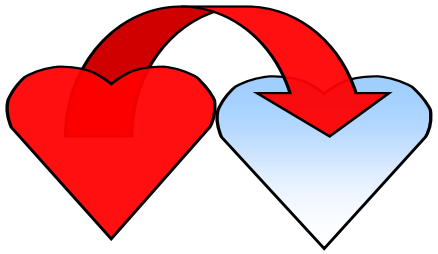
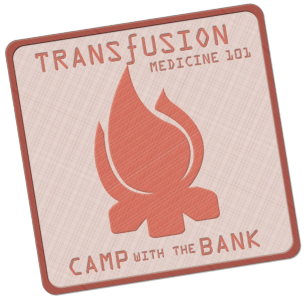
Rwanda Biomedical Centre

Healthy People, Wealthy Nation

CENTRE HOSPITALIER UNIVERSITAIRE DE KIGALI

Quality Health Care Training & Research





ISBT

Canadian Blood Services

BLOOD
PLASMA
STEM CELLS
ORGANS
& TISSUES

Team-based learning education – The flipped classroom

Dr. Terri Skelton

Department of Pediatric Anesthesia, BC Children's Hospital, Vancouver, Canada

Rwanda Biomedical Centre

Healthy People, Wealthy Nation

This event is supported by RBC/Blood Transfusion Division

https://rbc.gov.rw/index.php?id=676


ISBT
International Society
of Blood Transfusion
This event is supported
by the ISBT Academy
www.isbtweb.org

Objectives

- To contrast traditional seminars versus team-based learning
- To examine the validity of the flipped classroom and team-based learning
- To practice team-based learning questions in preparation for Transfusion Camp seminars

Traditional Seminar

70 M is admitted to the ICU with respiratory failure due to pneumococcal pneumonia.

His past medical history is significant for DM Type 2, HTN, and coronary artery disease. He is on antibiotics and hemodynamically stable. He is intubated and ventilated (PS10, PEEP 8, FiO2 0.5, oxygen saturation 94%).

There is no evidence of bleeding or hemolysis, however, over the last few days, his hemoglobin has drifted down to 70 g/L.

Does this patient require a transfusion?

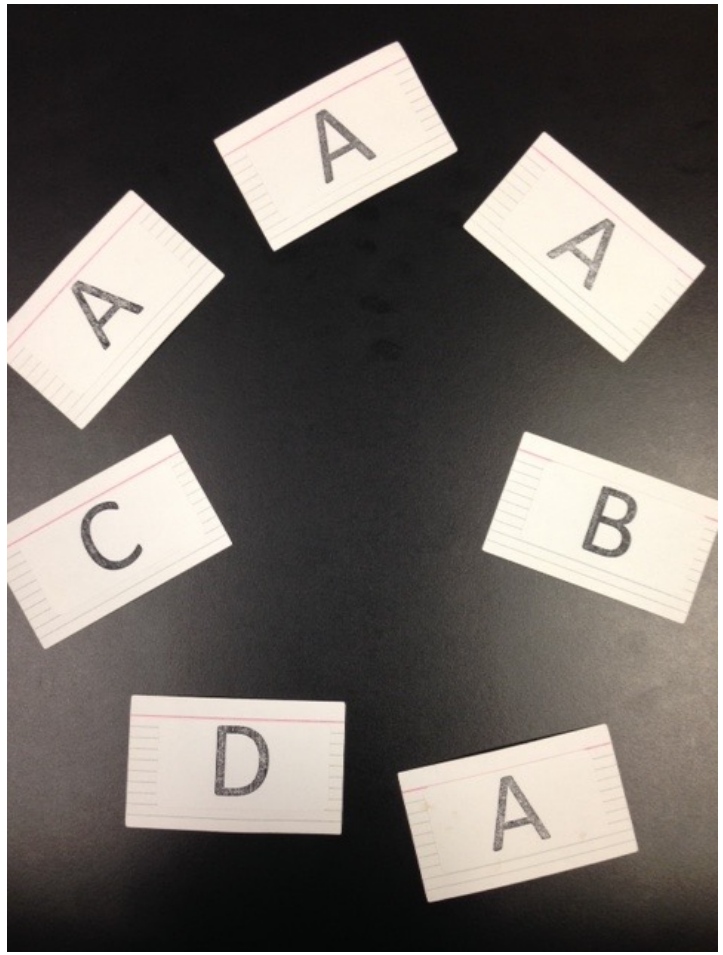
Team-Based Learning Seminar

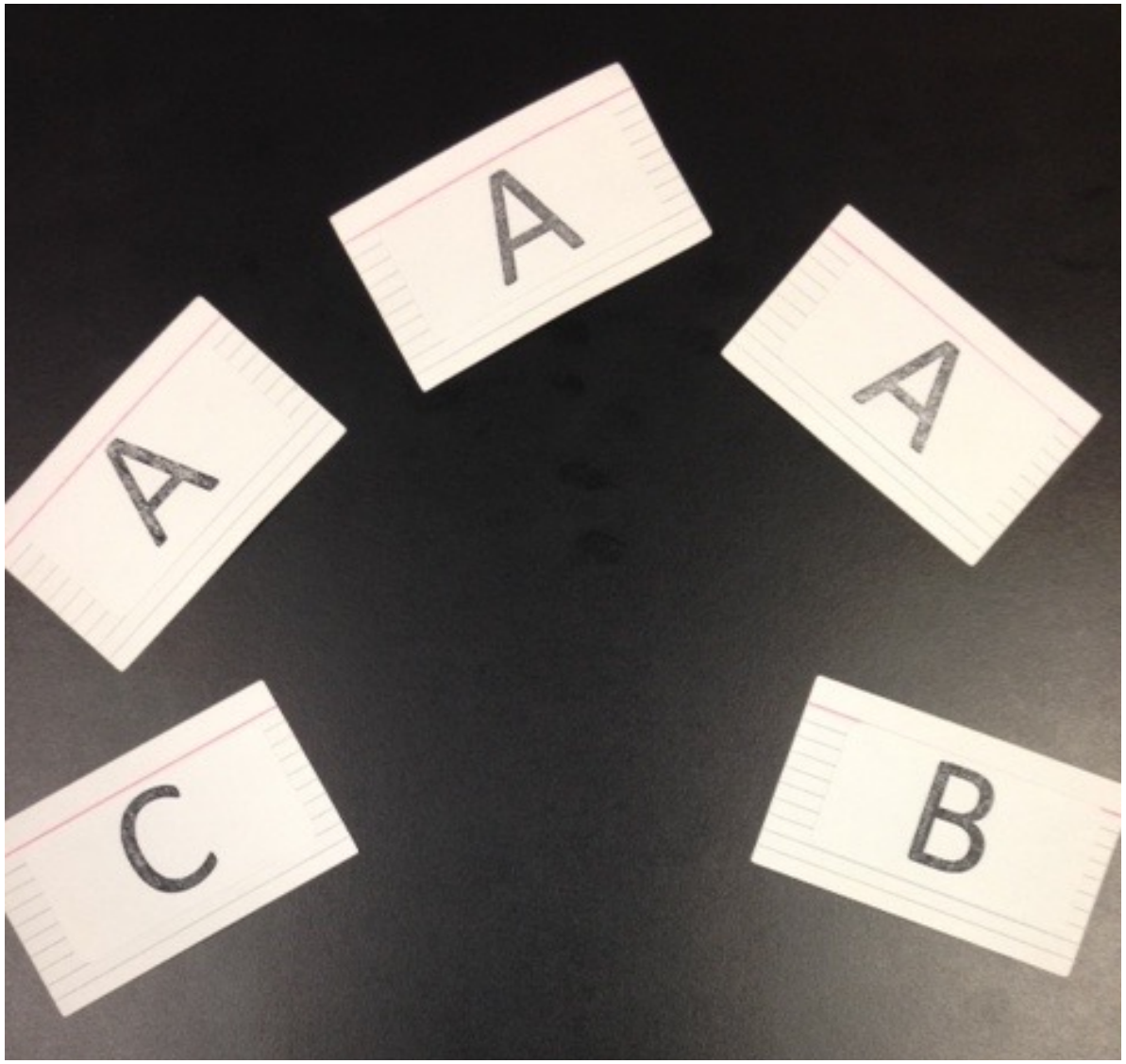
70 year old male admitted to the ICU with respiratory failure due to pneumococcal pneumonia…

Which of the following represents the most appropriate RBC transfusion strategy for this patient?

A. Transfuse RBCs if Hgb <100 g/L
B. Transfuse RBCs if Hgb <90 g/L
C. Transfuse RBCs if Hgb <80 g/L
D. Transfuse RBCs if Hgb <70 g/L

Modified Team-Based Learning





Modified Team-Based Learning

Why did you answer A?

Why did you answer B?

…

Facilitator provides “answer” and why other options are less optimal

Why?

1

TBL is a collection of practices that support one another for powerful instructional effect. This chapter describes the building blocks of team-based learning and the steps necessary to put them into place.

The Essential Elements of Team-Based Learning

Larry K. Michaelsen, Michael Sweet

New Directions for Teaching and Learning, no. 116, Winter 2008
Published online in Wiley InterScience (www.interscience.wiley.com) • DOI: 10.1002/tl.330

Team-based learning

Goes beyond simply covering content

Focuses on ensuring that students have the opportunity to practice using course concepts to solve problems

It is designed to provide students with both conceptual and procedural knowledge

Groups: Groups must be properly formed and managed.

Accountability: Students must be accountable for the quality of their individual and group work.

Feedback: Students must receive frequent and timely feedback.

Assignment design: Group assignments must promote both learning and team development

When these four elements are implemented in a course, the stage is set for student groups to evolve into cohesive learning teams

The flipped classroom

Education and Information Technologies
https://doi.org/10.1007/s10639-022-11339-3

Check for updates

Flipped classroom with teams-based learning in emergency higher education: methodology and results

Konstantinos Antonis[1] · Petros Lampsas[2] · Ioannis Katsenos[3] · Spyros Papadakis[4] · Stella-Maria Stamouli[5]

Received: 30 April 2022 / Accepted: 5 September 2022

Students undertake a more active role in the learning process

Teachers are mainly facilitators of the learning process and are available for students' requests

International Journal of Teaching and Learning in Higher Education
http://www.isetl.org/ijtlhe/

2017, Volume 29, Number 1, 177-185
ISSN 1812-9129

Putting Structure to Flipped Classrooms Using Team-Based Learning

Krisztina V. Jakobsen and
Megan Knetemann
James Madison University

What does it do?
Does it increase knowledge?

Benefits of team-based learning

Students may believe they have learned more; knowledge assessment scores may be better or equivalent

Stronger social ties between students

Students show a deeper understanding of materials

Increased perceived value of what they have learned

Students show more attention span capacity

Which embarrassing thing are you most likely to do?

A. Trip in front of a crowd
B. Text the wrong person
C. Call someone the wrong name
D. Wardrobe malfunction

If you could have one of these superpowers, which one would you choose?

A. 👀Be invisible whenever you want

B. 💪Superhuman Strength

C. 🐶Talk to animals

D. 🦅Be able to fly

Example seminar question

A 37 year old G3P2 is post-vaginal delivery of an uncomplicated pregnancy. Her hemoglobin was 102 g/L and her MCV was 74 pre-delivery.

The nurse pages you because her HR has increased to 120 from 85 bpm, SBP dropped from 110 to 85 mmHg, and she has just passed a huge amount of blood per vagina approximately 1-hour post-partum.

The patient is disoriented and is difficult to rouse.

Example seminar question

Which of the following statements regarding the management of post-partum hemorrhage is true?

A. Fibrinogen concentrates increase the risk of thromboembolic complications compared to cryoprecipitate

B. Once it occurs, initiation of rapid transfusion support is more important than attempting source control

C. The main risk of using recombinant factor VIIa is thromboembolic events

D. Tranexamic acid is still of benefit when given more than three hours after onset of bleeding

Example seminar question

Which of the following statements regarding the management of post-partum hemorrhage is true?

A. Fibrinogen concentrates increase the risk of thromboembolic complications compared to cryoprecipitate

B. Once it occurs, initiation of rapid transfusion support is more important than attempting source control

C. **The main risk of using recombinant factor VIIa is thromboembolic events**

D. Tranexamic acid is still of benefit when given more than three hours after onset of bleeding

Example seminar question

What secondary complications should you watch for in a massively transfused patient?

A. Hypercalcemia

B. Hypokalemia

C. Hypothermia

D. Hyponatremia

Example seminar question

What secondary complications should you watch for in a massively transfused patient?

A. Hypercalcemia

B. Hypokalemia

C. Hypothermia

D. Hyponatremia

1200 - 1330 *Lunch*		
1330 - 1500	**Seminar I** *Triggers for RBC and platelet transfusions*	
1500 – 1530 *Break*		

1030 - 1200	**Seminar II** Plasma, fibrinogen and prothrombin complex concentrates	**Blood Requisition, Pre-transfusion Testing, Blood administration (checking)** *Nursing workshop*
1200 - 1330 *Lunch*		

1430 – 1500 *Break*		
1500 - 1630	**Seminar III - Sickle Cell Disease and Transfusion**	**Management of transfusion reactions** *Nursing workshop*

Rwanda Biomedical Centre

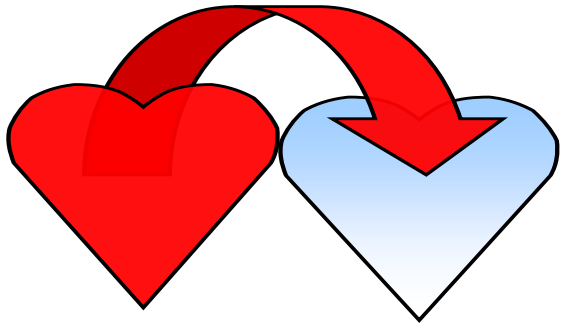
Healthy People, Wealthy Nation

ISBT

C.H.U.

Quality Health Care Training & Research

CENTRE HOSPITALIER UNIVERSITAIRE DE KIGALI



UNIVERSITY of RWANDA

UR

Canadian Blood Services

BLOOD
PLASMA
STEM CELLS
ORGANS
& TISSUES