written examination for Stage B candidates is composed of short answer questions. Together, the two papers have around 50 of these questions arranged within ten clusters. Each cluster has one or two broad themes such as return to work, hygiene, management, environment, critical appraisal, research methods.

The questions test a spread of the 80 Stage B learning objectives across all nine domains of the AFOEM training curriculum – see Appendix 2 to this document. Each question tests a candidate's ability to *apply their knowledge* to a situation and to explain what they would do.

The pass standard for each question is determined in the weeks *before* candidates sit the exam. A *common myth* is that only a set proportion of candidates is allowed to pass. Please know that is **not so**. Both training and assessment committees would be very pleased indeed if *all* exam candidates were well enough prepared to pass their exams.

The practical examination has pairs of items of three types – history-taking, physical examination and exhibit-based – a total of six items all up. These test a spread of the 58 relevant learning objectives across all curricular domains except critical appraisal and research methods (Domains 30 and 40) – see Appendix 3 to this document. The history-taking stations may refer to the work-related causes of a person's medical condition or a person's return to work after treatment.

Preparing for your exams

You will be well-prepared for your exam if you have *enough knowledge* and can *think like an expert*. Of course, true expertise takes years to develop. The examiners don't expect you to be expert, but they do expect you to be able to reason in the way of an expert.

To assist you to foster that thinking process, Appendix 1 to this document contains 80 questions, half of them written as clinical situations.

The questions in Appendix 1 are presented *without* answers. That is *deliberate*. You and your supervisor should together use the questions for two purposes:

- To identify areas in which you need more knowledge, i.e. to develop learning needs. To that end, each question is accompanied by the curricular learning objective(s) to which it applies.
- If you already have some relevant knowledge, you should develop an approach to responding to such a scenario. **Please know that this is NOT to “get the right answer”; it is to develop your way of thinking about this type of problem.** The *framework of thought* is what is really important.

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APPENDIX 1

Eighty questions for early Stage B registrars

The purpose of this set of questions is to assist you in the early part of Stage B, together with your supervisor, to develop learning plans. These questions are designed to assist you to identify what you know already so that you may focus your learning where it is most needed. Each question refers to one or more learning objectives in the AFOEM Training Curriculum, e.g. [20.3.1] or to a whole theme, e.g. [Theme 20.2]. The curriculum (published in 2009) offers, for each learning objective, some sources of learning.

This is an *assistance to the planning of learning*, **not** a test and does **not** replace your study plan. No answers have been provided. Many of the questions are deliberately worded to be quite general (i.e. “consider what will affect a worker’s return to work”), to encourage you to think of all relevant factors and then consider which are truly applicable – to demonstrate that you are thinking like an expert. As you prepare answers to the questions, we’d expect you to recognise gaps in your knowledge and seek to learn more about that subject rather than just enough to answer the question.

The first forty questions are presented as clinical scenarios. The remaining forty deal with exposures, screening, ethics, law and management.

- 1 Following an injury, a foundry worker develops a right-sided frozen shoulder. What considerations will affect this worker’s return to work? [12.6.1, 20.3.1]
- 2 A long-time abalone diver has arthritis of the left knee. In what ways may the occupation have contributed? [12.6.1]
- 3 A suburban bus driver has taken sick leave because of an episode of irritable bowel syndrome. What considerations will affect this worker’s return to work? [12.6.10]
- 4 A civil engineer has chronic renal failure requiring regular dialysis. What arrangements would you discuss with this worker’s employer so that the worker may remain productive at work? [12.6.8]
- 5 At a periodical examination, a driver of heavy vehicles at a large, open cut mine site is found to have Type 2 diabetes. What further information would you need to so as to determine the worker’s fitness to continue this work, and who needs to know of this? [12.6.10, 20.4.1]
- 6 A 30 year old journalist returns from several weeks in a war zone with nightmares, panic attacks, heightened reactivity to stimuli, and withdrawal from social activities. What is likely to be wrong with this worker and how would you manage this worker’s return to work? [12.6.2, 80.1.5]
- 7 A 28 year old worker in a car crash repair workshop develops asthma which continues to worsen. You decide to visit the worker’s workplace. What types of activity there would you give particular attention to? [12.6.3, 20.3.1]
- 8 A 30 year old laboratory worker has just found she is pregnant? What information would you seek to determine whether it is safe for her to continue this work? [12.6.11, 12.6.12].
- 9 A competent 62 year old safety officer and training instructor develops bronchogenic carcinoma. This worker asks whether work may have contributed? What questions would you ask this worker? [12.4.1, 20.2.2]
- 10 An orchardist is screened with a red cell cholinesterase test. You refer back to a previous test and find a downward trend in the level of this enzyme. What questions would you ask this person? [20.2.2, 20.4.1]

- 11 The 58 year old operator of a lifting device at a shipping container terminal sustains a head injury following a heavy fall from his bicycle. A small sub-dural haematoma is evacuated but he has ongoing diplopia resulting from a stretching injury to his left trochlear nerve, something that typically resolves over a period of months. He is treated with an eye patch then a prism lens. What would you want to determine so as to establish when he could return to work? [12.6.6]
- 12 A worker in a suburban bakery complains of gradually worsening and increasingly frequent episodes of asthma. What questions would you ask in order to establish a likely cause? [12.6.3, 20.2.2]
- 13 A veterinary surgeon who works with farm animals develops an ulcer on the dorsum of her hand. What questions would you ask to establish its possible cause? [20.2.3, 20.3.1]
- 14 A zoo worker is bitten by a monkey. What questions would you ask this worker to try to determine her risk of a developing serious illness? [20.2.3]
- 15 A musical events organiser has had a difficult time during the coronavirus pandemic and she is facing business failure. Her episodes of supraventricular tachycardia have become more frequent and prolonged. What would you advise? [12.6.5, 20.2.5]
- 16 A 23 year old school library assistant has been away from work for a month with first episode psychosis. He has been successfully treated. What questions would you ask to establish his fitness to return to work? [12.6.2, 80.1.3]
- 17 A railway worker in a remote location sustains a direct current electric shock and is conscious and in severe pain with resulting burns to his arm and upper chest. You are in telephone contact with a first aider on site. What advice would you give? [12.1.4, 20.2.1]
- 18 A worker is thrown off her feet by an explosion. She is very short of breath and cannot see out of her right eye. How would you assess her physical condition? [12.1.4, 12.6.6, 20.2.1]
- 19 A 57 year old manager of a plant nursery complains of chronic fatigue. What questions would you ask to try to establish the basis for this? [12.2.2, 12.6.9, 20.2.2, 20.2.5]
- 20 A driller in a stone quarry states that in winter his fingers go white. He says this is not significantly painful but asks whether he should be concerned by it. How do you respond? [12.6.5, 20.2.1]
- 21 A 53 year old forklift driver developed vertigo and some hearing loss which caused her to leave work. By the next day it had resolved and she remained well for the next two days. On what basis would you recommend that she resume or not resume her forklift driving? [12.3.13, 80.1.3]
- 22 A 55 year old, long-time packaging worker in pharmaceutical manufacturing company tells you that his workplace will close permanently in three months. He will lose his job. He appears well. What further questions would you ask him after he tells you this? [12.6.2, 20.2.5]
- 23 A 50 year old nurse suffered sudden pain in her lower back and left thigh while transferring a patient to a commode. After four weeks of analgesics and physiotherapy she is ready to resume modified duties at work. How would you devise a return to work plan and follow-up on its implementation and effect? [12.6.1, 20.2.4, 80.1.5]
- 24 A 40 year old mining company executive returns from rural Brazil with a fever and mild jaundice. What is your differential diagnosis and choice of investigations? [20.2.3]

- 25 A 36 year old interstate truck driver has a body mass index that matches his age. During one eleven-hour shift at 3am, his truck collided with a medium-sized tree that had recently fallen across the road in a local squall. He sustained only minor bruises and his load did not spill. When questioned later, he said that he didn't even see the tree and he is sent to you for a medical assessment. What would you assess? [12.6.3, 12.6.10, 80.1.4]
- 26 You assess a 35 year old man with a generally well-controlled anxiety state who has applied to work as a prison warden. What laws may impinge on your decision here? [70.1.1]
- 27 A house painter aged 52 suffers an episode of neck pain radiating to his dominant arm. He ceases work. He is found to have C5/6 disc herniation. Three weeks of conservative treatment has left him without pain unless he turns his head suddenly or extends his neck. What type of restrictions would you refer to on his return to work certificate? [12.6.1, 80.1.5]
- 28 A 54 year old sandwich bar employee has had several weeks of gradually worsening pain on abducting and flexing her right shoulder to bring her (dominant) arm above shoulder height. What questions would you ask her about her work? [12.6.1, 20.2.4]
- 29 A 47 year old office worker is referred to you for medical assessment because co-workers have complained about her strong, unpleasant body odour. What questions would you ask her? How would you define whether an issue is a medical issue or a management (HR) issue for the organisation? [12.6.10, 50.1.1]
- 30 A worker is referred for assessment because of aggressive behaviour toward co-workers, excessive absenteeism, and disregard of some health and safety rules. What questions would you ask him to try to distinguish medical issues from what are essentially management (HR) issues? [12.6.2, 50.1.1]
- 31 Three weeks ago, 35 year old concreter, in good health but previously diagnosed with multiple sclerosis, found he was tiring readily and stumbling when walking on uneven ground. He was found to have below-thigh proprioceptive loss in his left leg. This recurrence of his MS was successfully treated and you are assessing his readiness for return to work. What questions would you ask him? [12.6.1, 80.1.1]
- 32 A 38 year old medical colleague, a single mother, seeks your advice about a male patient whom she treats for Type 2 diabetes and who has become excessively fond of her and is starting to intrude (albeit in a kind way) into her family life. What advice would you give her? [62.3.3, 65.2.1]
- 33 A 42 year old high school English teacher with a high reputation for the quality of his teaching and attentiveness to the individual needs of his students has been given a larger class with several constantly unruly students. This, together with switches from classroom to online and back again occasioned by the coronavirus pandemic, has left him anxious. Oddly, today he is missing from class and his school principal finds him alone in the school chapel, trembling and crying and you are asked to assess him. What earlier preventive activity may have avoided this crisis? [12.6.2, 61.3.1]
- 34 A 28 year old colleague that you know well, a physician adult basic trainee, speaks to you in despair. After a few months where her two pre-school children had a series of health issues and her studying for her physician exam had strained the relationship with her spouse, she failed the written examination. She says to you: "You're into occupational medicine where you assess a person's fitness to return to work after a physical injury. Well, this exam failure has caused me an emotional injury, so how do I tell whether I'm fit to return to study?" What do you ask her? [12.6.2, 63.1.1, 80.1.5]

- 35 You are a member of a voluntary team planning for a medical conference that is six months away. The committee chair, aged 45 years, was chosen for the role because of her positive personality and energetic capability. At recent meetings, you consider she has become irritable and shown less enthusiasm, initiative and confidence than she had before. These are subtle but persisting changes and you suspect that she may be depressed. You feel that you know her well enough to raise the subject with her. What do you say and how? [12.6.2, Theme 61.3]
- 36 Four months ago, an art and craft teacher aged 53 sustained a head injury with loss of consciousness for several minutes and what was later found to be small haemorrhages in the right parietal and frontal lobes. He was treated conservatively and he has steadily recovered. His speech is clear and coherent and his mobility is normal. However, other persisting problems remain – easy fatigue, reduced ability to get started on tasks and to prioritise his actions, a mildly dishevelled appearance and attempts at joking that are a bit ‘off’. He is very eager to get back into the school environment because teaching was hitherto a major part of his life. What aspects of his behaviour may create problems were he to return to his role as a teacher? [12.6.2, 70.1.1, 80.1.5]
- 37 The driver of an express train in the metropolitan area struck and killed a child at a level crossing – a child of similar age to one of her own children. She is distraught. What follow-up care should be made available for this train driver for the short and medium term? [12.6.2, 20.2.5, 80.1.5]
- 38 A 24 year old casual farmworker is twelve weeks’ pregnant. For a few minutes one work day, she was downwind of aerial spraying of a carbamate insecticide on a neighbouring property. She became anxious when a co-worker said that he thought this spray could cause birth defects. You see her the following day. What is your approach to her situation and, based on what occurs, what advice would you give? [12.6.11, 12.6.12, 20.3.1, 20.4.2, 30.5.1]
- 39 An office worker with eye, nose and throat irritation is referred to you with a provisional diagnosis of sick building syndrome? What questions would you ask in order to clarify what was wrong with the person and what may be done to resolve the matter? [12.2.2, 20.3.2]
- 40 A worker experiences a minor burn to the forearm through spilling of a small ladle of molten metal in a non-ferrous foundry. You realise that the worker’s injury could have been a lot worse. How would you investigate this incident? [62.3.1]
- 41 In the context of occupational health, what is meant by the term *exposure*? [Theme 20.2]
- 42 A company that mines spodumene (lithium ore) asks your advice about biological monitoring. What would you recommend? [20.4.1]
- 43 A large cold storage company operates their facility at –27 degrees Celsius and 16% ambient oxygen level. What health precautions would you recommend for workers? [20.2.1]
- 44 Why is a statement of toxicity on a safety data sheet appropriately described as a statement of *hazard* rather than of *risk*? [20.2.2]
- 45 Is every exposure to a hazard likely to be dangerous? If not, when can exposure to a hazard be considered safe? [Theme 20.2]
- 46 What hazards are well-recognised to exist in a grain silo? [20.2.1, 20.2.2]
- 47 What hazards are well-recognised to exist in an underground coal mine? [20.2.1, 20.2.2]
- 48 What is a confined space? What risks confront a worker who enters one? How may such risks be minimised? [20.2.2, 20.3.3]

- 49 What are the likely sources of *Cryptosporidium* organisms in a metropolitan water supply? How may the risk of this infestation in a city's drinking water be minimised? [20.2.3]
- 50 Why are some people more susceptible than others to environmental hazards such as air pollution? [90.1.1]
- 51 What are a few simple preventive measures that you could apply to reduce the risk of spread of *Legionella* organisms through a hotel air-conditioning system? [20.3.3]
- 52 What are the main components of a local exhaust ventilation system? What things commonly go wrong to reduce the effectiveness of such a system? [20.3.3]
- 53 What is meant by the *inherent duties* of a job role? [80.1.3]
- 54 What precautions should be taken when a worker operates a high-powered laser? [20.2.1]
- 55 Given the hazards of ionising radiation, why do we allow any exposure at all of this radiation in workplaces? [20.2.1, 20.3.3]
- 56 Why do nanoparticles tend to be more reactive than larger particles of the same substance? [20.1.2]
- 57 What structures of the inner ear are permanently damaged by sustained and unprotected exposure to loud noise? How does the resulting impairment affect one's ability to hear the different sounds of speech? [12.3.13, 12.6.7]
- 58 In the prevention of work-related cancer, why cannot evidence from epidemiology firmly specify the *lower limits* of exposure risk? [20.2.6, 30.5.1]
- 59 What is the difference between statute law and common law in its application to workers and workplaces? [70.1.1, 70.3.1]
- 60 What is expert evidence in a court of law? What constraints apply to the giving of expert evidence in a medical report to serve a court process. [70.3.2]
- 61 What various types of professionals and others are commonly involved in a worker's return to work after prolonged and partial recovery from serious work-related injury? [Theme 80.1]
- 62 Under occupational health and safety law, what is the employers' general duty of care? [70.1.1]
- 63 What is meant by primary, secondary and tertiary prevention? Give an example of each type. [20.3.3, 69.3.1]
- 64 What would you expect to be common risks to the work of a jockey? [20.3.1 – not directly specified.]
- 65 How would you safeguard your own safety if faced with an aggressive patient? [12.6.2, 61.1.1, 62.3.3]
- 66 What is *secondary* prevention? How could this be applied to prevention of dermatitis among the staff of a suburban hairdresser? [12.6.4, 20.4.1]
- 67 For a worker who works with small quantities of liquid mercury, why is testing a lock of hair *not* a good indicator of the worker's average mercury absorption whereas, for a fishmonger who enjoys eating flake several times a week, it is? [20.4.2]
- 68 What are the components of the hierarchy of control of workplace hazards? Why is it called a hierarchy? [20.3.3]
- 69 Tertiary prevention can seem to be like 'shutting the gate after the horse has bolted'. Why is it so important in occupational medicine? [69.3.1, 80.1.5]
- 70 For what types of industry is the services of medical review officer likely to be required? Why? [20.4.1, 70.1.1, 80.1.6]

- 71 Why does a temperature inversion in a deep valley have the potential to increase the concentration of air pollutants in the air near to the ground? [90.1.6]
- 72 What are the principal health effects of exposure to ultraviolet radiation? [20.2.1]
- 73 Why is the term *occupational stress* potentially ambiguous? [20.2.5]
- 74 Why is it never appropriate to order a test whose result you cannot interpret for your patient? [20.4.2, 65.1.1]
- 75 What is the purpose of an ethics submission in planning a research project? For what types of research is it needed? [40.1.1, 40.2.1, 65.1.1, 65.3.1]
- 76 In what ways may a small research project be funded? [40.1.1]
- 77 Regarding an epidemiological study, what distinguishes *causation* from statistical *association*? [30.5.1, 40.3.1]
- 78 How would you determine appropriate goals for an occupational health service in a nationwide road transport organisation? [50.4.2]
- 79 In what ways may a work culture or environment on a fishing vessel contribute to workers' human errors? [20.3.1, 50.2.1, 62.2.1, 62.3.1]
- 80 How may trade unions influence the practice of health and safety in a large retailing organisation? [50.1.2, 61.5.1]

APPENDIX 2

80 learning objectives tested at the Stage B written examination

A small number of the learning objectives cited here are from Stage A, in Domains 30 and 60.

Learning objective	Topic
	Sub-domain 12: Medical expertise
12.1.4	Manage life-threatening conditions that affect or are affected by occupation or environment and be able to apply supportive care that is appropriate to the circumstances
12.2.2	Manage patients with undifferentiated presentations allegedly related to occupation or environment
12.6.1	Manage musculoskeletal or neurological conditions that affect or are affected by occupation or environment
12.6.2	Manage psychiatric conditions that affect or are affected by occupation or environment
12.6.3	Manage respiratory system conditions that affect or are affected by occupation or environment
12.6.4	Manage skin conditions that affect or are affected by occupation or environment
12.6.5	Manage cardiovascular conditions that affect or are affected by occupation or environment
12.6.6	Manage eye conditions that affect or are affected by occupation or environment
12.6.7	Manage ear conditions that affect or are affected by occupation or environment
12.6.8	Manage renal and urinary disorders that affect or are affected by occupation or environment
12.6.9	Manage conditions of the blood-forming or immune systems that affect or are affected by occupation or environment
12.6.10	Manage conditions of the endocrine or gastroenterological systems that affect or are affected by occupation or environment
12.6.11	Manage reproductive issues that affect or are affected by occupation or environment
12.6.12	Assess and manage specific toxicities relating to occupation or environment
	Domain 20: Workplace hazard assessment
20.2.1	Describe the potential health effects of common and important physical hazards
20.2.2	Describe the potential health effects of common and important hazards from substances used in workplaces
20.2.3	Describe the potential health effects of common and important biological hazards
20.2.4	Describe the potential health effects of common and important design hazards
20.2.5	Describe the potential health effects of common and important psychosocial hazards
20.3.1	Outline the major hazards commonly found in nominated workplaces
20.3.2	Describe the general principles of workplace assessment
20.3.3	Determine whether current hazard control mechanisms and procedures are satisfactory
20.3.4	Compile a report of a workplace assessment that can be understood by people without scientific expertise
20.4.1	Apply a screening test to a work group
20.4.2	Use apt communication techniques to dissuade the use of an inappropriate test
	Domain 30: Critical appraisal of information
30.1.1	Demonstrate understanding of the principles of evidence-based medicine, the limitations of evidence and the challenge of applying research findings to daily clinical practice
30.2.1	Understand and apply the process of diagnostic reasoning
30.2.2	Prognosticate and predict risk
30.2.3	Derive therapeutic decisions which maximise patient benefit and acceptance
30.2.4	Use evidence effectively and efficiently to inform clinical decision making
30.3.1	Appraise test in accord with the properties of the test and characteristics of those being tested
30.5.1	Appraise support for an alleged causal association between a health effect and an exposure
	Domain 40: Research project
40.1.1	Contribute to the development of new knowledge by active involvement in research
40.2.1	Understand and apply ethical principles underpinning the conduct of research
40.3.1	Discern the essence of a data set; summarise and depict this in a meaningful and logical way
	Domain 50: Working with leaders
50.1.1	Describe and distinguish the various forms of management within an organisation
50.1.2	Outline the purpose of government regulators, trade unions and special interest groups
50.2.1	Define and describe the effects of organisational factors on health and safety performance
50.3.1	Describe the components of a process of quality assurance by continuous improvement within an organisation
50.4.1	Identify the health and safety needs of an organisation
50.4.2	Determine the goals of the occupational health service

continued over ...

Learning objective	Topic
	Sub-domain 61: Communication
61.1.2	Empower patients and be respectful of their rights in all aspects of communication
61.2.1	Apply communication skills in encounters with a third party including a patient's employer or family (including extended family) and/or carers
61.3.3	Apply communication skills to facilitate effective clinical handover and transfer of care
61.4.3	Describe the ethical and legal constraints on communicating medical information to 3 rd party
61.4.4	Identify and address barriers to communication in a non-medical workplace
61.5.1	Demonstrate understanding of the modalities of influence within an organisation
	Sub-domain 62: Quality and safety
62.2.1	Optimise safe work practice, which minimises error
62.2.3	Promote safe continuity of care for patients
62.3.1	Recognise, report on and manage adverse events and error
62.3.2	Identify, establish, implement and/or comply with relevant risk-management and risk-minimisation procedures
62.3.3	Identify risks to health arising from one's own work activities
62.3.4	Understand the process of managing complaints and how to utilise complaints to enhance medical care
63.3.1	Sub-domain 63: Teaching and learning Recognise the importance of health educ ⁿ and role of the physician as a teacher to patients, other physicians and in the wider community, and develop the skills to undertake this role
64.1.3	Sub-domain 64: Cultural competency Apply specific knowledge of the patient's cultural and religious background, attitudes and beliefs in managing and treating the patient
64.1.4	Understand how the special history of Maori and Pacific peoples (NZ) and Aboriginal/Torres Strait Islander peoples (Australia) affects their current health status
64.1.6	Demonstrate the ability to promote effective cross-cultural partnerships and culturally diverse teams to improve health outcomes
	Sub-domain 65: Ethics
65.1.1	Demonstrate ability to apply an ethical framework in clinical practice
65.3.1	Demonstrate the ability to apply legal and ethical frameworks to physician-patient relationships
65.3.2	Demonstrate the ability to apply relevant legislation and ethical frameworks to interactions outside the direct physician-patient relationship
	Sub-domain 67: Leadership and management
67.1.2	Identify personal attributes or health issues that could impair one's performance at work
	Sub-domain 68: Health advocacy
68.1.1	Know and apply the key principles, processes and limitations of advocacy
68.2.1	Identify and address key issues affecting personal work environment and recognise the role of advocacy
	Sub-domain 69: The broader context of health
69.1.1	Demonstrate an awareness of health priorities for the local community, and more broadly for Australia and New Zealand
69.2.1	Identify and define the determinants of health
69.3.1	Adopt a population health approach to the prevention of illness, promotion of health and control of disease
69.4.1	Implement strategies to reduce inequities in health status between population groups
	Domain 70: Law and medicine
70.1.1	Locate and interpret legislation applicable to specific hazards in workplaces and the enviromt
70.2.1	Describe the process of reaching industrial agreements and their influence on health & safety
	Domain 80: Fitness and return to work
80.1.1	Assess the task demands and environment of the work of an employee
80.1.2	Define and negotiate the standards of fitness required
80.1.4	Describe the consequences of injury/illness and, esp. its effect on a person's ability to work
80.1.5	Prepare and implement a return to work or rehabilitation plan for an employee
80.1.6	Discuss with a patient the implications for employment of medication and convalescence from procedures
	Domain 90: Environmental risks and incidents
90.1.1	Define environment and factors that influence occurrence of exposure and the susceptibility of individuals or groups
90.1.2	Describe how environmental risk is assessed and perceived
90.1.3	Describe the process of development of envmtl. standards for hazards arising from wkplaces
90.1.4	Recognise/advise on health risks in the general environment arising from wkplace activities
90.1.5	Recognise/advise on health risks in and around the domestic environment/leisure activities
90.1.6	Describe the health risks of work in ambient environments of extreme temp. or pressure

APPENDIX 3

58 learning objectives potentially tested at the Stage B practical examination

A small number of the learning objectives cited here are from Stage A, in Sub-domains 11 and 61.

Learning objective	Topic
	Sub-domain 11: Clinical process
11.1.1	Elicit the history and obtain other relevant data
11.1.2	Conduct an appropriate physical examination
11.1.3	Synthesise findings from history and physical examination to develop a differential diagnosis and management plan
11.1.4	Plan and arrange investigations appropriately
11.1.5	Take, record and analyse an occupational and environmental history from an individual
11.1.6	Assess what has been gained from a clinical encounter, form an opinion, and decide the options of what to do next.
11.2.3	Incorporate health and wellness promotion in clinical practice
	Sub-domain 12: Medical expertise
12.2.2	Manage patients with undifferentiated presentations allegedly related to occupation or environment
12.6.1	Manage musculoskeletal or neurological conditions that affect or are affected by occupation or environment
12.6.2	Manage psychiatric conditions that affect or are affected by occupation or environment
12.6.3	Manage respiratory system conditions that affect or are affected by occupation or environment
12.6.4	Manage skin conditions that affect or are affected by occupation or environment
12.6.5	Manage cardiovascular conditions that affect or are affected by occupation or environment
12.6.6	Manage eye conditions that affect or are affected by occupation or environment
12.6.7	Manage ear conditions that affect or are affected by occupation or environment
12.6.8	Manage renal and urinary disorders that affect or are affected by occupation or environment
12.6.9	Manage conditions of the blood-forming or immune systems that affect or are affected by occupation or environment
12.6.10	Manage conditions of the endocrine or gastroenterological systems that affect or are affected by occupation or environment
12.6.11	Manage reproductive issues that affect or are affected by occupation or environment
12.6.12	Assess and manage specific toxicities relating to occupation or environment
	Domain 20: Workplace hazard assessment
20.2.1	Describe the potential health effects of common and important physical hazards
20.2.2	Describe the potential health effects of common and important hazards from substances used in workplaces
20.2.3	Describe the potential health effects of common and important biological hazards
20.2.4	Describe the potential health effects of common and important design hazards
20.2.5	Describe the potential health effects of common and important psychosocial hazards
20.3.1	Outline the major hazards commonly found in nominated workplaces
20.3.2	Describe the general principles of workplace assessment
20.3.3	Determine whether current hazard control mechanisms and procedures are satisfactory
20.4.1	Apply a screening test to a work group
	Domain 50: Working with leaders
50.2.1	Define and describe the effects of organisational factors on health and safety performance
50.4.1	Identify the health and safety needs of an organisation
	Sub-domain 61: Communication
61.1.1	Apply communication skills to engage and reassure the patient in specific situations including: first encounters, history taking, counselling and breaking bad news
61.1.2	Empower patients and be respectful of their rights in all aspects of communication
61.2.1	Apply communication skills in encounters with a third party including a patient's employer or family (including extended family) and/or carers
61.3.2	Communicate effectively with referring doctors, and when referring a patient to another specialist
61.3.3	Apply communication skills to facilitate effective clinical handover and transfer of care
61.4.3	Describe the ethical and legal constraints on communicating medical information to a third party
61.4.4	Identify and address barriers to communication in a non-medical workplace
61.5.1	Demonstrate understanding of the modalities of influence within an organisation

continued over ...

Learning objective	Topic
	Sub-domain 62: Quality and safety
62.2.1	Optimise safe work practice, which minimises error
62.2.3	Promote safe continuity of care for patients
62.3.1	Recognise, report on and manage adverse events and error
62.3.2	Identify, establish, implement and/or comply with relevant risk-management and risk-minimisation procedures
62.3.4	Understand the process of managing complaints and how to utilise complaints to enhance medical care
	Sub-domain 64: Cultural competency
64.1.3	Apply specific knowledge of the patient's cultural and religious background, attitudes and beliefs in managing and treating the patient
	Sub-domain 65: Ethics
65.3.1	Demonstrate the ability to apply legal and ethical frameworks to physician-patient relationships
65.3.2	Demonstrate the ability to apply relevant legislation and ethical frameworks to interactions outside the direct physician-patient relationship
	Sub-domain 68: Health advocacy
68.1.1	Know and apply the key principles, processes and limitations of advocacy
	Domain 70: Law and medicine
70.1.1	Locate and interpret legislation applicable to specific hazards in workplaces and the environment
	Domain 80: Fitness and return to work
80.1.1	Assess the task demands and environment of the work of an employee
80.1.2	Define and negotiate the standards of fitness required
80.1.4	Describe the consequences of injury/illness and, esp. its effect on a person's ability to work
80.1.5	Prepare and implement a return to work or rehabilitation plan for an employee
80.1.6	Discuss with a patient the implications for employment of medication and convalescence from procedures
	Domain 90: Environmental risks and incidents
90.1.1	Define environment and factors that influence occurrence of exposure and the susceptibility of individuals or groups
90.1.2	Describe how environmental risk is assessed and perceived
90.1.4	Recognise/advise on health risks in the general environment arising from workplace activities
90.1.6	Describe the health risks of work in ambient environments of extreme temp. or pressure