Year 3 Case-based Learning

General Facilitator Guide 2024-25

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Year 3 Case-based Learning at a glance 2024-25

Queen's University Belfast – School of Medicine, Dentistry and Biomedical Sciences | Belfast Health and Social Care Trust – caring supporting improving together | Northern Health and Social Care Trust | South Eastern Health and Social Care Trust | Southern Health and Social Care Trust | Western Health and Social Care Trust

CBL: What and why?

Student-centred, patient centred small group learning
Skills development (problem-solving, communication, documentation, teamwork)
Understand clinical reasoning and integrated care
Incorporate and apply GCAT themes
Formative assessment

CBL structure

4 Cases with 4 Parts each
2 Cases during each LIC
Each Part consists of a 60 minute student Session and 90 minute facilitated Session (X2 per Case)
First Case is exception, with the Facilitator at all 4 Sessions
Group size 10-12 students (max 12)
All Sessions ideally in person

Trust administration role

Allocate groups and inform students
Timetable and book rooms for both independent and facilitated sessions in accordance with each Case 4-week timeline, 2 in each LIC
Recruit Facilitators
Coordinate Facilitator training sessions (QUB to deliver)
Share materials with Facilitators

Facilitator role

Ideally doctor e.g. specialty trainee, specialty doctor, consultant or GP. Experienced AHP also suitable
Requires some knowledge of medicine and surgery
Requires Facilitator training
Reviews Facilitator materials
Attends a 90min facilitated session for each Part arranged by Trust
Provides email for CBL attendance form on MyProgress for each facilitated session

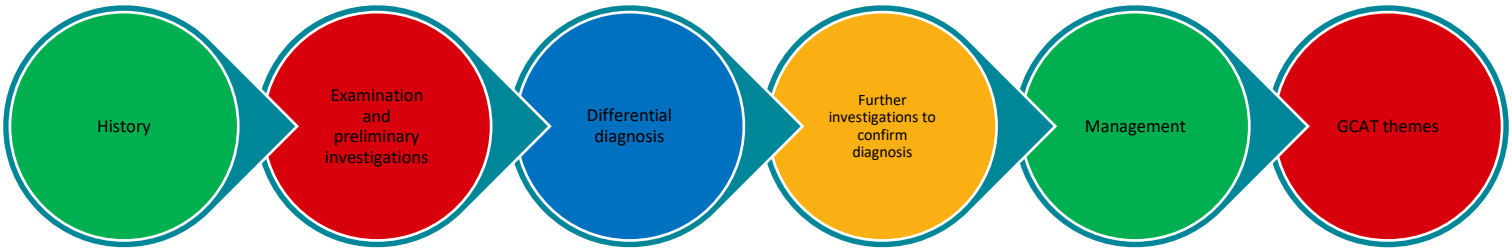
Student role

Develop and agree student group contract
Allocates and undertakes roles of chair/deputy/scribe in all Sessions
Independent Sessions – work through Sessions and allocate research topics for facilitated Session
Facilitated Sessions – discuss learning and works through case progression, applying research

QUB CME role

Coordinate CBL timeline with Trusts
Provide student materials via Portal to students
Provide Facilitator materials via Causeway Learning link to Trusts
Provide Facilitator training
Produce and review CBL materials
Collect and respond to feedback

Structured approach to case



Year 3 LIC Overview

What is a Longitudinal Integrated Clerkship (LIC)?

The LIC is a relatively new development in medical education. In an LIC, the traditional, sequential time limited blocks are replaced with a longer attachment to a particular ward or team. Is this case, instead of the previous 6 weeks of surgery in one hospital, 7 weeks medicine in another, plus several other shorter attachments throughout the year, students are based in one Trust for each 14 week semester. During the semester, students are allocated to a base-ward, where they become embedded in the team and learn the generic skills required for inpatient care.

In addition to the learning opportunities on their base-ward, they take part in a number of other specialty-based learning activities. These may be ward or clinic based and will encompass the following specialties:

- Cardiology
- Dermatology
- Endocrinology
- Haematology
- Internal medicine (this includes Acute Medicine, Gastroenterology, Respiratory Medicine, and Therapeutics & Clinical Pharmacology)
- Musculoskeletal Medicine
- Nephrology
- Neurosciences
- Ophthalmology
- Otorhinolaryngology
- Surgery (this includes Breast Surgery, Hepatobiliary Surgery, Upper and Lower GI Surgery, Urology, and Vascular Surgery)

Experience may vary depending on the site on as not all specialties are represented in all hospitals. However, everyone will be spending one semester in Belfast and one in another Trust and so everyone should have exposure to the full range of specialties available.

A more formal knowledge-based teaching programme will be provided with lectures for the whole year group being delivered on Thursday and Friday afternoons. In addition, there will be a number of Clinico-Pathological Conferences (CPCs) held throughout the year.

Students complete an electronic logbook to keep track of their progress.

Why use LICs?

The concept of the LIC is supported by sound educational research, which shows that the LIC format, with subjects being covered throughout the year, results in better long-term recall. The research also suggests that students have a greater sense of belonging and a better relationship with their tutors in longer attachments.

An Introduction to Case-based Learning (CBL) in Year 3

Case-based Learning (CBL) has been introduced to the undergraduate medical curriculum for Years 1 and 2 in Queen's and has been extremely popular with both students and staff. CBL in Year 3 is different from Years 1 and 2 and is designed to help students develop skills in approaching patient history, examination, differential diagnosis, investigations, and management, and justify their choices through explanation of the underlying fundamental principles and clinical reasoning.

What is CBL?

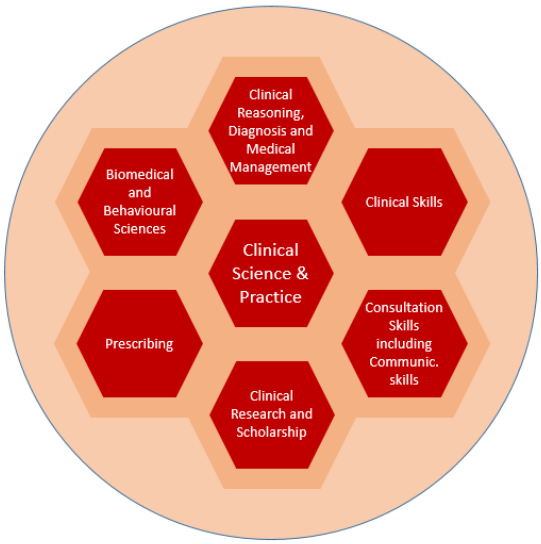
CBL is a form of small group teaching in which students follow a patient who encounters various challenges. Students are encouraged to work together as a group to think holistically in an integrated way about all aspects of the case. They are encouraged to see each patient as a complex person, existing in a particular set of social circumstances with a unique set of feelings, hopes and fears. This **person-centred** approach to learning requires students to analyse the clinical, scientific and social factors relevant to the case, fostering curiosity, empathy, reasoning and analytical skills. The cases have been designed to help learning in multiple domains and cover specific learning outcomes that meet the GMC requirements in *Outcomes for Graduates (2018)*.

CBL is also **student-centred**, and we ask that students take responsibility for developing a self-directed approach to learning. This process should help students develop team-working, problem-solving and communication skills. The facilitator's role is to help *guide* discussions and ensure that the key elements of the case are explored adequately. Facilitators are not there to teach the material. They are experts in their own fields but will not necessarily have any specialised knowledge about the case.

How CBL fits into the curriculum

CBL is integral to the medical curriculum which follows an **integrated body system** approach. Cases and body systems from Years 1and 2 are revisited and expanded upon in Year 3 in a **'spiral curriculum'** approach. Overarching themes continue to incorporate core knowledge and skills from the biomedical, social and behavioural sciences as well as clinical skills. The themes are **G**lobal and Population Health, **C**linical Science and Practice, **A**chieving Good Medical Practice, and **T**eamwork for Safe Care **(GCAT).**

GCAT Themes



General CBL learning outcomes

By the end of the cases, students should be able to:

- Demonstrate contribution to effective team-working.
- Demonstrate communication and negotiation skills.
- Demonstrate self-directed learning.
- Demonstrate teaching and presentation skills.
- Appreciate integrated clinical care.
- Apply clinical reasoning and problem-solving skills.
- Formulate problem lists and differential diagnoses for common medical and surgical presenting complaints.
- Rationalise the requirement for investigations.
- Interpret investigation results correctly.
- Identify sources of relevant guidelines and apply them to clinical scenarios.
- Develop evidence-based management plans.
- Consider the relevance of biomedical, psychological and social science principles to patient presentations and management.
- Consider the relevance of global and population health to patient presentations.
- Identify relevant professional, ethical and legal responsibilities.

The two parts of the case also have specific learning outcomes. These consist of *essential* learning outcomes and *desirable* learning outcomes. These are provided to facilitators in their guides, but they are not provided to students. Students write their own learning outcomes for each case, guided by the facilitator. The facilitator's list will be revealed to students at the end of the case on the Portal.

How CBL works in Year 3: A summary

There are four CBL cases throughout Year 3, two during each LIC. One case has two parts and runs over approximately 4 weeks. Each part has two sessions; an independent session and a facilitated session. The first case in Year 3 is an exception, where all meetings are facilitated.

Students are placed in a CBL group by the Trust in which they undertake their LIC. They will receive details of the group from the local undergraduate office. Students remain in this group throughout the LIC and are allocated a facilitator(s).

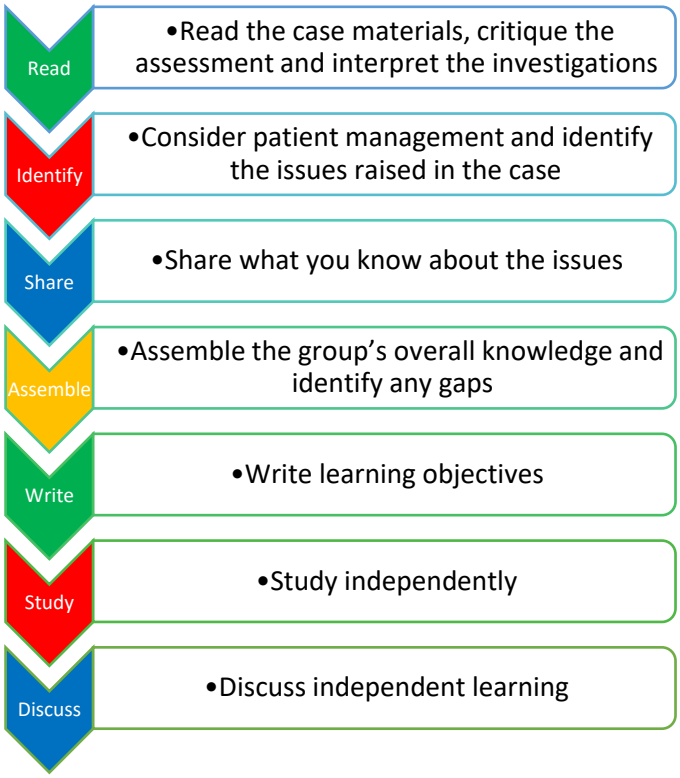
The materials for CBL will be released to students at intervals via a key link on the Year 3 portal within the LIC section. Each part has a guide and supporting medical documents and investigations. The materials for facilitators will be distributed via an email link to the platform Causeway Learning. The facilitator package incorporates student materials, case details, learning outcomes, guidance, and references.

In the first CBL session, students are provided with case details and they should work through the framework provided below. Although the process is similar to Years 1 and 2, Although the process is similar to Years 1 and 2, there are some changes for CBL in Year 3. During the year, students are challenged to go further and include critique or development of the clinical approach to patient assessment and management.

We are also advising that students **do not create PowerPoint presentations** to discuss the learning. Feedback from students and facilitators has suggested that this hampers actual discussion, which is something that we want to generate in the CBL sessions. More is discussed on this below.

The learning outcomes for each case will be released on the Portal after the case has been completed. There is an overview lecture for Case 1 to ensure students have grasped the key concepts and new approach to CBL. However, there are no further overview lectures for Cases 2-4, since the aim of the cases is to encourage thought and integration of knowledge across traditional disciplinary boundaries, not transfer content.

Framework for students

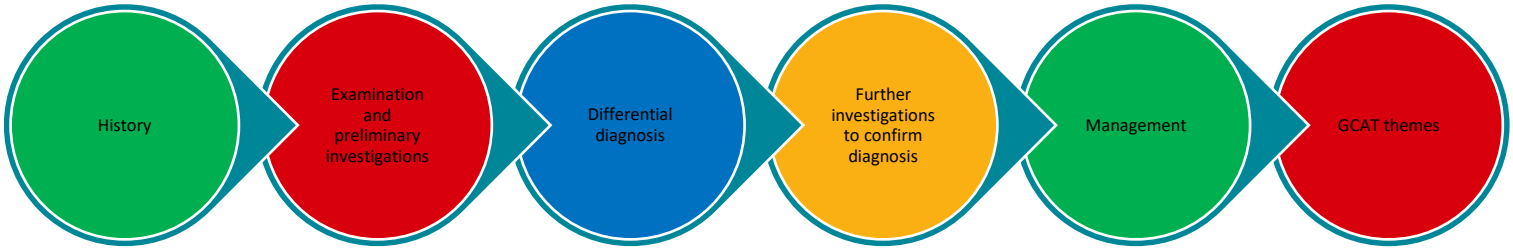


1. *Read the case materials, critique the assessment and interpret the investigations*

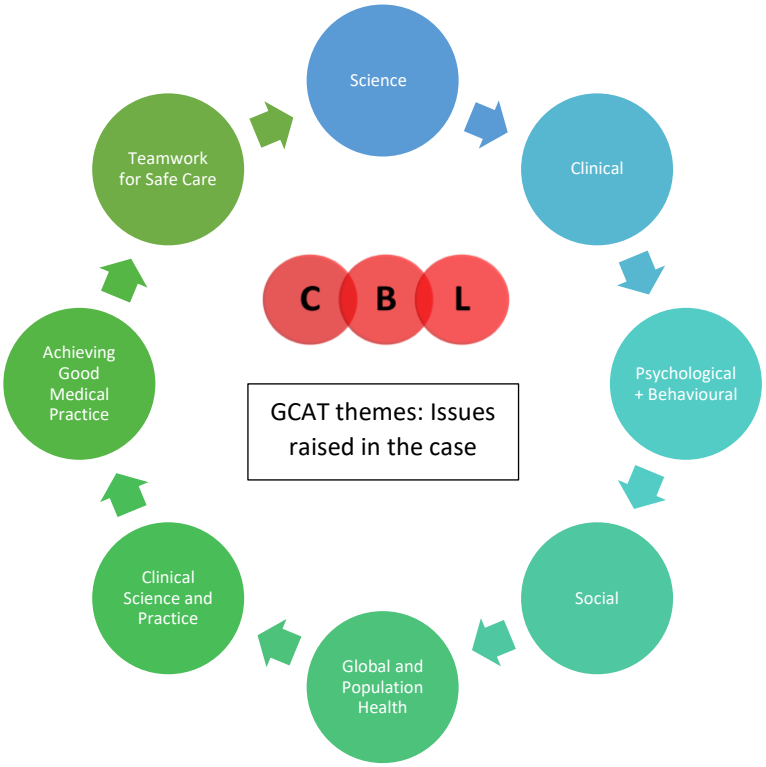
Students should work through the case presentation and consider patient history, examination and preliminary investigations. They should consider what additional information is required to support their clinical reasoning behind a differential diagnosis.

2. *Consider patient management and identify the issues raised in the case*

There should next be a discussion, critique and development of patient management and of the issues related to GCAT themes that the case raises. Each case contains many topics for consideration.



Students should work through each case iteratively trying to identify all issues contained within it



3. *Share what you know about the issues*

Share any knowledge about the issues identified in the case. Students in each group will have different clinical experiences within their LICs and this is an opportunity to share these with the group.

4. *Assemble the group's overall knowledge and identify any gaps*

The group should now re-examine the information gathered in detail and organise this to help identify where further exploration is needed.

5. *Write learning objectives*

The group should agree on a set of learning objectives which will often take the form of questions. These should be designed to help address the knowledge gaps identified in stage 4. The goals should be specific and achievable within the time available between the two group meetings. Unlike previous years, in Year 3 we want **multiple** students to have knowledge of **multiple** learning outcomes. There should be 2 or 3 more learning objectives generated than there are students, and we advise students to come to the facilitated session ready to discuss 2 or 3 learning outcomes instead of just one. Each learning outcome should have at least 2 students assigned to it. The first CBL session finishes when stage 5 is complete.

6. Independent study

In the time between CBL sessions, students will work individually to seek out learning resources to obtain the information to help them with the learning objectives that have been written. Links to learning resources and activities are provided in the guides to support this step. Students are encouraged to keep a record of what they discover in whatever format the student prefers e.g. handwritten or electronic notes. As mentioned above, students should each look into 2 or 3 learning objectives, and each learning objective should have a few students covering it. You are not expected to have the same degree of "in-depth" knowledge of each topic as you might have pursued in Years 1 & 2. The scribe for the session should send the names of students attached to each learning objective to the facilitator prior to the facilitated session.

7. Discuss independent learning

In the next CBL meeting, the group returns to discuss the findings of their independent study with a facilitator. The chair should guide the group through the case materials, and learning objectives are discussed in the order in which they come up. Students should report on the output of their study, share information about sources, discuss difficult concepts, and identify problem areas that need further study or expert help. By having more than one student covering a single learning objective, discussion of the topics can take place, as opposed to students simply passively sitting through a number of PowerPoint presentations. The facilitator will provide guidance on whether learning outcomes have been met appropriately.

The next part of the CBL case will run in a similar way. Additional case information will be released on the portal and students have another independent and facilitated session for this part. Using the new information, students work through the 7-stage process again.

Unlike CBL in Years 1 and 2, there is no wrap-up lecture for Year 3 cases. These cases are more about developing skills and preparing students for lifelong learning. Students will be formatively assessed by facilitators through their contribution to the group as an integral part of the process. The case learning outcomes will be revealed on the Portal at the end of the case.

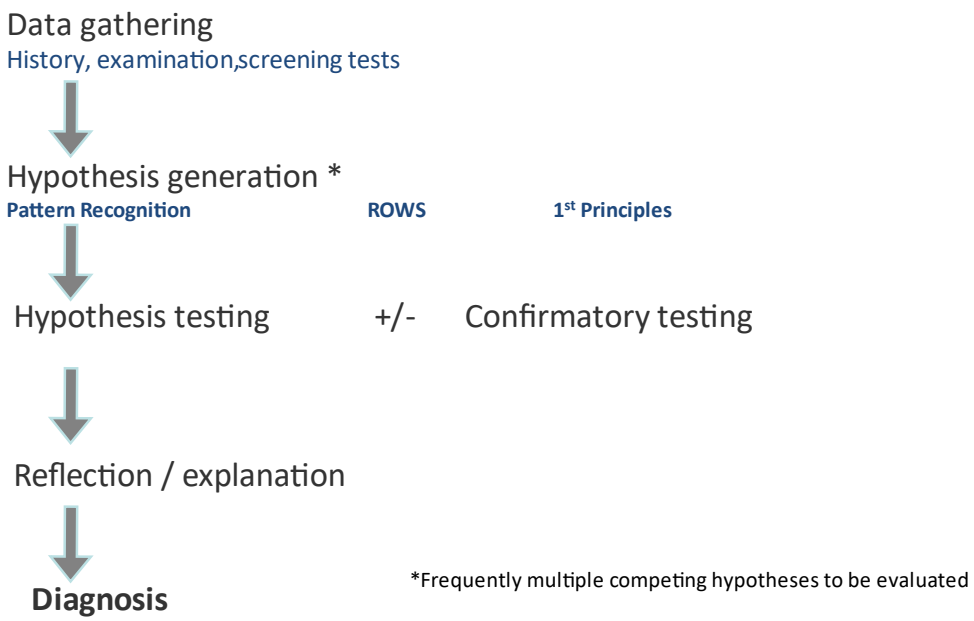
Clinical reasoning

Students have been introduced to concepts underlying clinical decision making through lectures and tutorials. CBL in Year 3 provides the opportunity for students to apply these skills to clinical scenarios. Clinical reasoning is incorporated into case learning outcomes. Students should be encouraged to describe how their thinking has led to their conclusions. They have been provided with the following outline to approaching clinical reasoning.

Background

Solving clinical problems requires more than just knowledge of diseases and treatments. Clinicians need to be able to reason and evaluate and to do this we need to understand how we think, called metacognition, enabling us to have insight into problems and minimising error. The process can be broken down into a number of steps.

The hypothetico-deductive process



The hypotheticodeductive process consists of the following steps:

Data gathering

Information is gathered through history, examination, “routine bloods”, bedside investigations and imaging. A patient’s narrative should be actively questioned as it is interpreted, and sufficient information must be collected before conclusions are made. This forms the basis for hypothesis generation.

Hypothesis generation

There are several strategies to produce a list of differential diagnoses:

- *Pattern recognition*: Patterns of symptoms and signs are identified, and more complex patterns can be recognised with practice. However, even experts must test their assumptions to prevent errors.
- *Rule out worst case scenarios*: This supports risk management, but often leaves the diagnostic question unanswered.
- *Reasoning from first principles:* This is applied when the pattern is unclear and further careful thought is required for underlying meanings to be identified.
- *The Casablanca strategy:* This is the use of a standard battery of tests for a given symptom without any application of analysis, just like working on autopilot.

Hypothesis testing

Hypotheses must be examined and proved to be correct or incorrect by testing against knowledge and evaluating supporting data. A thoughtful and analytical approach is required.

There are two system approaches to judgement and choice. System 1 is fast, automatic, used frequently, and operates subconsciously. System 2 is slow, effortful, used infrequently, and requires conscious thought. When we are under pressure, we default to System 1 thinking, but a System 2 approach better serves clinical decision making. Bypassing this increases the risk of error. There are three basic types of error: skill based (slips and lapses), rule based, and knowledge based. Mistakes can also arise through a lack of understanding of the principles of logic.

Reflection

Finally, it should be it should be determined if conclusions are logical, coherent and sufficient for the patient presentation.

Summary

As we collect relevant information about a case, we also need to be aware of how we think and safeguard the process of how we make decisions that affect our patients. We can use cognitive forcing strategies, such as structured review of data and diagnostic checklists. We can also use

resources to decrease dependence on memory. We can make ourselves accountable to the rest of the team for our thinking processes. Thinking "out loud" allows others to follow our train of thought - and permit challenge when our reasoning is flawed. It is important that we also develop skills in error recognition and recovery.

Reference

Trimble, M. (2021). *Clinical decision making.* https://www.med.qub.ac.uk/portal/year3/clinical/cbl2021/CBL_introClinicalReasoning.mp4

A structured approach to patient assessment and management

Students have been provided with the following information to help them approach patient assessment.

History taking

What does Outcomes for Graduates (2018) say about history taking?

7b take a history that includes consideration of the patient's autonomy, views and any associated vulnerability, and reflect this in the care plan and referrals

11a elicit and accurately record a patient's medical history, including family and social history, working with parents and carers or other advocates when the patient is a child or young person or an adult who requires the support of a carer or other advocate

14c interpret findings from history, physical and mental state examinations

14g synthesise findings from the history, physical and mental state examinations and investigations, in collaboration with colleagues if necessary, and make proposals about underlying causes or pathology

18a establish an accurate medication history, covering both prescribed medication and other drugs or supplements, and establish medication allergies and the types of medication interactions that patients experience

25d assess, by taking a history, the environmental, social, psychological, behavioural and cultural factors influencing a patient's presentation, and identify options to address these, including advocacy for those who are disempowered

The primary goal of any history taking is to aid the clinician in establishing *a list of diagnostic possibilities*. It also allows the doctor to develop a rapport with their patient, place the patient's diagnosis in the context of their life and highlight important physical signs that need to be sought on physical examination. At the end of the consultation the doctor needs to know what is the best for that patient. Doctors must consider patients' lifestyle, cultural background, expectations, and values to structure a treatment plan that best suits that patient.

In CBL, you will be presented with histories that have been taken by other members of staff. These purposefully have gaps to help you develop sills in critiquing and building on information from others.

Remember to maintain a structured approach to history taking and its critique. We have provided a framework below from your Clinical Skills sessions as a reminder.

Presenting complaint and history of presenting complaint

Identify what the patient perceives as the problem, supported by a check list of systematic questions relevant to the presenting symptoms. When patients are unable to give an adequate or reliable account, the necessary information must be obtained from other sources.

Past medical history

This should include an account of any previous illnesses or operations, or specific conditions related to the presenting complaint.

Drug history and allergies

Ascertain allergies (and their nature), prescription and over-the counter medicines, or alternative/complementary treatments.

Family history

The patient's family medical history can give you clues to possible conditions that they may be predisposed to. You may want to ask if any specific conditions run in their family. If relevant, ask about the age of onset or death.

Social history

Social history is essential in helping determine the best management plan for the patient. Enquire about support at home, accommodation, occupation, environmental factors, smoking, alcohol and drugs (and extent).

It is also important to enquire how symptoms have impacted the patient’s lifestyle and their priorities.

Systematic questions

Run though other systematic questions to uncover any other symptoms.

Summarise and provide the opportunity for questions

Reference

Queen's University Belfast Medical Education Portal. History taking: A general guide. https://www.med.qub.ac.uk/portal/cskills/students/Y1AutumnGeneralHT.aspx

Examination and preliminary investigations

What does Outcomes for Graduates (2018) say about examination? 14b safely and sensitively undertake: an appropriate physical examination (with a chaperone present if appropriate) a mental and cognitive state examination, including establishing if the patient is a risk to themselves or others, seeking support and making referrals if necessary a developmental examination for children and young people. 14c interpret findings from history, physical and mental state examinations 14g synthesise findings from the history, physical and mental state examinations and investigations, in collaboration with colleagues if necessary, and make proposals about underlying causes or pathology

In CBL, students are encouraged to critique the examinations that have been recorded and identify other relevant examinations that the documented assessment might have neglected. Students are also provided with some basic investigations to assess and interpret.

In a system with finite resources and given the potential risks of every investigation, students should be able to explain the rationale behind each requested. These include:

- Bedside investigations: What initial investigations are indicated and why? This may include urinalysis, ECG, ABG, etc.
- Basic blood tests: What 'routine' bloods are necessary to check, and why are they relevant for diagnosis and/or management? These include clinical biochemistry and haematology tests.
- Initial imaging: Consider the relevance in requesting initial imaging like Chest X-ray or Abdominal X-ray.

Differential diagnosis

What does Outcomes for Graduates (2018) say about diagnosis?

6f manage the uncertainty of diagnosis and treatment success or failure and communicate this openly and sensitively with patients, their relatives, carers or other advocates

12 Newly qualified doctors must work collaboratively with patients and colleagues to diagnose and manage clinical presentations safely in community, primary and secondary care settings and in patients' homes. Newly qualified doctors must, wherever possible, support and facilitate patients to make decisions about their care and management.

13 Newly qualified doctors must be able to perform a range of diagnostic, therapeutic and practical procedures safely and effectively, and identify, according to their level of skill and experience, the procedures for which they need supervision to ensure patient safety.

14d propose a holistic clinical summary, including a prioritised differential diagnosis/diagnoses and problem list

14f interpret the results of investigations and diagnostic procedures, in collaboration with colleagues if necessary

14h understand the processes by which doctors make and test a differential diagnosis and be prepared to explain their clinical reasoning to others

17b diagnose and manage acute medical and psychiatric emergencies, escalating appropriately to colleagues for assistance and advice

19a make effective use of decision making and diagnostic technologies

22f analyse clinical phenomena and conduct appropriate critical appraisal and analysis of clinical data, and explain clinical reasoning in action and how they formulate a differential diagnosis and management plan.

26e critically appraise a range of research information including study design, the results of relevant diagnostic, prognostic and treatment trials, and other qualitative and quantitative studies as reported in the medical and scientific literature.

In CBL, students are tasked with gathering information to develop a differential diagnosis. You are encouraged to apply a hypotheticodeductive process to understand and describe your clinical reasoning.

Sometimes use of a structure like the surgical sieve can support diagnostic approach. There are different mnemonics that can help recall of such a framework for diagnostic thinking, for example:

VITAMIN CDEF

V: vascular

I: infective

T: traumatic

A: autoimmune

M: metabolic

I: iatrogenic

N: neoplastic

C: congenital

D: degenerative

E: endocrine

F: functional

Reference

Chai, J., Evans, L., & Hughes, T. (2017). Diagnostic aids: the Surgical Sieve revisited. *The clinical teacher*, *14*(4), 263–267. https://doi.org/10.1111/tct.12546

Further investigations to confirm diagnosis

What does Outcomes for Graduates (2018) say about investigation?

2l providing information about options for investigations, treatment and care in a way that enables patients to make decisions about their own care

14a propose an assessment of a patient's clinical presentation, integrating biological, psychological and social factors, agree this with colleagues and use it to direct and prioritise investigations and care

14e propose options for investigation, taking into account potential risks, benefits, cost effectiveness and possible side effects and agree in collaboration with colleagues if necessary, which investigations toselect

14f interpret the results of investigations and diagnostic procedures, in collaboration with colleagues if necessary

14g synthesise findings from the history, physical and mental state examinations and investigations, in collaboration with colleagues if necessary, and make proposals about underlying causes or pathology

22c justify, through an explanation of the underlying fundamental principles and clinical reasoning, the selection of appropriate investigations for common clinical conditions and diseases

In order to narrow down the differential diagnosis, and based on initial information that is gathered, further investigations will be requested. Students should consider:

- Other laboratory tests: What other laboratory tests are relevant? These include microbiology, immunology, genetics, cellular pathology, histocompatibility and immunogenetics tests.
- Imaging: Explain the best further imaging modalities recommended by guidelines, and their associated risks, taking into account individual patient factors.
- Procedures: Depending on the presenting complaint, procedures may be indicated to obtain a specimen for analysis such as aspiration or biopsy. Other laboratory tests as above will be directly relevant to specimen analysis.
- Specialist tests: Specific diagnostic tests may be indicated.
- Screening: The working diagnosis may also indicate the need for relevant screening tests for associated problems.

Management

What does Outcomes for Graduates (2018) say about management?

6b identify the need to adapt management proposals and strategies for dealing with health problems to take into consideration patients' preferences, social needs, multiple morbidities, frailty and long term physical and mental conditions

12 Newly qualified doctors must work collaboratively with patients and colleagues to diagnose and manage clinical presentations safely in community, primary and secondary care settings and in patients' homes. Newly qualified doctors must, wherever possible, support and facilitate patients to make decisions about their care and management.

14l propose a plan of management including prevention, treatment, management and discharge or continuing community care, according to established principles and best evidence, in collaboration with other health professionals if necessary

14m support and motivate the patient's self-care by helping them to recognise the benefits of a healthy lifestyle and motivating behaviour change to improve health and include prevention in the patient's management plan
15 Newly qualified doctors must demonstrate that they can make appropriate clinical judgements when considering or providing compassionate interventions or support for patients who are nearing or at the end of life. They must understand the need to involve patients, their relatives, carers or other advocates in management decisions, making referrals and seeking advice from colleagues as appropriate.
22d select appropriate forms of management for common diseases, and ways of preventing common diseases, and explain their modes of action and their risks from first principles
22f analyse clinical phenomena and conduct appropriate critical appraisal and analysis of clinical data, and explain clinical reasoning in action and how they formulate a differential diagnosis and management plan.
23 Newly qualified doctors must explain and illustrate by professional experience the principles for the identification, safe management and referral of patients with mental health conditions.
26b interpret and communicate research evidence in a meaningful way for patients to support them in making informed decisions about treatment and management

A biopsychosocial approach should be adopted to patient management as well as assessment.
Management should include:

- Lifestyle and behavioural changes
- Medication
- Medical intervention
- Surgical intervention
- Psychological intervention
- Social intervention
- Spiritual and cultural support
- Prevention strategies (primary and secondary)
- Monitoring
- Complications
- Long-term follow-up
- Integrated care

Integrated care

Integrated care, or integrated health services delivery, is a World Health Organisation approach to strengthen people-centred health systems. It involves the delivery of services designed according to population and individual needs, coordinated by multidisciplinary teams who work across different settings and levels of care. Such services should reflect best available evidence and aim to continuously improve performance. Integrated care also aims to improve population health and individual experiences of care, and reduce costs, known as the Triple Aim objectives. Northern Ireland has established Integrated Care Partnerships. As you progress through the case and through your LIC, consider how integrated care works in action.

References

HSC Health and Social Care Board. (2022). *Integrated Care Partnerships (ICPs).* http://www.hscboard.hscni.net/icps/

World Health Organisation. (2016, September). *Strengthening people-centred health systems in the WHO European Region: Framework for action on integrated health services delivery.* *https://www.euro.who.int/__data/assets/pdf_file/0004/315787/66wd15e_FFA_IHSD_160535.pdf*

Zonneveld, N., Driessen, N., Stüssgen, R., & Minkman, M. (2018). Values of Integrated Care: A Systematic Review. *International journal of integrated care*, *18*(4), 9. https://doi.org/10.5334/ijic.4172

GCAT Themes

Students are encouraged to work through the GCAT themes and identify relevant issues in the case related to global health, biomedical and behavioural sciences, professionalism (including ethics and law) and teamwork. These should be considered when writing learning outcomes. As the facilitator, you may need to reinforce the specific learning points related to sciences and encourage students to revise the relevant areas.

The student role

Student materials

The materials for CBL will be available via a key link on the Year 3 portal within the LIC section. Each case consists of a guide for each part, with supporting medical documents and investigations, which will be released at intervals. The package incorporates case details, a framework to work through and references to guide learning.

Group allocation

Students will be placed in a CBL group by the Trust in which they undertake their LIC. They will receive details of the group from the local undergraduate office and will remain in this group throughout the LIC with allocated facilitator(s).

CBL sessions

There are two types of sessions – *independent* and *facilitated*. During all sessions, students are recommended to identify a group Chair and Deputy Chair to guide discussion and a Scribe to record ideas to be shared with the group. These roles are outlined below. They are encouraged to work together before, during and after the sessions.

Attendance

CBL is a mandatory part of the curriculum. Students should record attendance in the e-logbook via the Facilitator report.

Other differences from Years 1 and 2

- Each case consists of 2 parts and 4 sessions (2 independent and 2 facilitated).
- Sessions are shorter. Independent sessions are 1 hour. Facilitated sessions are 1.5 hours.
- The aim of cases in Year 3 is to encourage thought and integration of knowledge across traditional disciplinary boundaries. We want to encourage discussion on this, and so are asking students **not to make PowerPoint presentations**.
- Clinical reasoning is a key outcome i.e. students should develop ways to present why they reach their conclusions and explain their thought processes.
- The materials provided have gaps on purpose. Students should critique the assessments and consider what other information is required, and why.
- Sometimes students may come across topics or ideas which are new for the group. These are opportunities for self-directed learning and research as a group.

The first case

The first CBL case introduces students to the change in **process** of CBL from Years 1 and 2. Students have become very proficient at the CBL model, but Year 3 CBL will provide new challenges. The format of the first case differs from the rest to support the transition to Year 3 CBL, so all its sessions are facilitated. During the first meeting students should allocate roles and agree how to work together going forward.

Independent sessions at a glance

- 1 hour session
- Resources available on the Portal via a Key Link within the LIC section
- The local undergraduate office will provide details about the time and venue
- Appoint a Chair, deputy Chair and scribe (see below)
- Agree a meeting agenda
- Work through the materials and CBL process
- Identify areas to learn more about and agree as a group how to divide the workload, in preparation for the facilitated session. Links to learning activities and resources will be provided to help guide research.
- Students should ensure to divide up learning objectives such that each student investigates 2 or 3 L.O.s and each L.O. has at least 2 students assigned to it. There should be more learning objectives generated than there are students.
- You are not expected to have the same degree of “in-depth” knowledge of each topic as you might have pursued in Years 1 & 2.
- Agree how to approach the facilitated session.

Suggested independent lesson plan

Topic	Duration
Introduction. Confirm group roles, agenda and ground rules	5 minutes
Summarise patient journey from previous parts (if relevant)	5 minutes
Chair and Deputy Chair facilitate discussion on material. Work through framework. Write learning outcomes.	20 minutes
Identify areas requiring research and agree group approach.	20 minutes
Summarise main learning points and plan.	10 minutes

Facilitated sessions

- 1.5 hour session
- Students should appoint a Chair, deputy Chair and scribe (see below)
- Revisiting the narrative of the case, learning objectives should be discussed in the order in which they come up. This may involve sharing useful resources or describing thought processes, but should ***not*** involve presenting PowerPoint presentations as the format is different from CBL in Years 1 & 2.
- By having more than one student covering a single learning objective, discussion of the topics can take place, as opposed to students simply passively sitting through a number of PowerPoint presentations.
- The facilitator's role is to ensure most of the learning outcomes have been covered, and provide some feedback and insight on the students' research
- The facilitator may present new materials as the case develops in the facilitated session. This reflects real life as more information is gathered about the patient as their journey progresses. This provides the opportunity to consolidate research and apply new learning.

Suggested facilitated lesson plan

Topic	Duration
Introduction. Confirm group roles, agenda and ground rules.	10 minutes
Summarise patient journey from previous parts and main learning points.	5 minutes
Group discusses learning from independent session	30-40 minutes
Facilitator presents case development (if relevant). Chair and Deputy Chair facilitate discussion.	20 minutes
Question time. Summarise main learning points. Revisit learning outcomes.	10 minutes

Teamwork

CBL requires students to work closely with a group of peers throughout the LIC. In Years 1 and 2, students completed a formal group contract in CBL groups. In Year 3, students are asked to demonstrate how they have developed as a team member and take ownership of how their group is

going to work together effectively. This could include agreeing the use of a suitable communication channel to coordinate group activities.

The group should work together to manage both independent and facilitated sessions. During all sessions, students should identify a Chair and Deputy Chair to guide discussion and a Scribe to record ideas. They are asked to rotate these roles to develop different skills.

In Year 3, students will have access to real patients, as opposed to cases that have been "created" for them in CBL. Therefore, it's important to see the place of CBL. Feedback from students has focused on the importance of generating discussion to ensure that the CBL sessions are helpful, so we encourage students to be professional and engage in the sessions, taking an active role towards discussing the learning objectives, topics and surrounding themes that the cases generate.

It is also a good idea for students to decide how they would like to share their learning going forward, such as preparing summary notes, or writing multiple choice questions.

Roles in the team

CBL is intended to be directed by the group. Individual roles are designed to help students coordinate the sessions and get the most out of them, as well as develop leadership, chairing and management skills. The group should agree how to allocate roles and how to share the process of feeding back to each other and the facilitator.

Group Chair – Their role is to coordinate the group and ensure the framework is followed. This includes maintaining group focus and making sure all members contribute. This role is also important in managing group dynamics when differences of opinion arise.

Deputy Chair – Their role is to support the Chair and session practicalities, such agenda-setting and timekeeping.

Scribe – Their role is to note key points agreed by the group during the meeting, such as key areas to research and how the group intends to approach this. This role does not prevent other group members from making their own notes if they find this helpful.

Professionalism

Students are reminded of the professional standards expected of medical students. Attendance should be recorded in MyProgress, and students will ask for your email to sign this off: this will generate confirmation emails into your inbox that don't require any action unless you receive one from a student who was not present during the session.

Outcomes for Graduates (2018) states that they must work effectively and appropriately with others, act appropriately towards colleagues, take personal and professional responsibility for actions, manage time effectively, and demonstrate commitment to professional development and lifelong learning.

Students have been advised about managing problems as a team. They should ensure all perspectives are heard and identify a way of working towards a resolution together. The Chair and Deputy Chair can guide these discussions. It is not expected for these individuals to resolve issues, but for the group to work together to do so. If there are issues that students find difficult to resolve, or if they have serious concerns about the professionalism of another student during CBL sessions, they have been advised to discuss concerns with their facilitator or their local undergraduate office.

The facilitator role

The role of the facilitator is to ensure that students maintain focus, participate effectively, and explore the necessary learning outcomes. It is not expected to be a teaching session, but facilitators should guide students in the right direction. As well as developing content knowledge through CBL, students will develop essential skills in self-directed learning, teamwork, communication, and problem solving by working together as a group to share what they know and to tackle what they do not.

Acting as a facilitator involves the following:

- **Attend facilitator training** – Online training sessions incorporate general training on facilitation and case overviews.
- **Review facilitator handbook and packages** - Handbooks containing all relevant information to enable facilitators to support student discussions will be provided via a link to a Causeway Learning package.
- **Session delivery** – Facilitated sessions are 90 minutes long. There is one facilitated session for each part. These can be delivered flexibly according to local requirements. Each Trust / site will make their own decisions regarding timing and place of delivery.
- **Group allocation** – Facilitators will be allocated a group which is anticipated to consist of 10-12 students. This is coordinated by the local undergraduate office. It is recommended that the same facilitator supports the group throughout the case.
- **Role during sessions** - The facilitator's role is to ensure that students maintain focus, participate effectively, and explore the learning outcomes, promoting adult-learning. We

advise you to consider the One-Minute Preceptor Model (below) during the session. You should provide some feedback and insight into the student's learning but it's **not** expected to be a teaching session and subject expertise is not required. Students should develop essential skills in self-directed learning, teamwork, communication, problem-solving and clinical reasoning.

- **Learning outcomes** – the case guides include learning outcomes, which are areas that the students are expected to identify and explore. To help guide them, we have phrased these as questions which you should ask the students during the **facilitated** session. This is to encourage discussion around these themes and to get the students to consider them in more depth. We are advising facilitators to consider the One-Minute Preceptor Model (see below for details) to achieve this, but there is a balance required to ensure this is facilitation and not teaching. Rather than turning the facilitated session into a mini-lecture, we want you to ask probing questions to encourage students to explore/discuss the topics further.
- **Attendance** – CBL is a mandatory part of the curriculum. Students should ask for your email address to record confirmation of their attendance at facilitated sessions in MyProgress.
- **Outcomes** - We anticipate this to be a rewarding and enjoyable experience that allows facilitators to expand facilitation skills and influence the professional development of a group of medical students.

The One-Minute Preceptor Model

The One-Minute Preceptor Model is a brief teaching tool that was developed to enable teachers to quickly teach a general principle in a short period of time. We have chosen this for CBL as the cases cover a broad range of topics, and it is a useful way for facilitators to encourage input from students while providing feedback on what they have researched.

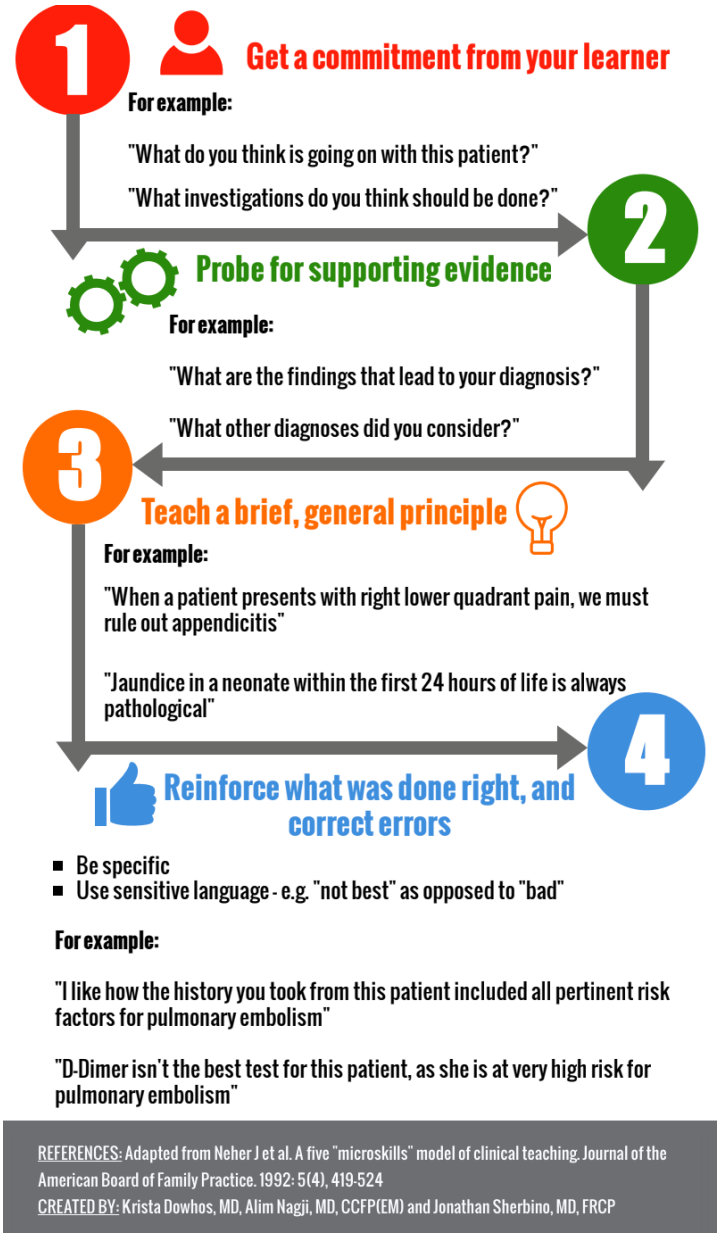
The student who is allocated to chair the session should go through the medical documentation of the case in the order it's presented, and students should mention their learning outcomes when they come up. If they do not mention them, feel free to prompt the group by asking the appropriate question from the learning outcomes, e.g "In this case, how would you interpret her laboratory tests and radiological images?" (taken from case 1). To ensure everyone participates, it might be worth asking the students who have looked into a particular learning outcome to identify themselves.

Student and facilitator feedback has highlighted that discussion is important in making the CBL sessions more useful. We have asked multiple students to cover each learning outcome, and so you should try to encourage input from multiple students by asking if anyone else has any additional

ideas. You should ask probing questions to explore the students' understanding, and as an opportunity to highlight or develop clinical reasoning.

While we're not expecting any facilitator to be an expert in all of the different themes that each case brings up, by nature of being healthcare professionals, facilitators will know more about some things than our Year 3 medical students. Therefore, to round out the learning objectives as they're discussed, we expect facilitators to give some brief feedback on what has been discussed. To reiterate from earlier, CBL is **not** about content delivery, but about integrating that knowledge. So we do not want facilitators to talk for a long time, rather to highlight any correct/incorrect areas and signpost students to where they could find more information.

The infographic below shows some of this framework if you would find that helpful.



Top tips

- Encourage students in their group work outside of the sessions and encourage them to find ways to discover answers to their questions.
- Use open questions to challenge ideas.
- It may be useful to summarise the discussion at points in the session or ask a student to provide a summary.
- *The first session: Introductions and icebreakers:* The first time you meet, consider an icebreaker to allow both you and the students to get to know each other and encourage interaction.
- *The first session: Student agreement:* Students should agree how they are going to work together regarding participation, cooperation, and communication. This can be helpful to refer at the start of each subsequent session, especially if any group problems arise.
- *Finishing well*: Leave time to summarise the session, review learning outcomes, answer questions and direct students to their next steps.

Common problems

There are some common challenges in small group work. We suggest some ideas to remedy potential problems:

- The dominant student – Thank the student for their contribution. Give them a role. Ask other students' opinions by name.
- The quiet student - Go around the group asking students by name. If all students are quiet, enquire about group understanding of the task.
- The disruptive student – Thank them for their contribution, explore reasons if appropriate. Invite the group to find a resolution. Refer to ground rules.

If you have concerns about a student's behaviour, attendance, or engagement, or if students approach you with issues encountered during sessions when you are not in attendance, please discuss with your local undergraduate teaching centre.

Evaluating progress and learning

We will be evaluating student progress in three ways:

1. Mandatory attendance: Students should ask facilitators for their email address to confirm attendance on MyProgress. This will generate confirmation emails into your inbox that don't require any action unless you receive one from a student who was not present during the session
2. Formative assessment: Students are formatively assessed by the facilitator as an integral part of the CBL process, in how they share their learning and interact with the group and the case. If facilitators have concerns about student engagement, they should contact their local undergraduate office.
3. Feedback: Students and facilitators will be asked to complete anonymous questionnaires, and there will be feedback meetings at the end of both LICs to discuss the cases with the Trusts. Feedback will be used to improve the cases going forward.

Important dates

LIC 1

Case 1: 9th September 2024 – 11th October 2024

Case 2: 21st October 2024 – 29th November 2024

LIC 2

Case 3: 24th February 2025 – 28th March 2025

Case 4: 5th May 2025 – 26th May 2025

Student timeline

Each case guide has a timeline, which 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 coordinated by each LIC site, but students should have the relevant session content available on the portal for each session.

Week 1 – Part 1 released on portal. Part 1 independent session.

Week 2 – Part 1 facilitated session.

Week 3 - Part 2 released on portal. Part 2 independent session.

Week 4 – Part 2 facilitated session.

Learning resources

The case guides for students and facilitators contain a list of resources relevant to the case.

Learning opportunities

The case guides list some learning opportunities from previous and current years which support the contents of the case, such as lectures, tutorials or previous CBL cases.

References

General Medical Council (2018, June). *Outcomes for Graduates.* https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/outcomes-for-graduates/outcomes-for-graduates

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