



# University of Toronto Transfusion Camp

## 2023-2024

Participating universities

**Alberta:** University of Alberta, University of Calgary

**British Columbia:** University of British Columbia

**Manitoba:** University of Manitoba

**Newfoundland:** Memorial University of Newfoundland

**Nova Scotia:** Dalhousie University

**Ontario:** University of Toronto, University of Ottawa, McMaster University, Queen's University, NOSM University, Western University

**Québec:** McGill University, Université Laval, Université de Montréal, Université de Sherbrooke

**Saskatchewan:** University of Saskatchewan

**International:** Guys Hospital & St. Thomas Hospital (U.K.), University Hospitals Birmingham NHS Foundation Trust (U.K.), University of Oxford (U.K.)

## TARGET AUDIENCE

Trainees, ideally PGY2 or higher, 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.

University programs interested in participating in Transfusion Camp must contact organizers ([transfusioncamp@blood.ca](mailto:transfusioncamp@blood.ca)) to review the requirements for participation and for onboarding. New university programs are preferably onboarded in the Spring or Summer for trainees to join Transfusion Camp in the Fall for Day 1.

## ATTENDEE EXPECTATIONS

### **PARTICIPATION**

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

### **COST**

Free for Canadian University trainees.

### **REGISTRATION**

1. Register by contacting your university program director. Depending on location, there may be a maximum number of local attendees allowed.
2. Trainees must have their university program director's approval to participate.
3. In addition to access to the course and course portal, registration may also provide appropriate refreshments at breaks, depending on location and circumstances.

## COURSE INFORMATION

### FORMAT

- Content is delivered over 4 days (see schedule below) from September to April.
- Each day includes lectures and team-based learning seminars.
- Trainees attend either “synchronously” (via webcast) or “asynchronously” depending on local preferences and circumstances.
- Trainees attend remotely or in-person at their local sites, depending on local preferences and circumstances.

### LOCATIONS

Locations for trainees to attend the course will depend on the format chosen by their university program. The university program administrator will communicate to their trainees about the chosen format (synchronously/asynchronously, remotely/in-person) and the locations and dates for the events. The dates and locations for all participating university programs are provided on the Course portal (hosted at <https://profedu.blood.ca>).

### MATERIAL & CERTIFICATION

Trainees will be provided with:

1. Access to a Course portal for resources: including course program and schedule; pre-reading materials; lecture slide presentations, recordings and highlights; seminars' case studies and moderator guide.
2. Depending on the university program, a Certificate of Completion of Transfusion Medicine Camp with attendance, and pre-test and post-test scores may be issued. To obtain a certificate, trainees must attend 3 of 4 days and complete the post-test exam.

# COURSE PROGRAM & SCHEDULE

## DAY 1> BLOOD COMPONENTS & PRODUCTS INDICATIONS

### Learning objectives

#### INDICATIONS FOR BLOOD TRANSFUSION

1. Appropriately prescribe components (RBC, plasma, platelets, and fibrinogen replacement)
2. Appropriately prescribe plasma protein products (albumin, coagulation factor concentrates)
3. Have a reasonable approach to the correction of coagulation prior to procedures
4. Know when to order irradiated blood components

#### 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

### Synchronous attendance via Zoom – September 22, 2023

#### Start time (EST)

	On Your Own	Pre-Course Exam provided via email and administered via online survey tool (30 minutes)
9:00	Dr. Jeannie Callum	Red Cell Transfusion (45 minutes)
9:45	Dr. Katerina Pavenski	Platelet Transfusion (45 minutes)
10:30	Dr. Akash Gupta	Basic Blood Bank Testing (30 minutes)
11:00		<b>Break</b> (15 minutes)
11:15	Facilitated Seminar 1A	RBC & Platelet Transfusion Cases, developed by Dr. Sebastian Vuong & Dr. Shuoyan Ning (75 minutes)
12:30		<b>Lunch</b> (45 minutes)
13:15	Dr. Justyna Bartoszko	Albumin (45 minutes)
14:00	Dr. Aditi Khandelwal	Plasma, PCC & Fibrinogen replacement (60 minutes)
15:00		<b>Break</b> (15 minutes)
15:15	Facilitated Seminar 1B (Non-Pediatric groups)	Plasma, PCC & Fibrinogen Cases, developed by Dr. Sheharyar Raza & Dr. Aditi Khandelwal (75 minutes)
	Dr. Lani Lieberman (Pediatric groups)	Fundamentals of Pediatric Transfusion (review slide on own)
	Facilitated Seminar 1B (Pediatric groups)	Pediatric Transfusion, developed by Dr. Ziad Solh & Dr. Valérie Arsenault (75 minutes)

### Asynchronous attendance

Asynchronous attendance is facilitated by university program administrators using recorded lectures. The dates and locations for all participating university programs are provided on the Course portal.

**DAY 2> TRANSFUSION REACTIONS & SICKLE CELL DISEASE****Learning objectives****RISKS OF TRANSFUSION**

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

**SICKLE CELL DISEASE**

5. Safely transfuse a patient with sickle cell disease

**Synchronous attendance via Zoom – November 24, 2023****Start time (EST)**

9:00	Dr. Zeller / Dr. Latour	Canadian Blood Services / Héma-Québec Virtual Tour (40 minutes)
9:40	Dr. Cserti-Gazdewich	Acute Non-Infectious Reactions (45 minutes)
10:25	Dr. Marissa Laureano	Informed Consent (20 minutes)
10:45		<b>Break</b> (15 minutes)
11:00	Facilitated Seminar 2A	Transfusion Reactions, developed by Dr. Sumedha Arya & Dr. Christine Cserti-Gazdewich (90 minutes)
12:30		<b>Lunch</b> (60 minutes)
13:30	Dr. Jacob Pendergrast	Sickle Cell Disease – Perioperative and Acute Transfusion Management (60 minutes)
14:30		<b>Break</b> (15 minutes)
14:45	Facilitated Seminar 2B	SCD & Transfusion, developed by Dr. Lianne Rotin & Dr. Jacob Pendergrast (90 minutes)

**Asynchronous attendance**

Asynchronous attendance is facilitated by university program administrators using recorded lectures. The dates and locations for all participating university programs are provided on the Course portal.

**DAY 3> PERIOPERATIVE & BLEEDING MANAGEMENT****Learning objectives****PATIENT BLOOD MANAGEMENT**

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

**CONGENITAL AND ACQUIRED BLEEDING**

3. Perform a preoperative bleeding history
4. Interpret coagulation testing results
5. Develop an approach to patients with congenital or acquired bleeding disorders (including reversal of common anticoagulants)

**Synchronous attendance via Zoom – January 26, 2024****Start time (EST)**

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	<b>Break</b> (15 minutes)	
10:45	Facilitated Seminar 3A	Patient Blood Management, developed by Dr. Charles Lafrance & Dr. Yulia Lin (90 minutes)
12:15	<b>Lunch</b> (60 minutes)	
13:15	Dr. Oksana Prokopchuk-Gauk	Congenital Coag – Bleeding history, VWD, Hemophilia (45 minutes)
14:00	Dr. Eric Tseng	Reversal of Antiplatelets & Direct Anticoagulants (45 minutes)
14:45	<b>Break</b> (15 minutes)	
15:00	Facilitated Seminar 3B	Advanced Hemostasis Testing & Management, developed by Dr. Nadia Gabarin & Dr. Carolyne Elbaz (90 minutes)

**Asynchronous attendance**

Asynchronous attendance is facilitated by university program administrators using recorded lectures. The dates and locations for all participating university programs are provided on the Course portal.

**DAY 4> MASSIVE HEMORRHAGE PROTOCOLS & REVIEW***Learning objectives***MASSIVE HEMORRHAGE**

1. Manage a massively hemorrhaging patient, including surgical, trauma and obstetric patients, with discussion of hemostatic medications (antifibrinolytics)

*Synchronous attendance via Zoom – April 5, 2024***Start time (EST)**

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	<b>Break</b> (15 minutes)	
11:00	Facilitated Seminar 4	Massive, Disaster Bleeding Cases, developed by Dr. Marc Bienz & Dr. Jeannie Callum (90 minutes)
12:30	<b>Lunch</b> (45 minutes)	
13:15	To be determined	New updates in Transfusion (30 minutes)
13:45	Panel	Ask the Experts Q&A and Review Session (45 minutes)
14:30	On Your Own	Post-Course Exam provided via email and administered via online survey tool (30 minutes)

*Asynchronous attendance*

Asynchronous attendance is facilitated by university program administrators using recorded lectures. The dates and locations for all participating university programs are provided on the Course portal.

# FACULTY

**Dr. Valérie Arsenault**  
*Université de Montréal*

**Dr. Sumedha Arya**  
*University of Toronto*

**Dr. Justyna Bartoszko**  
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**Dr. Marc Bienz**  
*University of Toronto*

**Dr. Jeannie Callum**  
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*McMaster University*

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*Sunnybrook Health Sciences Centre*

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*University Health Network*

**Dr. Aditi Khandelwal**  
*Canadian Blood Services*

**Dr. Charles Lafrance**  
*University of Toronto*

**Dr. Catherine Latour**  
*Héma-Québec*

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*Trillium Health Partners*

**Dr. Lani Lieberman**  
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*Canadian Blood Services*

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*University Health Network*

**Dr. Oksana Prokopchuk-Gauk**  
*University of Saskatchewan*

**Dr. Sheharyar Raza**  
*University of Toronto*

**Dr. Lianne Rotin**  
*University of Toronto*

**Dr. Nadine Shehata**  
*Sinai Health*

**Dr. Ziad Solh**  
*University of Western Ontario*

**Dr. Eric Tseng**  
*Unity Health Toronto*

**Dr. Sebastian Vuong**  
*McMaster University*

**Dr. Michelle Zeller**  
*Canadian Blood Services*



# PLANNING COMMITTEE & PARTNERS

**Dr. Jeannie Callum**  
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Laboratory Medicine & Pathobiology  
**UNIVERSITY OF TORONTO**



Contact Transfusion Camp organizers by email at [transfusioncamp@blood.ca](mailto:transfusioncamp@blood.ca)