

# From the Flipped Classroom to Zoom: Tips for Facilitating Case Based Learning Online



Robert Goldberg MD MScCH FRCPC

Reena Killian MD CCFP

Susanna Talarico BEd MD FRCPC MScCH



MD Program

UNIVERSITY OF TORONTO

# Disclosures

We have nothing to disclose

... except that this is still new for all us.

If we can do it, you can do it!

# Expectations

- Mute your mic, but get ready to jump in
- This session will be recorded
- There might be technological difficulties

# Objectives

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

1. Describe general strategies for teaching online
2. Describe tips for engaging student online, including asking good questions
3. Share strategies, successes and challenges around facilitating CBL online

# Outline

1. Introductions
2. Tips for teaching online
3. How to engages students and ask good questions
4. Share strategies, successes and challenges

# Introductions with Ice Breaker



*Artwork by Katerina Mertikas*

# Poll

Have you facilitated a CBL session in the past, and if so, have you facilitated online?

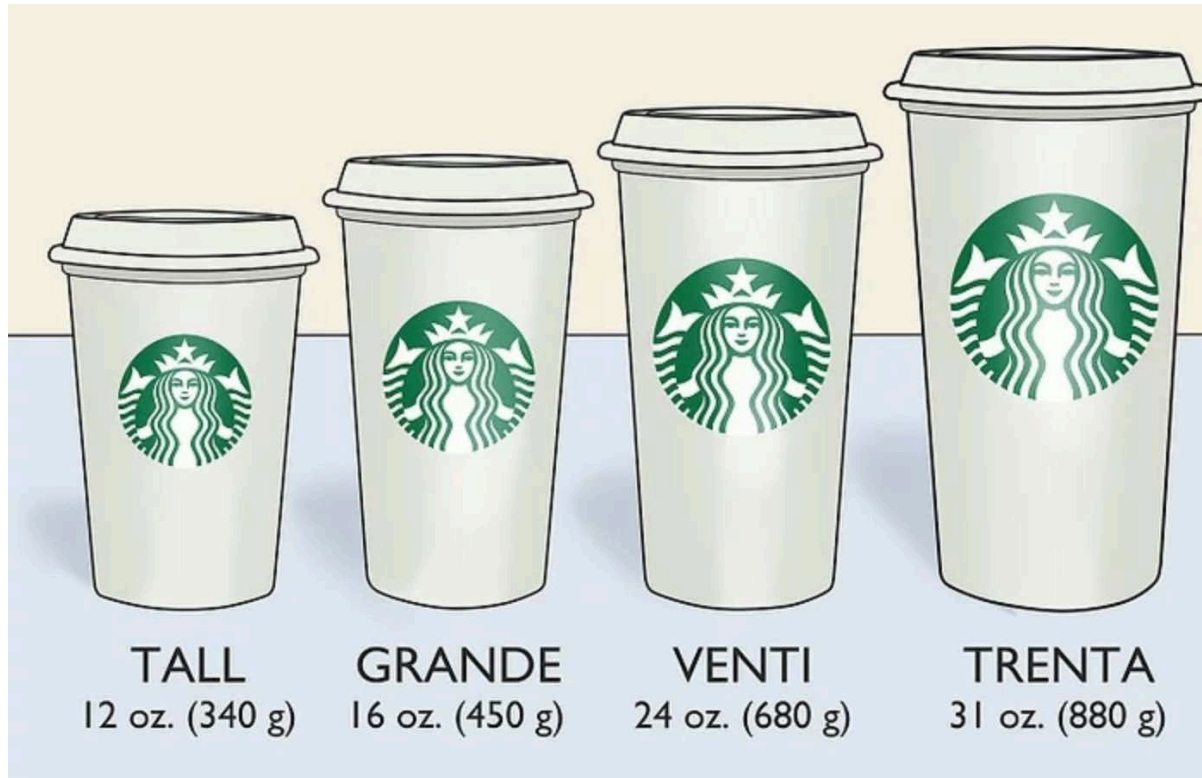
- a) No, this is my first time
- b) Yes, for the last 1-5 years, but never online
- c) Yes, for the last 6-10 years, but never online
- d) Yes, for the last 1-5 years, and online last spring
- e) Yes, for the last 6-10 years, and online last spring
- f) other

# Use the Chat!

What are you hoping to get out of this session?



# Annotate!



How are you feeling about teaching online?

# Our Old Classroom



*Artwork by Katerina Mertikas*

# The Flipped Classroom



*Artwork by Katerina Mertikas*

# Our NEW Classroom



*Artwork by Katerina Mertikas*

# Teaching Online

## Asynchronous Time

- Use this time for watching recorded lectures, reading a case, playing simulations, responding to questions

## Synchronous Time

- Use the time together to engage as a group and with the material

# **Possibility #1: Pandemic measures allowing remote and in-person delivery**

## **Virtual Curriculum with limited in-person experience**

- zoom-based live lecture broadcast from STG or MAM
- lecturer will need to manage polling and Q&A using a separate laptop
- offers some in-person learning and ability to speak to lecturers after
- limited capacity (50-65 at STG, 15 at MAM) for students to sign up
- students attending in person or remotely will use Zoom features to interact and must mute their microphones and speakers
- webinars will be recorded and posted on Elentra with closed captioning

# **Possibility #2: Pandemic measures allowing remote delivery only**

## **Contingency if university closed or access to clinical sites restricted**

- zoom-based lecture broadcast utilizing poll and Q&A
- lecturer will broadcast from remote location
- webinars will be recorded and posted on Elentra with closed captioning

# How does CBL fit into this?

- The Foundations Curriculum will continue to have the same number of academy-based small group tutorials. These include Portfolio, Health Science Research tutorials, Case-Based Learning (CBL), Clinical Skills sessions, Health in Community tutorials and workshops.
- Between September and December, small group sessions will be delivered via Zoom with your academy tutors. We will assess the hospital capacity and public health guidelines towards the end of the year to determine if these sessions can resume at the academies for the 2021 winter term.



# Planning and using “the board”

- Shared screen with slides or live typing
- What is it going to look like?
- Ensure you are able to share your screen ahead of time
  - change privacy settings to allow for screen recording

# Setting up your environment

- Check microphone and camera are working
- Set the camera so you are looking into it
- Reduce noise
  - turn off notifications
- make sure you have light from the front toward your face
- consider your background
  - make it neutral

# Teaching Online

- set clear expectations
- build community
  - Introduce yourself and have students introduce themselves
  - Show and tell: describe an object and why it's important to you
  - Two truths and a lie

# Engaging Students

- engage students early and often
- ask good questions
- call on individuals or groups
- reward student for building on the points of others
- be enthusiastic

# Asking Questions

- make it clear
- evoke emotions
- put students in a role
- polarize
- ask follow up questions
- mix it up
- set bounds for questions and discussions

# Using a Case

- Plan ahead: think about questions you would ask to introduce or motivate discussions
- Debrief
  - have students summarize (both the case and learning points)
  - provide a summary yourself
  - leave them with a question instead

# Any other general tips?

Close your eyes and think....

about a moment when your students were most engaged.



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



# 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

# 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

# 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 Productive Struggle

Ask probing questions to encourage critical thinking instead of providing direct instruction in a didactic manner

# 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

# 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

# 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!

- Stretch
- Dance
- Play music
- Talk about wellness



*Artwork by Katerina Mertikas*



How can we foster this structure,  
cognitive integration, and  
productive struggle in a  
“Zoom” CBL format?

# 1. Use the chatbox function!

- Encourage your students to use this at the start of the session!
- Prior to CBL session, ask your students to display questions in the chatbox!
  - Stratify: “Confident, Confused, Curious”
- Set the stage: encourage students to use the chatbox to ask additional questions, use “raise hand” function, and highlight any technical difficulties

# Using the chatbox function

Zoom Meeting ID: 570-057-336

The screenshot displays a Zoom meeting interface with a chatbox on the right side. The chatbox is titled "Zoom Group Chat" and contains several messages. The messages are:

- From Me to Everyone: CONFIDENT: Regulation of calcium by PTH
- CONFIDENT: Using FRAX to estimate 10-year osteoporosis risk
- CONFUSED: When to use bisphosphonates versus RANKL inhibitors for the treatment of osteoporosis
- CONFUSED: How to correct calcium level for albumin
- CURIOUS: What is the mechanism behind atypical femoral fractures?

The chatbox also shows a "To: Everyone" dropdown menu and a "Type message here..." input field. The meeting controls bar at the bottom includes icons for Mute, Stop Video, Invite, Participants, Share Screen, Chat, Record, and Reactions. The Chat icon is highlighted with a red arrow labeled "1". The Chat icon in the meeting controls bar is highlighted with a red arrow labeled "2". The Chat icon in the meeting controls bar is highlighted with a red arrow labeled "3".

Rob Goldberg

Mute Stop Video Invite Participants Share Screen Chat Record Reactions Leave Meeting

Type here to search



ENG 12:58 PM 4/5/2020

# Using the chatbox function

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.

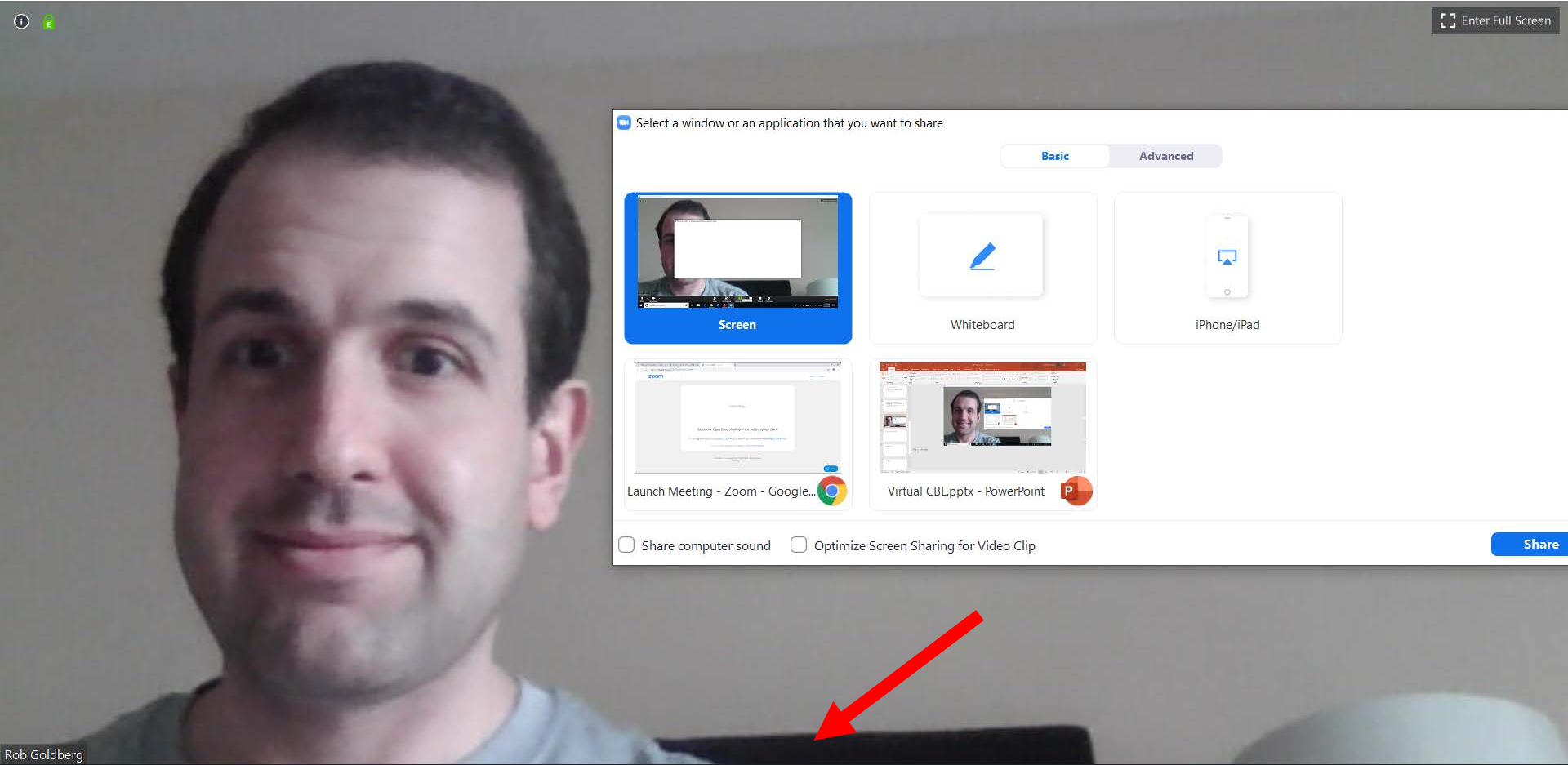
From [redacted] to Everyone:  
Confused: Does adrenal insufficiency always lead to decrease in both cortisol and aldosterone?

To: Everyone

Type message here...

## 2. Using the screen sharing function

- 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!
- Draw on the whiteboard
- Use the Annotate function



Clipboard Font Paragraph Styles

Calibri 11 A A Aa A

B I U abc x<sub>2</sub> x<sup>2</sup> A ab A

AaBbCcDd AaBbCcDd AaBbCc AaBbCc AaB AaBbCcD AaBbCcDd AaBbCcDd AaBbCcDd AaBbCcDd

Normal No Spac... Heading 1 Heading 2 Title Subtitle Subtle Em... Emphasis Intense E...

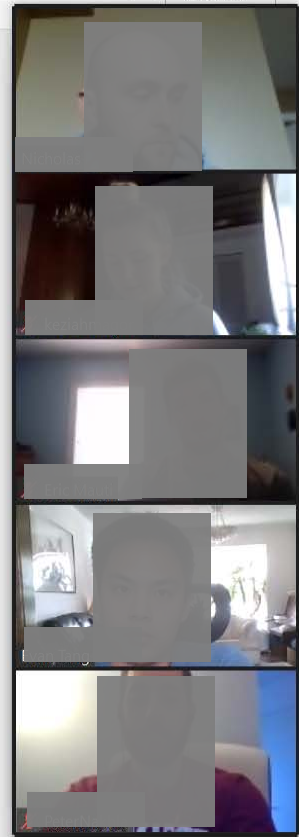
**(Group) Q4. What are the two recommended tools for assessing 10-year fracture risk? How and why are they used?**

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



# 3. Ask questions!

- Incorporate additional opportunities for interactivity every 5-15 minutes
- Be enthusiastic!



## 4. Debrief!

- Students are experiencing uncertainty and anxiety around the online learning environment
- Acknowledge and identify how you can support them
- The links for the zoom sessions remain active throughout the week and offer another way for you to potentially connect with students if desired

# CBL General Structure: “BEFORE”

| 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   |

# CBL General Structure: “AFTER”

| Teaching plan   | Estimated time |
|---|----------------|
| Orientation, setting the stage, re-introduction to features in Zoom that students may be encouraged to use (chatbox, “raising their hand”, participation) | 5-10 minutes   |
| Summary of the Virtual Patient Case   | 5 minutes      |
| Discussion of Assignment Questions using screen mirroring to display student answers and highlight key concepts   | 90 minutes     |
| What if scenarios   | 20 minutes     |
| Debrief   | 5-10 minutes   |

# Challenges and Successes

- What strategies and technologies have you used in CBL (both in person and online)?
- What works and what doesn't?
  - Use chat function, and label:
    - what works
    - What doesn't
  - raise your hand



the iSpot / Ken Orvidas

**TEACHER WELLNESS**

## **Teaching Through a Pandemic: A Mindset for This Moment**

<https://www.edutopia.org/article/teaching-through-pandemic-mindset-moment>

# Mindset

- Expect trial...and plenty of error
- Acknowledge the extraordinary
- Reduce the workload (for yourself and your students)
- No person is an island
- Everyone thinks they can't – before they can
- Mind the gap

<https://www.edutopia.org/article/teaching-through-pandemic-mindset-moment>

# 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.

# Resources

## CFD Virtual Teaching & Learning

- <https://cfd.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?

(Ask your Generation Z kids,  
nieces and nephews)

Or e-mail us

[susanna.talarico@sickkids.ca](mailto:susanna.talarico@sickkids.ca)  
[robert.goldberg@utoronto.ca](mailto:robert.goldberg@utoronto.ca)  
[reena.kilian@uhn.ca](mailto:reena.kilian@uhn.ca)

Thank you!