



University of Toronto Transfusion Camp

2020-2021

Participating universities

British Columbia: University of British Columbia

Alberta: University of Alberta

Saskatchewan: University of Saskatchewan

Ontario: University of Toronto, University of Ottawa, McMaster University, Queen's University, Northern Ontario School of Medicine, Western University

Québec: McGill University, Université Laval, Université de Sherbrooke

Nova Scotia: Dalhousie University
International: Oxford University

UNIVERSITY OF TORONTO TRANSFUSION CAMP 2020-2021 CURRICULUM

Upon completion of this course, the attendees will be able to:

INDICATIONS FOR BLOOD PRODUCTS

1. Appropriately prescribe components (RBC, plasma, platelets, and cryoprecipitate)
2. Perform a preoperative bleeding history
3. Interpret coagulation testing results
4. Have a reasonable approach to the correction of coagulation prior to procedures

BLOOD BANK TESTING

5. Summarize basics about blood bank tests and pre-transfusion compatibility testing
6. Explain the implications of a positive antibody screen
7. Know when to screen patients for platelet alloimmunization

RISKS OF TRANSFUSION

8. Obtain informed consent for transfusion
9. Prevent, diagnose, manage and report acute and delayed transfusion reactions
10. State the current risks of transfusion-transmitted infections
11. Describe challenges to transfusion safety (getting the right blood to the right patient)

INDICATIONS FOR MANUFACTURED BLOOD PRODUCTS

12. Appropriately prescribe fractionated blood products (albumin, coagulation factor concentrates)
13. State when and how Rh immunoglobulin is administered in pregnancy

SPECIAL TRANSFUSION SITUATIONS

14. Know when to order irradiated blood products
15. Develop an approach to patients with congenital or acquired bleeding disorders (including reversal of common anticoagulants)
16. Safely transfuse a patient with sickle cell disease
17. Manage a massively hemorrhaging patient, including surgical, trauma and obstetric patients, with discussion of hemostatic medications (antifibrinolytics)

BLOOD CONSERVATION

18. Have a standard approach to the management of pre-operative anemia
19. Apply patient blood management strategies, including for patients who refuse blood on religious grounds

TARGET AUDIENCE

Trainees from participating universities and registered in non-hematology specialty adult or pediatric programs including pediatric or adult programs in Anesthesia, Critical Care Medicine, Oncology, Obstetrics, Pathology, Clinical Pathology, General Internal Medicine, General Surgery, Trauma, and Emergency Medicine. Hematology and Hematopathology residents are also welcome to attend.

Depending on location, there may be a maximum number of local attendees allowed.

ATTENDEE EXPECTATIONS

PARTICIPATION

1. Attend all sessions
2. Actively participate during lectures
3. Actively participate in team-based learning seminars
4. Refrain from excessive use of interruption devices (mobile phones)
5. Arrange not to be on call the night before
6. Complete evaluations

COST

Free for Canadian University trainees at the PGY1 level or greater

REGISTRATION

1. Register by contacting your program director.
2. Trainees must have their program director's approval to participate.
3. In addition to access to the course and course portal, registration also provides appropriate refreshments at breaks, depending on location.

COURSE INFORMATION

FORMAT

- Content is delivered over 5 days (see schedule below) from July to June
- Each day includes lectures and team-based learning seminars.
- Trainees attend lectures in groups either “live” (in Toronto) or “live” remotely (via webcast) or “post-live” (recorded lectures). During the COVID-19 pandemic, adjustments will be made to deliver sessions virtually.
- Trainees attend team-based learning seminars in groups at their local sites. During COVID-19 pandemic, adjustments will be made to deliver seminars virtually.

LOCATIONS

- The course lectures are presented, webcast and recorded.
- Locations for trainees to attend the course vary depending on university program, please enquire with your program administrator.

MATERIAL & CERTIFICATION

Attendees will be provided with:

1. Access to a common course portal for reading materials, PDFs and recorded presentations, case studies and a discussion board
2. Exam review session
3. Depending on the university program, a Certificate of Completion of Transfusion Medicine Camp with attendance, and pre-test and post-test scores. To obtain a certificate, trainees must attend 3 of 5 days and complete the post-test exam.

COURSE SCHEDULE FOR SITES ATTENDING “LIVE” 2020-2021 CURRICULUM

DAY 1> BLOOD COMPONENT INDICATIONS & ADMINISTRATION – July 24, 2020

Start time

8:30	Dr. Yulia Lin	Pre-Course Exam (30 minutes)
9:00	Dr. Jeannie Callum	Red Cell Transfusion (45 minutes)
9:45	Dr. Katerina Pavenski	Platelet Transfusion (45 minutes)
10:30		Break (15 minutes)
10:45	Dr. Yulia Lin	Basic Blood Bank Testing (30 minutes)
11:15	Dr. Katerina Pavenski	Seminar 1A: RBC & Platelet Transfusion Cases (75 minutes)
12:30		Lunch (45 minutes)
13:15	Dr. Wendy Lau	Neonatal & Pediatric Transfusion (30 minutes)
13:45	Dr. Jeannie Callum	Plasma, PCC & Fibrinogen replacement (60 minutes)
14:45		Break (15 minutes)
15:00	Dr. Jeannie Callum	Seminar 1B: Plasma, PCC & Fibrinogen Cases (75 minutes)

DAY 2> COMPLICATIONS: COMPATIBILITY, ACUTE & LONG TERM TRANSFUSION RISKS & ERRORS – August 28, 2020

Start time

9:00	Dr. Katerina Pavenski	Informed Consent (30 minutes)
9:30	Dr. Steven Drews	Acute & Delayed Transfusion Transmitted Infections (30 minutes)
10:00		Break (15 minutes)
10:15	Dr. Cserti-Gazdewich	Acute Non-Infectious Reactions (45 minutes)
11:00	Dr. Cserti-Gazdewich	Seminar 2A: Labile Component Reactions (90 minutes)
12:30*		Lunch (non-Québec sites) (60 minutes)
	Dr. Nancy Robitaille	Virtual Héma-Québec tour (Québec sites) (30 minutes)
13:00*		Lunch (Québec sites) (60 minutes)
13:30*	Dr. Michelle Zeller	Virtual Canadian Blood Services Tour (non-Québec sites) (30 min)
14:00	Dr. Michelle Zeller	Delayed Non-Infectious Reactions (30 minutes)
14:30		Break (15 minutes)
14:45	Dr. Jacob Pendergrast	Seminar 2B: “Delayed or Derivative” Transfusion Reactions (90 minutes)

*Non-Québec sites: 12:30-13:30 Lunch and 13:30-14:00 Virtual Canadian Blood Services Tour

*Québec sites: 12:30-13:00 Virtual Héma-Québec tour and 13:00-14:00 Lunch

All lectures are recorded and shared on the portal.

DAY 3> SPECIAL TRANSFUSION SITUATIONS – MATERNAL, PERIOPERATIVE BLEEDING ASSESSMENT, SICKLE CELL DISEASE – January 22, 2021
Start time

9:00	Dr. Nadine Shehata	Alloimmunization & Anemia in Pregnancy (30 minutes)
9:30	Dr. Zachary Liederman	Bleeding Assessment & Approach to INR/PTT (45 minutes)
10:15		Break (15 minutes)
10:30	Dr. Zachary Liederman	Seminar 3A: Perioperative Bleeding Assessment (90 minutes)
12:00		Lunch (60 minutes)
13:00	Dr. Jacob Pendergrast	Sickle Cell Disease (60 minutes)
14:00		Break (15 minutes)
14:15	Dr. Jacob Pendergrast	Seminar 3B: SCD & Transfusion (105 minutes)

DAY 4> PATIENT BLOOD MANAGEMENT, CONSERVATION AND COMPLEX HEMOSTASIS – March 26, 2021
Start time

9:00	Dr. Yulia Lin	Pre-operative Patient Blood Management (45 minutes)
9:45	Dr. Keyvan Karkouti	Intra-op Patient Blood Management: Tranexamic Acid; Salvage and Triggers (45 minutes)
10:30		Break (15 minutes)
10:45	Dr. Yulia Lin	Seminar 4A: Patient Blood Management (90 minutes)
12:15		Lunch (45 minutes)
13:00	Dr. Michelle Sholzberg	Congenital Coag – VWD, Hemophilia (35 minutes)
13:35	Dr. Rita Selby	Reversal of antiplatelets & direct anticoagulants (40 minutes)
14:15		Break (15 minutes)
14:30	Dr. Nadine Shehata	Seminar 4B: Advanced Hemostasis Testing & Management (90 minutes)

DAY 5> TRAUMA, MASSIVE TRANSFUSION PROTOCOLS & CONTROVERSIAL ENTITIES – May 28, 2021
Start time

9:00	Dr. Jeannie Callum	Massive Hemorrhage: Pathophysiology & Evidence based management (60 minutes)
10:00	Dr. Katerina Pavenski	Massive Hemorrhage Protocols: Real World Application (45 minutes)
10:45		Break (15 minutes)
11:00	Dr. Jacob Pendergrast	Seminar 5A: Massive, Disaster Bleeding Cases (90 minutes)
12:30		Lunch (45 minutes)
13:15	Dr. Stuart McCluskey	Albumin (30 minutes)
13:45	Dr. Jordan Tarshis	Transfusion Authority Gradient (45 minutes)
14:30		Break (15 minutes)
14:45	Dr. Yulia Lin	Review Session (60 minutes)
15:45	Dr. Yulia Lin	Post-Course Exam (30 minutes)

FACULTY & PARTNERS

Dr. Jeannie Callum
Sunnybrook Health Sciences Centre

Dr. Lani Lieberman
University Health Network

Dr. Nancy Robitaille
Université du Montréal

Dr. Christine Cserti-Gazdewich
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Dr. Zachary Liederman
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Dr. Rita Selby
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Dr. Steven Drews
Canadian Blood Services

Dr. Yulia Lin
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Dr. Nadine Shehata
Mount Sinai Hospital

Dr. Keyvan Karkouti
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Dr. Christie Lee
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Dr. Paolo Perez-D'Empaire
University Health Network

St. Michael's
Inspired Care.
Inspiring Science.

 **Sunnybrook**
HEALTH SCIENCES CENTRE

 **UHN** Toronto General
Toronto Western
Princess Margaret
Toronto Rehab
Michener Institute

 **Canadian Blood Services**
BLOOD
PLASMA
STEM CELLS
ORGANS
& TISSUES

ORBCoN
Ontario Regional Blood Coordinating Network