

Year 3 Case-based Learning 2024-25

Case 2 Part 2 Facilitator Guide



Key Contributors:

Michael Trimble – Academic Lead for Year 3 CBL Philip Toner – Academic Lead for Year 3 Amy Taylor – ADEPT Fellow 2021-22

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Case overview: Unresponsive patient

- Part 1: Emergency department admission
- Part 2: Discharge from Acute Medical Unit

Student timeline

This timeline outlines when the Case materials will be released on the portal. Your CBL sessions may not coordinate exactly with this timeline as these details will be decided by each LIC site, but students should have the relevant session content available on the portal for each session.

2/9/24:	Y3 LIC1 begins
18/10/24:	Part 1 information released on portal
From 21/10/24:	Part 1 Independent Session 1
From 28/10/24:	Part 1 Facilitated Session 2
15/11/24:	Part 2 information released on portal
From 18/11/24:	Part 2 Independent Session 1
From 25/11/24:	Part 2 Facilitated Session 2

Part 2 presentation

A 23-year-old male man was BIBA to ED unconscious and managed for an intentional mixed overdose of paracetamol and diazepam in HDU. He has been stepped down to a medical ward.

Summary

James has been stepped down to a medical ward for observation and psychiatric assessment prior to discharge. Bloods identify incidental mild hyponatraemia secondary to medication. He is declared medically fit and psychiatry liaison attend for assessment. The review identifies that James has been depressed and had suicidal intent at the time of the overdose, but at the time of assessment James is low risk as he has no future active plans to harm himself. The liaison psychiatry doctor decides he can be discharged for further management in the community.

Learning outcomes

Essential

Note that not all of these will be able to be covered in every session, but students should consider:

- How should you assess, classify, investigate and manage hyponatraemia?
- How do you assess fluid status?
- What drugs can commonly cause hyponatraemia?
- What are some of the implications of polypharmacy?
- Outline risk factors for suicide and self-harm
- What do you know of the global and local burden of suicide?
- Do you know how to take a psychiatric history?
- Have you heard of a mental state examination?
- Can you describe the diagnosis and management of depression?
- How might the biopsychosocial model apply to the assessment and management of depression?
- What are some of the symptoms and signs of alcohol misuse and withdrawal?
- Are you aware of the impact of alcohol misuse on both physical and psychological health?
 - What about the impact on partners/family?
- How might handover from hospital to community best work?
- How might we try to manage risk in the community?
- How does clinical reasoning apply to this case?
- What might be some of the differences in hyponatraemia management in hospital and the community?

Desirable

- When thinking about the risk of attempted suicide, what might be the impact of socioeconomic group, gender, and age?
- What do you know of suicide prevention, or any prevention actions and guidelines?
- Describe management options for low and high risk psychiatric patients
- How might the Mental Health Act and Mental Capacity Act be relevant here?
- What factors may influence adherence to medication?
- Are you aware of screening and brief interventions relating to harmful drinking behaviour and alcohol misuse in the UK?

- Once someone is struggling with alcohol misuse, what management options are there?
- How might adverse childhood experiences and social determinants of health impact future health problems such as alcohol misuse?
- What is medicalisation? What do you think are the benefits and disadvantages in treating addictions?
- Discuss the structural forces (economic, socio-political, physical) that may help or impede how clinicians can treat people with addictions, particularly in the community
- Have you heard of social prescribing? How might it be useful?
- Can you see how clinical care is integrated across different teams in this case?
 - What are the challenges to achieving this?

Student guidance

There are two types of sessions – *independent* and *facilitated*. Students have been provided with a case guide and supporting materials, which includes medical documents and investigations. They should have met prior to the facilitated session and worked through the patient materials as a group, using the framework provided in the general guide to write learning outcomes. These should reflect the cognitive processes underlying the case. Students should also consider any additions they would make to the assessment and why, interpret the investigation results available, formulate a differential diagnosis, and suggest a management plan. They should have agreed how to present their learning to each other and their facilitator ahead of the facilitated session.

Key areas for discussion

The main topics for discussion during this session are:

- Hyponatraemia
- Depression (assessment and management, including adherence)
- Alcohol misuse
- Suicide risk assessment and prevention
- Discharge communication
- Community follow-up and management including social prescribing)

Facilitator guidance

The general guide outlines expectations about how both independent and facilitated sessions should be conducted. Students should present their learning from the independent session at the start of the facilitated session. You have been provided with a copy of the student materials, and additional materials to share as the case progresses.

In your facilitated session, there are a number of learning areas to be highlighted. The materials have intentional gaps which should be explored. Students should explore these in their discussions, facilitated by their Chair, however, we have *suggested some prompts* to stimulate discussion if required.

Medical Ward Round

- Assessment of hyponatraemia: Hyponatraemia is a laboratory diagnosis, defined as a serum sodium concentration of <135 mmol/L. Assessment should screen for symptoms such as nausea, vomiting, headache, confusion and seizures. The cause can often be identified from history and examination, and medicines are a common culprit. Examination should aim to determine if the patient is hypovolaemic, hypervolaemic, or euvolaemic. What is involved in fluid status assessment? This is intentionally blank and students should identify steps, including assessment of mucous membranes, skin turgor, JVP, oedema, change in weight, urine output, fluid intake (Fluid Balance Chart provided) and lying/standing blood pressure.
- Management of hyponatraemia: Encourage students to refer to guidelines and algorithms. The typical management of euvolemic hyponatraemia is fluid restriction and correction of the underlying cause. Although carbamazepine is the antiepileptic drug most associated with hyponatraemia, there are many other culprits, including levetiracetam (Keppra).
- Clinical decision making: Encourage students to reflect on how risk and benefit must be weighed up in clinical decisions. In this case, the clinician accepts the mild asymptomatic hyponatraemia instead of stopping the antiepileptic drugs, since the seizure risk is bigger than the risk from the asymptomatic hyponatraemia, and he requests help from primary care to monitor this after discharge.
- Declaration of medically fit: Prior to psychiatry review, patients should be confirmed to be medically fit. Psychiatric diagnoses should always have medical causes ruled out first.
- Blood tests:

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- Serum osmolality, urine sodium concentration, and urine osmolality are required to help identify the aetiology of hyponatraemia. Blood and urine samples should be taken at the same time.
- Serum osmolality: This can differentiate between hypotonic, hypertonic, and isotonic hyponatraemia. Serum osmolality <275 mmol/kg indicates hypotonic hyponatraemia, which has a range of causes, and can be classified further as hypovolaemic (clinical features of volume depletion), hypervolaemic (clinical features of fluid overload) and euvolaemic (absence of volume depletion or overload).
- Urine sodium concentration: Together with volume status, this supports classification of hypovolaemia or euvolaemia. Urine sodium concentration is >20 mmol/L in most patients with euvolaemic hyponatraemia.
- Urine osmolality: Used to help identify the cause, urine osmolality is high (i.e. ≥300 mmol/kg) in hypovolaemic or hypervolaemic hyponatraemia, but can be variable in euvolaemic hyponatraemia. High urine osmolality usually indicates SIADH or drug-induced.
- What other investigations could be requested? Important investigations include glycaemic status and blood lipids and proteins to rule out pseudohyponatraemia. Hypothyroidism and adrenal insufficiency should be excluded. Syndrome of inappropriate antidiuretic hormone (SIADH) is a common cause of euvolaemic hyponatraemia and is a diagnosis of exclusion. SIADH may also be the presenting finding of a malignancy, or precede the malignancy diagnosis.

Psychiatry Liaison

- Psychiatric history; Students should note there is higher detail in some areas of a psychiatric history compared to a general history, including developmental forensic and social history.
- Suicide risk assessment: This is an important aspect of a number of acute medical admissions, and all doctors should be skilled in assessment. James is classed as low risk. He has no current active plan, he has plans for his future, and he would reach out for help if the thoughts of life not being worthwhile got worse again.
- Alcohol-use disorder:
- Alcohol-use disorder results from a combination of genetic, psychosocial, and environmental factors and is characterised by increased tolerance, withdrawal signs and symptoms, and lack of control in drinking habits. It ranges from hazardous drinking, to harmful drinking, to dependence. Tolerance, withdrawal, impaired control of drinking behaviour, and continued drinking despite adverse consequences are features of dependence.

- Alcohol withdrawal syndrome can follow cessation or reduction in alcohol consumption. It can involve irritability, nausea, vomiting and abdominal pain, and can manifest in seizures. It is best monitored with a formal withdrawal assessment scale and benzodiazepines are the definitive medical treatment.
- Impact of alcohol misuse: Alcohol has short and long-term effects on almost every organ of the body. It increases risk of cardiovascular disease, malignancy, liver dysfunction, and obesity. Alcohol alters thoughts, judgement, decision-making, memory, risk-taking and behaviour and increases the opportunity for interpersonal conflict, injury, and problems with motivation and role functioning. Hangovers, or the range of negative symptoms experienced following a drinking episode, are one of the most commonly reported negative consequences of alcohol consumption that can have considerable physical, psychiatric, and occupational costs. There is clear evidence now that the patient's alcohol consumption has become problematic and screening of behaviour relating to alcohol and referral for treatment is warranted.
- Behaviour change: Binge-drinking, alcohol abuse, and mild dependence can be supported by brief interventions and cognitive behavioural therapies, behavioural therapies, and social network and environment-based therapies. Moderate or severe alcohol-use disorder requires more significant strategies, such as cognitive behavioural therapy (CBT) and motivational interviewing (MI). CBT involves a combination of behaviour change strategies and cognitive restructuring. MI involves asking people to describe the costs and benefits of their behaviour so they can see the mismatch between one set of beliefs about themselves, and what they are actually doing (cognitive dissonance).
- Impact on family: Consideration should also be given to the impact of James's alcohol addiction and recent overdose on his family. Stress, burden, and impaired mental health are common in affected family members.
- Mental state examination (MSE): This concept will be new for students, explored further in Year 4. At this point they should appreciate that it is an important part of psychiatric assessment, determined through observation and data-gathering during history taking. It includes Appearance and Behaviour, Speech/Thought Form, Mood /Affect, Thought Content, Perception, Cognition, and Insight.
- Summary: Students should be able to identify the key points regarding alcohol misuse, depression, and suicide risk.
- Management plan:
 - Alcohol:

- James should see the Addictions Team regarding his alcohol use. He would initially be
 referred to undertake community input. If he engages with this and more intensive input
 is required, he could be considered for inpatient treatment. On assessment with the
 addictions team, he could be considered for abstinence-promoting prescribing such as
 acamprosate or naltrexone first line. Disulfiram is the second line option and this comes
 with the requirement of having someone agree to supervise him due to the risk of
 severe side-effects if he drinks alcohol while taking it (nausea, cardiac arrythmia and
 even death).
- Depression:
- Effective treatment of severe or chronic depression requires the combination of pharmacological and psychotherapeutic interventions, reflecting the biological and psychosocial aspects of depression. Depression is determined by psychobiological vulnerability, which is impacted by biogenetic, psychological, somatic, and societal risk factors, and balanced by protective factors. Life events with an idiosyncratic, stress-inducing value interact with this vulnerability, triggering severe or chronic distress that affects the individual's resilience and leads to symptoms of depression. The pathogenesis of depression is symbolized by a negative downward loop, in which interactions among symptoms, vulnerability, and stressors drive the patient toward a depressive condition. Recurrent depression further influences psychobiological vulnerability, relapse risk and occurrence of stressors.
- James should be referred to the community mental health team who can carry out a biopsychosocial assessment. Psychological therapies such as cognitive behavioural therapy (CBT) may help him develop coping skills to deal with negative thoughts. Given that he is experiencing psychological and physical symptoms of depression, it would be appropriate to consider medication. Selective serotonin reuptake inhibitors (SSRIs) are first line. These take at least 2 4 weeks for effect as his adherence to the original medication was poor it would be reasonable to restart citalopram or else trial a different SSRI. Alternatively, due to low appetite with weight loss and poor sleep, mirtazapine (with side effects of drowsiness and increased appetite) would be an alternative option. In counselling, it would be important to explain the timelag to see effect, and that the dose can be increased after several weeks, so he may require a higher dose than the initial starting dose.
- Adherence: Adherence is the extent to which James's behaviour (taking medication) coincides with medical advice, which has been poor in the past. Adherence used to be

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referred to as compliance, but compliance now describes a more active and empowered patient. Factors influencing adherence include intentional and non-intentional aspects. Predictors include patient satisfaction, understanding and recall. In some cases, supporting change in beliefs and emotions alongside providing clear oral and written information can lead to modest improvement.

- Medicalisation is when non-medical problems are treated as medical conditions. An
 example of this is the prescription drugs found beside James. Students should be
 encouraged to discuss the benefits and problems of medicalisation e.g. medication can
 help to alleviate symptoms and to de-stigmatise conditions. Some disadvantages would
 be iatrogenesis and addiction. The medicalisation of alcoholism may be regarded as a
 positive as it doesn't blame the individual. However, criticisms include that it excludes
 cultural and social dimensions of alcoholism and it undermines the autonomy and
 responsibility of alcoholics.
- Global and local burden of suicide and suicide prevention: Suicide is a serious global public health issue which has a devastating impact on families and communities. More than 700,000 people die due to suicide globally every year. For each suicide, there are more than 20 suicide attempts, and a previous suicide attempt is the single most important risk factor for suicide. However, suicides are preventable there are many suicide prevention partnerships, strategies and action plans that aim to prevent suicide at individual, community and national levels. The Northern Ireland Assembly produced a research paper in 2021 considering the complexities of suicide in the context of mental health, the impact of the pandemic, support services, suicide data and suicide prevention strategies, which includes population-based approaches, targeted interventions, crisis de-escalation and case management, and postvention support for those bereaved or affected by suicide.

Discharge letter

- How would you fill in the hospital discharge letter? Students should consider what they
 would write in the boxes to provide a succinct summary of the case. The diagnosis should
 include intentional mixed overdose and hyponatraemia, the narrative should describe the
 HDU stay, the assessment and plan from psychiatry and the shared plan going foreward. This
 aims to give students to opportunity to concisely summarise the case.
- What important points should be communicated to the GP about this patient's inpatient stay, and any actions they should take? Students should consider the importance of

communication at this interface of services, especially given the patient's presentation. The GP must be given clear information about changes in medicines, the plan regarding hyponatraemia, risk assessment and referrals. The GP will be an essential point of contact, especially whilst James awaits the community mental health team's input. Students may consider that a phone call to the GP by the ward doctor would be useful in streamlining this communication.

Community follow-up

- Integrating care: *How is risk assessment and management approached differently in the community?* Students should identify the importance of safety-netting and actions such as daily dispensing to minimise risk of further overdose. Encourage students to reflect on the important role of the GP at this stage of care.
- Tired all the time: Students should consider the blood tests the GP refers to in the assessment of this fatigued patient, screening for hypothyroidism, deficiencies and diabetes. The results of these are presented in the additional materials.
- Patient autonomy: Encourage students to reflect on the doctor/patient relationship in GP, and how relationships can be built and issues revisited as a management plan evolves. This patient is currently not keen to interact with the addictions team, but is aware their support is available as an option in the future.
- Social prescribing: Social prescribing allows GPs, nurses and other primary care professionals
 to refer people to a range of local, non-clinical services provided by voluntary and
 community sector organisations, addressing holistic needs and supporting individuals to take
 greater control of their health. There are many different models, but most involve a link
 worker who works with people to access local sources of support. Examples include
 volunteering, arts activities, group learning, gardening, befriending, cookery, healthy eating
 advice and physical activities.
- Structural competency: Encourage students to review the relevance of structural
 competency for James returning to living in the community and for primary care e.g. access
 to housing, employment, social networks; structural factors that impact on primary care and
 how these link to his risk of depression and suicide. Treatment of addiction tends to focus on
 the individual, but facilitators should encourage students to discuss what social structures
 may make it difficult for James to change his behaviour, for example lack of employment
 and breakdown of social support networks. Encourage students to discuss structural forces
 that may help or impede how clinicians can treat people with addictions, such as lack of time

and long waiting lists. Students should also be encouraged to think of interventions that they as future clinicians could implement to help someone like James.

Additional materials for facilitated session

The students have not seen the additional materials you have been provided with. Share these materials with the students, review them together and hand over to the students to identify what is new for them and how the materials relate to what they have learned so far.

Bloods

- Tired all the time: TFTs, HbA1c and B12 and folate are normal. Nutritional problems are common in patients with alcohol-use disorders and the patient are given nutritional advice to prevent deficiencies. Students should recognise the importance of ruling out medical causes of fatigue instead of attributing such symptoms to depression.
- Hyponatraemia assessment and management in the community: James' hyponatraemia has worsened by the addition of an SSRI. What action should the GP take? Students should apply what they learned earlier in the case to determine how they would approach and manage the hyponatraemia this time. The GP would check the patient clinically and resend serum and urine electrolytes and osmolalities. The likely cause is the addition of an SSRI, so the GP could cross-taper to mirtazapine, as psychiatry had suggested this as another option.

Summary

• Who will be involved in follow-up of this patient in primary and secondary care? Students should recall the patient's problem list and identify that long-term follow-up will include primary and secondary care services, and identify the role of the multidisciplinary team, particularly specialist nurses and social workers.

Useful resources

BMJ Best Practice. (2018, June). *Alcohol use disorder*. <u>https://bestpractice.bmj.com/topics/en-gb/198</u>

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Rosário, F., Santos, M. I., Angus, K., Pas, L., Ribeiro, C., & Fitzgerald, N. (2021). Factors influencing the implementation of screening and brief interventions for alcohol use in primary care practices: a systematic review using the COM-B system and Theoretical Domains Framework. *Implementation Science : IS*, *16*(1), 6. <u>https://doi.org/10.1186/s13012-020-01073-0</u>

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World Health Organisation. (2022). *Suicide prevention*. <u>https://www.who.int/health-</u> topics/suicide#tab=tab_1

Learning opportunities for students

Lectures

Specialties – Endocrinology – Calcium and sodium abnormalities

Surgery – Fluids and electrolytes

Other opportunities

Specialties – Endocrinology and Diabetes – Thyroid, Diabetes

Medicine - Clinical decision making

Scientific basis of clinical practice - clinical biochemistry, pathology, haematology

Foundations for Practice

- Fundamentals of Clinical Science: Pharmacology and therapeutics, sociology/psychology, public health, clinical biochemistry, mental health
- Blood, Cardiovascular and Respiratory Systems: Adherence
- Gastrointestinal, Endocrine, Renal and Reproductive Systems: Chemical pathology
- Neurology: Psychiatry, psychology, mental health

Previous cases

• Case 18 - ' Coming to terms with epilepsy.'

Acknowledgements

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Peter McMurray	General Adult Psychiatry ST6	
Julie Anderson	Psychiatry Lead QUB	
Rick Plumb	Academic Lead C Theme	
Mark Harbinson	Academic Lead A Theme	
Grainne Kearney	Deputy Academic Lead A Theme	
Tom Bourke	Academic Lead T Theme	
Helen Reid	Academic Lead T Theme	
Diarmuid O'Donovan	Academic Lead G Theme	
Vivienne Crawford	Deputy Academic Lead G Theme	
Mairead Corrigan	Academic Lead for Equality & Diversity	
Noleen McCorry	Lecturer in Population Health & Health Care	
Laura McGowan	Lecturer in Nutrition and Behaviour Change	
Legacy Subject Science Leads		