

# Strategies for Facilitating Case Based Learning



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MD Program  
UNIVERSITY OF TORONTO

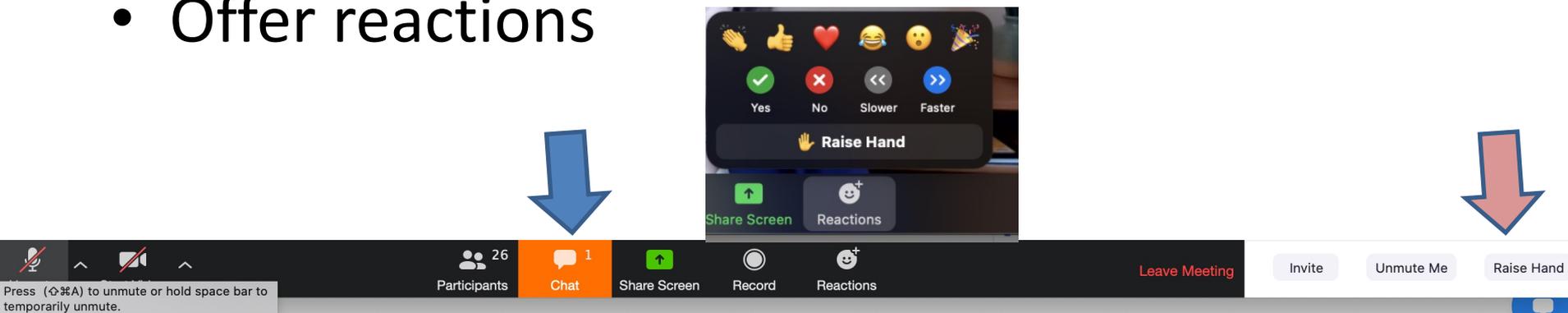
# Disclosures

We have nothing to disclose

There might be technical difficulties

# Zoom Features that Encourage Interactivity

- Mute your mic, but get ready to jump in
  - Press space bar to unmute temporarily
- Use the Chat Box
- Raise your hand
- Offer reactions



# Objectives

By the end of this webinar, you will be able to:

- Describe the CBL teaching paradigm
- Explain what your role is as a CBL tutor
- Explain what the student's role is in CBL
- Describe general strategies for engaging students in active learning including asking good questions

# Introductions with Ice Breaker



*Artwork by Katerina Mertikas*

# Poll

Have you ever facilitated a CBL?

- a) No, this is my first time
- b) Yes, but only online
- c) Yes, and in person pre-pandemic
- d) other

# Use the Chat!

What are you hoping to get out of this session?

# Our Old Classroom



*Artwork by Katerina Mertikas*

# The Flipped Classroom



*Artwork by Katerina Mertikas*

# The ZOOM Classroom

m Meeting ID: 570-057-336

Speaker View

Rob Goldberg

Stop Video

Invite

Participants 10

Share Screen

Chat

Record

Reactions

Leave Meeting

Zoom Group Chat

From [redacted] to Everyone:  
Confused: does the term "pituitary hyperfunction" imply overproduction of any pituitary hormone? It seems like it is generally used to relate to prolactin specifically, which would be the most common?

From [redacted] i to Everyone:  
in the end, if we have time: different between Toxic nodular goitre and toxic adenoma and how they present differently

From [redacted] to Everyone:  
Curious: workup in search for secondary OP - why we measure each thing (e.g. TSH, vitD, ALP)?

From [redacted] to Everyone:  
Confused: Pathophysiology underlying psychiatric overtones in hypercalcemia

From [redacted] to Everyone:  
Curious: Why does the word "incidentaloma" exist?

From [redacted] to Everyone:  
Curious: Switching patients to denosumab from bisphosphonate

From [redacted] to Everyone:  
Confused: technetium scan vs. radioactive iodine uptake. When to use which one.

From [redacted] to Everyone:  
Confused: Does adrenal insufficiency always lead to decrease in both cortisol and aldosterone?

To: Everyone

Type message here...

# The Hybrid Classroom



# Our New Classroom

All sessions in the Foundations curriculum will be in person, with just a few exceptions (i.e. large group CBL, ISAL, etc.)



# What is CBL?

- Involves the use of learning activities based on patient cases
- Basic, social, and clinical sciences are studied in relation to the case, are integrated with clinical presentations and conditions
- Learning is associated with real-life situations

# CBL vs PBL

## PBL

- Focuses on student-directed objective setting, with minimal tutor direction and pre-learning

## CBL

- Students given resources ahead of time to familiarize them with the terminology and content of the case
- Tutors play a more directive role than in PBL
  - assist in directing students to educational resources and provide more guidance in the tutorial

# CBL vs PBL

CBL provides students with a more structured and faculty directed approach to their future independent learning

For more about the role of CBL in the Foundations Curriculum and how to prepare for your sessions see:

[https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/cbl\\_tutor\\_primer\\_2018\\_-\\_revised\\_4march2021.pdf](https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/cbl_tutor_primer_2018_-_revised_4march2021.pdf)

# Engaging student in CBL – Do's and Don'ts

# Build Community

Introduce yourself and have students introduce themselves

- “Hi, I’m \_\_\_\_\_ and my pronouns are \_\_\_\_\_.”

Icebreakers

- Show and tell: Where were you when you got into med school?
- Two truths and a lie
- What do you do?

# Set Ground Rules

Students should be actively contributing to the group learning experience... listening and participating, and should not be using computers or phones for activities unrelated to CBL

Turn off notifications to minimize distractions

# Engaging Students

- Engage students early and often
- Call on individuals or groups
- Reward student for building on the points of others
- Be enthusiastic
- Ask good questions

# Model Clinical Decision Making

Guide the student discussion to help students achieve an appropriate level of understanding. If needed, share your approach to how you would think about the answer (i.e. how would you organize a differential diagnosis and arrive at a diagnosis).

Share real clinical examples.

# Encourage Active Learning and Productive Struggle

- Engage students in **guided discovery** and ask probing questions that encourage problem solving and **understanding**, instead of providing direct instruction
- Maximize **learning in the longer term** versus of performance in the shorter term

# Use Contextual Variation

Learners are exposed to the **same concept** in **different contexts**

Ask, “what if...

For practical strategies on how to use meaningful contextual variation, see:

<https://ofd.med.utoronto.ca/resources/using-meaningful-contextual-variation-enhance-understanding-and-promote-learning-transfer>

# Promote Cognitive Integration

Cognitive Integration involves looking at basic and clinical sciences in an integrated and causal way

Encourage students to make connections to the patient case, and guide them in understanding how basic science applies to clinical situations

For practical strategies on how to promote it, see:

<https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/CBL%20Cognitive%20Integration%20Questions%20-%20FINAL.pdf>

# Check for Understanding

Ask students for their rationale for their answers and challenge their reasoning to probe for understanding. Having the right answer to the questions does not mean they have a good understanding.

Identify and clarify any misconceptions, both from the verbal answers shared in the group session and the written responses you have reviewed.

Ask, “does everyone understand? Does everyone understand why?”

Don't - Ask impossible or “read my mind” questions

# Encourage Participation

Create a supportive and safe environment to allow everyone to feel comfortable participating. Validate student responses, gently correct misconceptions. Provide positive and supportive feedback (“Yes, AND...”)

DON'T – Shame, patronize or silence students

# Stick to the Program!

Do – Reassure students that you have covered all the material in the tutor guide. They should leave feeling prepared for their assessments and future clinical practice future.

Don't – Go rogue or allow students to go on tangents

# Have fun!

- Take a break
- Play music
- Take it outside with food
- Talk about your career, wellness, etc.



*Artwork by Katerina Mertikas*

How can we foster this structure,  
cognitive integration, and  
productive struggle in an in  
person CBL format?

# CBL General Structure

Teaching plan	Estimated time
Orientation and Setting the Stage	5-10 minutes
Summary of the Virtual Patient Case	5 minutes
Discussion of Assignment Questions	90 minutes
“What if” scenarios	20 minutes
Closing	5-10 minutes

# Where to find CBL and Course Materials?

The screenshot displays the UofT Elentra Faculty Dashboard. At the top, the navigation bar includes the UofT logo, the user's name 'Robert Goldberg', the current program 'MD Program - faculty', and a 'Logout' button. A 'Student Assistance' link is also visible. Below the navigation bar, the main menu features 'DASHBOARD' (highlighted), 'COURSES', 'CURRICULUM', and 'ADMIN'. The page content is titled '/ Faculty Dashboard' and includes a 'My Bookmarks' section with an 'Add Bookmark' button. A prominent yellow message box states 'UofT Elentra Message Center' and 'The Message Center is currently empty', with a 'Previously Read Messages' link. Under 'My Communities', there are links for 'Foundations Tutor' and 'Mississauga Academy of Medicine'. A 'Get Help!' button is located in the bottom right corner. The Windows taskbar at the bottom shows the date as 8/12/2022 and the time as 11:10 AM.

/ Courses / View Courses

### My Bookmarks

You can bookmark this page

Add Bookmark

### Display Style

- Learner View
- Director View

### My Communities

- Foundations Tutor
- Mississauga Academy of Medicine

## Course Listing

Course Quick Select:

-- Select a Course --

#### Year 1

- MED100H - Introduction to Medicine
- MED110Y - Concepts, Patients and Communities - 1
- MED120H - Concepts, Patients and Communities - 1
- MED130H - Concepts, Patients and Communities - 2

#### Year 2

- MED200H - Concepts, Patients and Communities - 3
- MED210H - Life Cycle
- MED220H - Complexity and Chronicity
- MED200H-A - Adapted Concepts, Patients and Communities 3

#### Year 3

- TTC310Y - Transition to Clerkship
- ANS310Y - Anesthesia
- DER310Y - Dermatology
- EMR310Y - Emergency Medicine

Academic Year 2022-23 - .

My Bookmarks  
You can bookmark this page  
Add Bookmark

- Course Navigation
- Home Page
  - Administration
    - Contacts
    - Urgent/Crisis
    - Policies & Expectations
    - Attendance / Reporting Absences
    - Assessment
    - Technology
    - Evaluation
  - Course Description
  - Course Materials
    - Course Videos
  - Integrated Clinical Experience
    - ICE: CAP 1
    - ICE: Clinical Skills 1
    - ICE: Health in Community 1
  - Health Science Research (HSR)
  - Portfolio
  - Announcements
  - Library Resources
  - Discussion Board
  - 2T5 Modules
  - Course Videos
  - Course Videos 3

# Concepts, Patients, and Communities - 1

## Home Page

Edit Page

### Welcome to CPC 1 2022-23!

The CPC1 Course Director, Robert Goldberg, will be available for office hours. Please click [HERE](#) to view the available dates and to book a meeting.

**Important: We're moving to a new video platform! The new platform requires your enrolment in order to access lecture recordings starting in January!**

Make sure you get enrolled before the course continues in January. Please click the following: [Course Videos](#). That's it! Clicking *Course Videos* = enrolment.

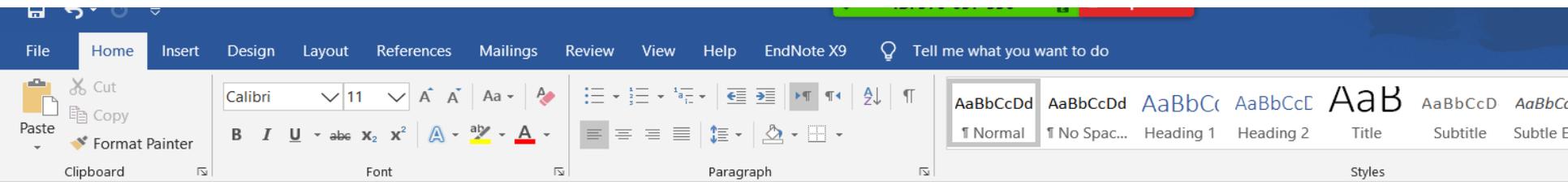
*Please do this soon to avoid delaying your access to the recordings in the new year.* Until January, the link will be empty; its purpose right now is to facilitate your enrolment to the new platform. After you enroll, you will be able (after the new year) to access the recordings from the Course Videos link or you can go to a Learning Event and access it from there.

#### Downloading Lecture Recordings

The new video delivery platform will allow you to download a file to view offline on any device (although some recordings may not be downloadable). The MD Program takes the intellectual property of its presenters very seriously, and this is a reminder that recordings and videos in Elentra are for the use of students in the Temerty Faculty of Medicine MD Program only and are never to be reproduced, shared with anyone, or reposted anywhere without the express written permission of the Temerty Faculty of Medicine MD Program.

# 1. Use a board!

- Whiteboard, google doc, google Jamboard, etc.
- Set the stage : encourage your students to use the board at the start of the session
  - Stratify questions: “Confident, Confused, Curious”
- Collate a selection of individual or group student responses and display to your group
- Collate a series of key slides from modules and lectures
  - Display and discuss to highlight key concepts!



**(Group) Q4. What are the two recommended tools for assessing 10-year fracture risk? How and why are they used?**

CAROC (Canadian Association of Radiologists and Osteoporosis)

- Uses femoral neck T score and age to classify as low, moderate, or high risk of fracture
- There are separate charts for men and women
- Cannot use this tool if an individual is under 50 or over 85
- The patient is moved to the next risk category if they have had a fragility fracture after the age of 40 or have a history of prolonged corticosteroid use
- If the patient has a T score of less than -2.5 at any site, the patient is automatically at moderate risk
- If the patient has experienced a prior hip or vertebral fragility fracture or more than 1 non-vertebral fragility fracture, they are automatically at high risk
- At low risk, pharmacologic therapy is not indicated
- At moderate risk, risks/benefits should be discussed with patient and consider other reasons to initiate therapy
- At high risk, the patient should be treated with pharmacologic therapy

FRAX (fracture risk assessment tool)

- Specific for Canada
- More accurate than CAROC, especially when individuals have 1+ risk factors for fracture
- The questionnaire includes: age, sex, weight, height, femoral neck T score

# Jamboard



Untitled Jam



Set background

Clear frame



# 3. Ask questions!

- Incorporate additional opportunities for interactivity every 5-15 minutes
- Why, what if?
- Assessment for learning (nonjudgemental)
- Be enthusiastic!

## 4. Debrief!

- Students are experiencing uncertainty and anxiety
- Acknowledge and identify how you can support them
- Offer another way for you to potentially connect with students if desired over the week

# 5. Create a safe space

- Ensure the content, photos and the language used are diverse, inclusive, and appropriate
- Ask a colleague to review your content ahead of time
- Refer to:
  - Queen’s University Style Guide: Equity, Diversity and Inclusion <https://healthsci.queensu.ca/academics/edi/style-guide>
  - CAMH Health Equity and Inclusion Framework for Education and Training <https://www.eenet.ca/resource/health-equity-and-inclusion-framework-education-and-training>
  - Misrepresenting Race — The Role of Medical Schools in Propagating Physician Bias  
NEJM <https://www.nejm.org/doi/full/10.1056/NEJMms2025768>

# Learner Environment

- We must create psychologically safe environments
- A psychologically safe environment is one where learners feel comfortable asking questions, taking risks, making mistakes, and asking for help. They feel respected, and that their efforts and skills are valued (Edmonson, 1999).
- A supportive and safe environment **MUST** be created to allow students to feel comfortable participating. Encourage critical thinking while validating student responses, gently correcting misconceptions, and avoiding shaming.

# Evaluations



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## Student Evaluation of Tutor Case-Based Learning (CBL) Tutoring Skills

The MD Program takes evaluation of teachers seriously and relies on student feedback to continually improve the curriculum. Providing honest, objective and constructive feedback is a key professional obligation of learners. Please use the following form to evaluate the tutoring skills of your teacher.

### Disclosing Mistreatment

*If you have experienced or witnessed student mistreatment or a major incident of unprofessionalism in the MD Program learning environment or the MD Program community, please use the following link to learn more about our supports and resources (including a confidential online tool designed to allow medical students at the University of Toronto to report such events): <https://md.utoronto.ca/student-mistreatment>*

What was the duration of your encounter with this teacher?

- I had no contact with this teacher
  1-3 sessions
  4-7 sessions
  8 or more sessions

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
The tutor supported us in exploring basic science concepts	<input type="radio"/>					
The tutor supported us in exploring psychosocial concepts	<input type="radio"/>					
The tutor supported us in making connections between basic science and clinical concepts	<input type="radio"/>					
The tutor supported our understanding and reasoning process	<input type="radio"/>					
The tutor supported a safe and inclusive learning environment (e.g., non-threatening, supportive, encouraging)	<input type="radio"/>					

Unsatisfactory   Poor   Adequate   Good   Excellent   N/A

My overall assessment of this tutor is:

Please use this additional space to clarify or to make further comments (especially if you have selected a rating of Strongly Disagree/Unsatisfactory or Disagree/Poor for any of the above criteria):

# Sharing Strategies, Successes, and Challenges

## Adventures in Teaching!

- Responding to an Incorrect Answer and Maintaining a Safe Learning Space
- Silence – Learners are Hesitant to Engage

[https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/adventures\\_in\\_teaching\\_virtual\\_teaching.pdf](https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/adventures_in_teaching_virtual_teaching.pdf)

- Tips for Creating and Maintaining an Inclusive Synchronous Online Learning Environment:

[https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/inclusive\\_virtual\\_learning\\_environment.pdf](https://ofd.med.utoronto.ca/sites/default/files/assets/ofd-resource/document/inclusive_virtual_learning_environment.pdf)

# Let's Jam!

Share your strategies, successes, and challenges using our Jamboard:

<https://jamboard.google.com/d/15GuSqCL8ohh2II5D-onEkK8zEh13W8mRS9xzd9MtuBU/edit?usp=sharing>

# Resources

MD Program Office of Faculty Development

- <https://ofd.med.utoronto.ca/>

CFD Virtual Teaching & Learning

- <https://cfid.utoronto.ca/virtualteachinglearning>

Harvard Business Publishing Education – Moving Your Classroom Online

- <https://hbsp.harvard.edu/teaching-online-resources/>

MedEd PORTAL – Virtual Learning Resources

- <https://www.mededportal.org/collection/virtual/>

PIVOT MedEd - Faculty Resources

- <https://sites.google.com/view/pivotmeded/home>

Schiano, Bill and Espen Anderson. “Teaching with Cases Online.” Harvard Business Publishing. May 25, 2017.

- [https://s3.amazonaws.com/he-product-images/docs/Article Teaching With Cases Online.pdf](https://s3.amazonaws.com/he-product-images/docs/Article_Teaching_With_Cases_Online.pdf)

# Questions?

E-mail us

[susanna.talarico@sickkids.ca](mailto:susanna.talarico@sickkids.ca)

[robert.goldberg@utoronto.ca](mailto:robert.goldberg@utoronto.ca)

Thank you!