Questions for this month's clinical challenge are based on articles in this issue. The style and scope of questions is in keeping with the MCQ of the College Fellowship exam. The quiz is endorsed by the RACGP Quality Assurance and Continuing Professional Development Program and has been allocated 4 CPD points per issue. Answers to this clinical challenge will be published next month, and are available immediately following successful completion online at www.racgp.org.au/clinicalchallenge. Check clinical challenge online for this month's completion date. **Kath O'Connor**

SINGLE COMPLETION ITEMS

DIRECTIONS Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the most appropriate statement as your answer.

Case 1 – Dayani Dissinyake

Dayani Dissinyake, 30 years of age, is planning to visit relatives in Sri Lanka for 2 weeks. Her relatives live south of Colombo, on the coast. She comes to you for travel advice.

Question 1

The ideal time for Dayani to present for travel advice is:

A. 1 week before travel
B. 2–3 weeks before travel
C. 6–8 weeks before travel
D. 12 months before travel
E. the day before she leaves.

Question 2

In your consultation with Dayani you tell her that she:

A. is at lower risk of acquiring travel illness as she plans to visit friends and relatives (VFR)
B. is at higher risk of acquiring travel illness as she plans to VFR
C. does not need travel insurance as she is VFR
D. needs hepatitis A vaccination
E. is likely to be naturally immune to hepatitis A.

Question 3

Regarding vaccinations and medications, you explain that:

A. DEET containing insect repellent is indicated to help to avoid mosquito bites even if she is taking malaria chemoprophylaxis
B. water purification tablets are not necessary if she has had hepatitis A vaccinations
C. acetazolamide is indicated as she is going to a low altitude location
D. travel vaccinations and medications are relatively inexpensive
E. all travellers need identical vaccines and medications.

Question 4

Dayani is putting together a medical kit. In addition to Band-Aids, insect repellent, paracetamol, and condoms, you suggest she take a 'gastro kit'. This should include:

A. antacids and antihistamines
B. laxatives, antihistamines and a broad spectrum antibiotic
C. antibiotic cream and a minor sedative
D. rehydration solution, loperamide, tinidazole and norfloxacin
E. sterile needles, syringes and alcohol swabs.

Case 2 – Daniel O'Reilly

Daniel O'Reilly, 40 years of age, is a Jesuit priest. He returned yesterday from his work in refugee camps at the Thai-Burmese border. Three days ago he developed severe diarrhoea, nausea and abdominal cramps.

Question 5

The most likely bacterial cause is:

A. falciparum malaria
B. typhoid
C. enterotoxogenic *Escherichia coli*
D. *Giardia*
E. *Shigella* spp.

Question 6

Daniel has had 10–12 watery stools per day for about 10 days. There has been some blood in his stools but he has not had a fever. He has no significant past history and is on no medications. He had some vaccinations before leaving but can't remember which ones and took Malarone (atovoquone-proguanil) for malaria prophylaxis. He is mildly dehydrated, afebrile and his abdomen is soft with mild generalised tenderness. You decide to investigate. The most appropriate test is:

A. nothing, his diarrhoea will resolve spontaneously
B. blood culture to look for typhoid and thick and thin films for malaria
C. three faecal samples for micro, culture and identification
D. faecal fats
E. stained faecal smear to look for intestinal worms.

Question 7

Stool samples identify enteroinvasive *E. coli* (EIEC). In addition to fluid replacement you prescribe:

A. nothing, his diarrhoea will resolve spontaneously
B. metronidazole
C. ciprofloxacin
D. albendazole
E. praziquantel.

Question 8

Daniel comes in for review 10 days later. He has finished his antibiotics and is feeling a lot better but complains of occasional loose stools, stomach cramps and flatulence, particularly after eating dairy. Daniel has:

A. antibiotic associated diarrhoea *(Clostridium difficile)*
B. transient lactose intolerance
C. inadequately treated dysentery
D. viral diarrhoea
E. malaria.

Case 3 – Sally Fellowes

Sally Fellowes, 30 years of age, is leaving in 2 weeks for a 10 day 'Intrepid Travel' adventure tour of the highland rainforest areas of Borneo.

Question 9

Sally has just finished her first year of training as a division 1 nurse. Before she started her training she had two hepatitis B vaccinations at 0 and 1 month but missed the third. It is now 11 months since her last hepatitis B vaccine. She asks whether she can have the third vaccination now. You tell her:

A. she needs to restart her hepatitis B vaccination
B. to wait until after the trip as she should not receive too many vaccines at once
C. that she can have her third injection now in addition to other travel vaccines
D. she does not need hepatitis B vaccine unless she is an intravenous (IV) drug user
E. that hepatitis B vaccine gives her coverage for hepatitis A while travelling.

Question 10

You take a vaccination history. Sally was vaccinated against measles, mumps and rubella before starting her nursing training. She has not had a tetanus booster as an adult. She was vaccinated against the flu 3 months ago. Which of the following is true:

A. routine vaccinations are contraindicated at the same time as travel vaccinations
B. a dTpa booster is indicated
C. she should have another flu vaccination to protect her against bird flu
D. pneumococcal vaccine is indicated in all travellers
E. tetox should be given as she does not need pertussis or diphtheria vaccination.

Question 11

Sally has been told by the tour organisers that she requires at least hepatitis A and typhoid vaccination. You tell her:

A. that she has left it too late to be vaccinated against hepatitis A
B. a single dose of Twinrix (hepatitis A and B) will give her better hepatitis A protection than a single dose of hepatitis A vaccine
C. the oral and injectable forms of typhoid vaccine are of similar efficacy
D. typhoid is more common than hepatitis A
E. oral typhoid vaccination provides better and longer protection if six capsules (ie. two packs) are given.

Question 12

In addition to hepatitis A and typhoid vaccination and a hepatitis B and dTpa booster, which of the following vaccines do you offer:

A. cholera, yellow fever, Japanese encephalitis, rabies
B. meningococcal vaccine
C. Japanese encephalitis and a polio booster
D. cholera and rabies
E. Japanese encephalitis and yellow fever.

Case 4 – Margaret Malcolm

Margaret Malcolm, 35 years of age, presents for travel advice. She is going on a 10 day wildlife safari in Central and Eastern Africa in 2 weeks.

Question 13

Margaret asks about prevention of malaria. You tell her that:

A. she does not need malaria prophylaxis
B. malaria prophylaxis is too expensive for a 10 day trip
C. prophylaxis with doxycycline, mefloquine or Malarone (atovoquone-proguanil) is indicated
D. if she takes malaria prophylaxis she doesn't need to worry about mosquitoes
E. the tablets are worse than the disease.

Question 14

You take a history to determine the most appropriate medication for Margaret. Which of the following is NOT relevant:

A. pregnancy
B. psychiatric history
C. history of epilepsy
D. oculogyric crisis with stemetil
E. cardiac conduction disturbance.

Question 15

Margaret had an urticarial reaction to minocycline taken for rosacea. She has a past history of depression and anxiety. Which of the following is the MOST appropriate medication for malaria prophylaxis:

A. doxycycline
B. quinine
C. tonic water
D. mefloquine
E. Malarone (atovoquone-proguanil).

Question 16

If you are not sure of the prevalence of malaria in a location where a patient is travelling, which is the best freely available resource:

A. WHO or CDC website
B. *Therapeutic guidelines*
C. MIMS
D. infectious diseases textbooks
E. commercially available travel medicine specific databases.

ANSWERS TO APRIL CLINICAL CHALLENGE

Case 1 – Shannon McCarthy

1. Answer C
Medicare requires GPs to provide psycho-education. Referral to a psychiatrist or a psychologist and provision of a medical label may be appropriate but not necessary. Planning for a crisis is appropriate in some cases.

2. Answer B
The three step process arose out of the BOMHC initiative. It involves: assessing the presenting problem, deciding on a plan of management with the patient, and organising referral/follow up. Screening for mental distress is recommended but is not part of the three step process. .

3. Answer C
The dose and duration of treatment chosen for depression is more important than the type of treatment. Men and the socially isolated are at higher risk of suicide. Research into what should be included in a mental health plan is scarce. Targeted screening of high risk individuals is recommended by RACGP guidelines.

4. Answer E
Medicare rebates apply to psychologists and allied medical health professionals if a mental health care plan is completed by the GP. Training is recommended but not mandatory. A review can be claimed twice per 12 month period. A plan can be claimed once every 12 months. SIP payments were generated under the superseded BOMHC initiative; funding for the BAMHC is via Medicare item numbers.

Case 2 – Martin Shields

5. Answer D
Approximately 50% of individuals with bipolar I have a first degree relative with a mood disorder; so family history is important. It is important to ask about manic or 'hypomanic' episodes. Identifying triggers may be useful in the management phase to assist in the development of a 'stay well plan'.

6. Answer B
Patients with bipolar II have more frequently oscillating moods compared to patients with bipolar I. Patients with bipolar I can have psychotic highs. The severity of the highs is what distinguishes bipolar I (more severe/manic)from bipolar II (less severe/hypomanic). The suicide risk is comparable between bipolar I and II. Bipolar III refers to a high induced by an antidepressant medication.

7. Answer A
The recommendation for bipolar I in the depressive phase is to start a mood stabiliser before starting an antidepressant. Fish oil supplementation may be useful as an adjuvant treatment. Tricyclic antidepressants have been known to induce high or 'rapid cycling'.

8. Answer C
A stay well plan uses the daily mood diary and discussion about triggers such as caffeine, recreational drugs and life events to develop preemptive and episode related strategies. There are no specific Medicare benefits for a stay well plan. The Black Dog Institute website describes a 'stay well plan' for use by GPs. Ideally, family and friends are involved. Approximately one-third of bipolar patients will have a problematic course. Sleep disturbance should be treated as this may avoid a bipolar episode.

Case 3 – Ilana Goldblum

9. Answer C
All antidepressants have a similar response rate of about 65%. Benzodiazepines can be used to treat transient anxiety. CBT is useful in mild to moderate anxiety and mild depression or as an adjunct to medication in moderate or severe depression. Choice of antidepressant usually depends on the side effect profile, particularly relating to sedation. Mianserin nearly always causes sedation.

10. Answer A
Diazepam is useful in anxiety as it has a long half life. Starting an antidepressant at half the recommended dose may minimise side effects. Dosage should be increased at 4 days if there are no problems. Improvement may take 4 weeks. Psycho-education about antidepressants is vital. If response is inadequate after 2–4 weeks, increase the dose. If response is inadequate 2 weeks after the maximum dose is reached, consider changing antidepressant.

11. Answer D
Antidepressants should be continued for 12 months after the first episode and 3 years for recurrent depression. Serotonin syndrome is usually due to drug overdose but can be a result of drug interaction or an idiosyncratic reaction. Risk is not related to duration of treatment.

12. Answer E
Diazepam should not be ceased abruptly. Withdrawal is managed using a tapered schedule. Underlying anxiety may respond to nonpharmacological treatments. Buspirone has less potential for dependence but is generally reserved for patients with generalised anxiety disorder. Tolerance to the sedative effects of benzodiazepines occurs rapidly. Whether tolerance to anxiolytic effects occurs is controversial. Abrupt withdrawal can cause anxiety, tremor, muscle twitching and seizures.

Case 4 – Santo Galati

13. Answer B
Primary appraisal refers to the significance of the illness to the patient. Secondary appraisal refers to the resources a patient has to cope with illness. Past experiences and beliefs as well as current circumstances all impact on thinking about a chronic or terminal illness.

14. Answer D
Problem focused coping involves efforts to control and directly solve the problem. Emotion focused coping involves reducing exposure to the stressor by avoidance, distraction, seeking social support and cognitive reframing.

15. Answer C
Santo is experiencing severe demoralisation. The GP can play a role in helping Santo find strategies to help him stay engaged with life. Involving him in decision making will give him a sense of control. Grief requires facing the consequences, but this is a gradual process.

16. Answer B
Santo has reassessed his priorities and is managing to look for the positive. Charity work is an example of meaning focused coping.

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