



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.

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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 – Susan Hatsis

Susan Hatsis, 35 years of age, is a researcher who sees you infrequently. She presents complaining of trouble sleeping.

Question 1

Which of the following is NOT true about insomnia:

- A. certain medical conditions may cause insomnia
- B. depression, anxiety and other psychological conditions may cause insomnia
- C. physical pain may cause insomnia
- D. insomnia is a diagnosis in itself – exploring the cause is unnecessary
- E. insomnia is a common presenting symptom in general practice.

Question 2

You diagnose Susan with depression and initiate treatment. Her insomnia persists. Which of the following characterises the relationship between insomnia and depression:

- A. sleep disturbance occurs in approximately 40% of patients depression
- B. persistent insomnia does not affect risk of depression recurrence
- C. concurrent insomnia and depression results in poorer responses to treatment
- D. insomnia is not predictive of the risk of suicidal behaviour
- E. psychosis is the most common psychiatric cause of insomnia.

Question 3

Which of these statements is true about circadian rhythm:

- A. the posterior pituitary gland is the central timekeeper
- B. circadian rhythms affect temperature, alertness and stress responses
- C. the circadian clock has no genetic basis – it is purely behavioural
- D. depression increases melatonin levels and delays sleep/wake times
- E. most antidepressants affect the expression of 'clock genes'.

Question 4

You advise Susan of ways to improve her sleep quality. Which of the following may be helpful:

- A. ensuring adequate fatigue by exercise just before sleep
- B. a warm sleeping environment

- C. an afternoon nap to avoid becoming overtired
- D. a heavy meal before bed to ensure sleepiness
- E. avoiding caffeine and alcohol before sleep.

Case 2 – Jaxson Fletcher

Jaxson Fletcher is a normally developing 6 year old brought in by his worried mother. He has woken the household three times in the past month with a loud frightened outburst.

Question 5

Which of the following factors would make a diagnosis of night terrors likely:

- A. day time sleepiness
- B. difficulty getting back to sleep
- C. minimal autonomic involvement
- D. events occur during the first third of the night
- E. memory of the event.

Question 6

If you can confidently diagnose Jaxson with night terrors, what will you tell his mother:

- A. night terrors occur in approximately 50% of children
- B. night terrors are usually a permanent but harmless condition
- C. tiredness, fever and disruption in routine may precipitate events
- D. Jaxson should be woken as soon as each event begins
- E. basic blood tests are required to exclude other possible causes.

Question 7

In your assessment of Jaxson, which of the following is LEAST likely to be a feature of nocturnal epilepsy:

- A. day time tiredness
- B. occurrence during REM sleep
- C. events that occur at different times during the night
- D. ease in getting back to sleep
- E. possible memory of the event.

Question 8

What investigations are appropriate for children such as Jaxson:

- A. basic blood tests in all cases
- B. sleep study in all cases
- C. EEG in all cases
- D. no investigation in any cases
- E. sleep study in selected cases.

Case 3 – Mary Audo

Mary Audo, 45 years of age, presents with insomnia exacerbated by an intermittent need to move her legs.

Question 9

You consider a diagnosis of restless legs syndrome (RLS). Which of the following is NOT one of the diagnostic criteria for RLS:

- A. an urge to move the legs, usually associated with uncomfortable sensations
- B. the urge to move begin or worsen during periods of rest
- C. the urge to move are partially or totally relieved by movement
- D. the urge to move are worse (or only occur) in the evening or night
- E. a family history of RLS.

Question 10

Which of the following is a recognised secondary cause of RLS:

- A. pregnancy
- B. hepatic failure
- C. polymyalgia rheumatica
- D. folate deficiency
- E. menopause.

Question 11

You diagnose typical mild intermittent RLS. Your initial management plan would include:

- A. referral to a sleep specialist
- B. referral to a neurologist
- C. iron studies
- D. night splinting
- E. trial of an antidepressant such as a SSRI.

Question 12

Mary's symptoms worsen and you consider pharmacological therapy. Which statement is accurate:

- A. nonergot dopamine agonists have rare but serious side effects such as pulmonary fibrosis
- B. ergot derived dopamine agonists can cause unusual compulsive behaviours
- C. dopamine precursors such as levodopa rarely cause augmentation
- D. dopamine precursors such as levodopa cause rebound in at least 20% cases
- E. gabapentin is useful but doesn't help with pain symptoms.

Case 4 – Robert Bligh

Robert Bligh, 47 years of age, is a solicitor. He has been sent in by his wife to 'do something about his snoring'.

Question 13

You assess Robert. What clinical features make obstructive sleep apnoea a likely diagnosis:

- A. Robert's snoring disturbs his wife more than three nights per week
- B. Robert's Epworth Sleepiness Scale score is 4

- C. Robert's neck circumference is 40 cm
- D. Robert's upper airway Mallampati score is B
- E. Robert's body mass index (BMI) is 24.

Question 14

Laboratory polysomnography is the 'gold standard' assessment. This measures several factors but does NOT routinely include:

- A. transcutaneous CO₂ monitoring
- B. continuous systemic BP
- C. oesophageal pressure monitoring
- D. video monitoring
- E. arterial blood gas measurement.

Question 15

Which feature on polysomnography lends the most weight to a diagnosis of obstructive sleep apnoea syndrome:

- A. sleeping respiratory rate of 18 bpm
- B. exaggerated sleeping heart rate variability
- C. recurrent nocturnal hypercapnia
- D. recurrent apnoeas 6 times per hour
- E. an apnoea-hypopnoea index of 3.

Question 16

Robert would like to know about continuous positive airway pressure (CPAP) pumps. You tell him they are usually well tolerated. However:

- A. pressure sores may occur requiring mask adjustment
- B. most CPAP pumps weigh over 5 kg
- C. CPAP pumps are prohibited on all international flights
- D. only nasal and oral masks are commercially available
- E. CPAP pumps are loud, frequently irritating partners more than the snoring.

ANSWERS TO APRIL CLINICAL CHALLENGE

Case 1 – Olivia Nguyen

1. Answer E

Up to 40% of people with high risk early stage CRC experience recurrence. History and examination is recommended every 3–6 months for 3 years then every 6–12 months to 5 years. Colonoscopy is recommended at 12 months then every 3–5 years.

2. Answer C

Altered bowel habit is common after CRC treatment. Patients may experience diarrhoea, urgency or constipation and may develop a 'new normal' bowel habit. Recurrence or surgical complications are unlikely in this case.

3. Answer B

Strategies to lower the incidence of bowel cancer include maintaining a healthy weight, eating a balanced diet, limiting alcohol intake and not smoking. Increased physical activity can reduce cancer related and overall mortality after CRC and improve quality of life.

4. Answer A

Depression, concerns about recurrence and negative body image are common after CRC treatment so survivors should be screened for psychosocial distress and unmet support needs.

Case 2 – James Horn

5. Answer C

The FOBT screening program uses an immunochemical test unaffected by diet and medications. The test is performed at home and sent by the patient to pathology. Screening reduces the incidence and mortality of bowel cancer and a meta-analysis demonstrated one in 6 CRC deaths were preventable by FOBT screening. All abnormal FOBT results should be investigated further.

6. Answer C

General practitioners play several critical roles in the NBCSP. They can encourage informed participation, follow up positive results, arrange further investigation and notify the register. They are not responsible for enrolling patients in the program.

7. Answer D

Rescreening is not part of the NBCSP but screening with FOBT every 1–2 years is recommended for those over 50 years of age. General practitioners are well placed to provide rescreening utilising recalls and health check opportunities.

8. Answer B

'Screening' by definition is for asymptomatic people. Mick is now symptomatic and requires further investigation (colonoscopy) using normal referral channels.

Case 3 – Sarah Cohen

9. Answer D

HNPCC is a mutation of the mismatch repair gene that occurs in approximately one in 1000. It increases lifetime risk of cancer in the bowel, endometrium, ovary and stomach.

10. Answer C

The inheritance pattern for the gene mutation HNPCC is autosomal dominant with incomplete penetrance so the gene expression and cancer risk is <100%. Genetic testing should not be undertaken lightly, especially in children.

11. Answer C

About 1–5% of breast cancers involve the inheritance of a known genetic mutation. A thorough family history requires information on three generations of relatives. Ashkenazi Jewish ancestry increases the risk of both BRCA1 and 2.

12. Answer D

Individuals with BRCA1 or 2 genes require assessment by a familial cancer service. Ruth's breast cancer risk is higher than average so routine BreastScreen is inappropriate. BRCA is not associated with increased risk of renal or cervical carcinomas.

Case 4 – Jan Simons

13. Answer D

The RACGP recommend that screening programs address an important health problem which is adequately understood. The test should be simple, safe, validated and acceptable to the target population. Patients should make an informed choice about participation.

14. Answer B

Routine mammography and FOBT is recommended from the age of 50 years. Pap tests are recommended until the age of 69 years in women who have been sexually active. Pelvic ultrasounds and chest X-rays are not part of any routine cancer screening.

15. Answer C

The public often misunderstand the role and scope of screening programs. There are potential harms from screening and patients need to be adequately informed.

16. Answer A

Breast cancer screening mammography programs reduce breast cancer mortality by approximately 15% but result in over diagnosis and over treatment of approximately 30%. There is greater potential benefit in older age groups as breast cancer risk increases with age and false positives decrease slightly.