### Session I: Performance Improvement

**Session Objective:** To introduce attendees to examples of performance improvement projects. Attendees will also participate in developing a performance improvement project around aspects of perfusion.

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 1:15 pm - 1:45 pm | **Context Knowledge and Generalizable Knowledge:**  
**The Underpinnings for Intelligent Action**  
Robert C. Groom MS CCP  
**Objective:** It takes both context knowledge and generalizable knowledge to provide a solid foundation for designing intelligent tests of change. Participants will learn the crucial role of these two types of knowledge to implement improvement efforts that are effective and sustainable. |
| 1:45 pm - 2:15 pm | **Cardiac Surgery Performance Improvement:**  
**Where Clinicians Meet Processes**  
Kenneth G. Shann CCP  
**Objective:** To discuss the creation and function of a local performance improvement committee at Montefiore Medical Center. The attendees will be introduced to an interdisciplinary model designed to identify opportunities for process improvement and provide a mechanism for redesigning the system of care. |
| 2:15 pm - 2:45 pm | **Blood Management Among Pediatric Jehovah’s Witnesses**  
Daniel Gomez MT CCP  
**Objective:** To present Nationwide Children’s Hospital’s approach and management techniques for bloodless pediatric cardiac surgery. The attendees will be exposed to considerations regarding bloodless surgery from pre-operative through post-operative care. |

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:45 pm - 3:15 pm</td>
<td>Break</td>
</tr>
</tbody>
</table>
| 3:15 pm - 3:30 pm | **Pressure on Bypass – A Potential Quality Marker of Perfusion, A Concept**  
Michael Poullis BSc(Hons) MBBS MD FRCS(CTh) |
| 3:30 pm - 3:45 pm | **Simplified Perfusion Process Control: A Ten Year Profile**  
Basil M. Henrick BSc FCCP |
| 3:45 pm - 4:00 pm | **National Performance Measurement Strategy**  
Dirck A. Rilla LP CCP |
4:00 pm - 4:15 pm  Monitoring Microemboli During Cardiopulmonary Bypass with the EDAC® QUANTIFIER
Ted Lynch PhD

4:15 pm - 5:45 pm  Performance Improvement Breakout
• Neuroprotective strategies
• Preventing low Hct on bypass without transfusing
• Hemostasis management
• Renal Protection

Each table will be asked to work through one of the four topics listed. Faculty will moderate discussions over ½ hour. Each table (or some selection therein) will be asked to share their findings with the rest of the audience. This dialog will be moderated to encourage audience participation, and identify variation in the strategies taken by each table. The take-home points are that there are no wrong answers, only different strategies. Some strategies may be more effective than others, however. Attendees will then be walked through the development of a project about one of the following topics of perfusion (framing a question, developing methodology and patient cohort, determining what you need to collect, who to get around the table, what data to share and how to show it, framing your findings, and moving forward toward sustainability).

6:00 pm - 8:00 pm  Exhibits / Manufacturer Reception
Session II: Guideline Development

Moderators: Donald S. Likosky PhD & Jane Ottens CCP(Aust)

Session Objective:
1. Update attendees on the work of the ICEBP Guideline Writing Group. Highlight the ongoing difficulties of developing guideline writing within our professional body. Discuss what focus guideline writing for perfusion should take.
2. Discuss the development of guidelines in relation to the influence of perfusion on the systemic inflammatory response to cardiac surgery. Specifically looking at the influence of pharmacology, cell salvage, embolic events, filtration, coated circuits and temperature on this response.
3. Introduce attendees to recently published guidelines that relate to perfusion management. Evaluate current compliance to published guidelines, and areas of perceived need for clinical practice guidelines.

Developing Guidelines: Much Harder than it Seems
Robert A. Baker PhD CCP(Aust)

Objective: To openly discuss the problems associated with developing a guideline writing culture in the perfusion community. Identify the skill set and the resources that are needed by perfusionists to actually participate in the development of guidelines.

Working with the Systemic Inflammatory Response:
Remembering the Complexities!
R. Clive Landis PhD

Objectives:
1. To understand that the systemic “inflammatory” response is comprised of multiple host defence systems activated by the insult of surgery and cardiopulmonary bypass
2. To understand that the systemic “inflammatory” response can be redefined in terms of a “systemic host response” to surgery
3. To understand that clinically meaningful interdiction of the systemic host response to surgery will require combinations of drugs and/or circuit coating strategies to target multiple host defence pathways simultaneously
4. To understand that localised triggers caused by the surgical team are modifiable and may affect translation of the systemic inflammatory response into hard adverse clinical events
8:45 am - 9:30 am  **Current Guideline Development**  
Members of the ICEBP Guidelines Writing Group  
**Objective:** The work of the Guidelines Writing Group will be discussed in an interactive manner in relation to the development of guidelines regarding the influence of perfusion on the systemic inflammatory response to cardiac surgery. We will specifically look at recommendations that have been proposed in relation to the influence of pharmacology, cell salvage, embolic events, filtration, coated circuits and temperature on the systemic inflammatory response.

9:30 am - 9:45 am  **Pro/Con Debate**  
Robert A. Baker PhD CCP(Aust), Adjudicator  
**Should the ICEBP Review and Endorse the Shann Guidelines?**  
Donald S. Likosky PhD (Pro), Robert C. Groom MS CCP (Con)

9:45 am - 10:00 am  **Perfusion Data in Scientific Journals: Perfusion Standards of Reporting Trials (PERFSORT)**  
Michael Poullis BSc(Hons) MBBS FRCS(CTh)  
**Objective:** To develop a two-tier system to improve the standard of publication regarding the techniques and variables of extracorporeal support and to enable the data used for publication to be available for future interpretation and meta-analysis.

10:00 am - 10:30 am  Coffee and Exhibits

10:30 am - 12:00 n  **Published and Developing Guidelines: Are they Worth the Paper?**  
Donald S. Likosky PhD, Jane Ottens CCP(Aust), Robert A. Baker PhD CCP(Aust)  
**Objective:** In this interactive session current published guidelines for the practice of perfusion will be evaluated and discussed. The audience will be continually challenged with guidelines and asked to indicate via the Audience Response System their compliance with guidelines and then support for the guidelines. Where controversy exists, small group discussion will be encouraged to come forward with proposals for either alternative guidelines, complimentary topics or research suggestions to make the way forward clearer. Guidelines directly related to perfusion will be discussed, such as the recent glucose guidelines, the perioperative blood management guidelines and the coronary artery bypass graft surgery guidelines.

12:00 n - 1:30 pm  Lunch on own
Session III: Safety & Simulation

Moderators: Dwayne Jones CPC CCP RN & Nicholas B. Mellas CCP

Session Objective: Participants will benefit from a review of “Crew Resource Management”, an error avoidance strategy employed by the airline industry. Perfusionists, Nurses, Physicians and healthcare personnel will learn how to employ key error management techniques to detect, avoid and mitigate the effects of human error. An introduction to Perfusion simulators will provide attendees with a glimpse of the future of cardiovascular perfusion education as a method to improve safety in health care.

1:30 pm - 2:00 pm
Understanding the Concept of Crew Resource Management
Ann Marie Mellas, First Officer B757/767 United Airlines
Objective: Provide an overview of the tools and techniques used in commercial aviation to manage and reduce preventable errors.

2:00 pm - 3:00 pm
Applying the Principles of Crew Resource Management to Cardiac Surgery
Nicholas B. Mellas CCP
Objective: Discuss how the cardiac surgical clinical team might learn from the culture of safety embraced by the airline industry. Participants will be engaged in an interactive discussion based on real-life examples of operating room scenarios.

3:00 pm - 3:30 pm
Coffee and Exhibits

3:30 pm - 4:30 pm
The Use of High Fidelity Simulation in Cardiovascular Perfusion Education: A Canadian Perspective
K. S. Bandali PhD
Objective: Participants will benefit from a review of current and future initiatives that challenge conventional health care education models through the integration of high fidelity simulation and electronic capture.

4:30 pm - 4:40 pm
Perfusion Simulation: Experience with the Orpheus Simulator
Jane Ottens CCP(Aust)
Objective: Participants will be introduced to the use of an actual perfusion simulator.

4:40 pm - 5:15 pm
Safety and Simulation Panel Discussion: Q & A
Session IV: Registries
Moderators: Robert A. Baker PhD CCP(Aust) & Kenneth G. Shann CCP

Session Objective: To discuss how registries and databases have evolved over the years to become tools for local performance evaluation and improvement. Participants will hear the perspectives of key individuals who are integral to data collection and analysis including surgeons, perfusionists, researchers, and industry representatives. Participants will also share in an interactive discussion surrounding the ongoing development of the web-based ICEBP perfusion registry.

8:00 am - 9:00 am
Registries and Databases for Cardiac Surgery:
A Review of the History and Current State of the Art
Keynote Speaker: Jeffrey P. Jacobs MD FACS FACC FCCP

Objective: To describe the evolution of multi-institutional international databases of performing meaningful outcomes analysis. The importance of subspecialty collaboration for database development will be discussed. The role of the cardiac surgeon in the registry business will be described.

Note: Immediately following Dr. Jacobs’ talk will be a brief discussion of the Shann et al paper entitled “Complications Relating to Perfusion and Extracorporeal Circulation Associated with the Treatment of Patients with Congenital Cardiac Disease: Consensus Definitions from the Multi-Societal Database Committee for Pediatric and Congenital Heart Disease.”

9:00 am - 10:30 am
Interactive Session – International Perfusion Registry

Objective: To gain feedback from attendees regarding their experiences using an international perfusion registry. Prior to the conference, registrants will be sent a paper version of the registry and will be asked to collect data on 5 to 10 patients. Based on this experience, this interactive session will focus on identifying opportunities to improve the registry prior to its completion.

10:30 am - 11:00 am
Coffee and Exhibits

11:00 am - 11:15 am
Normothermic Bypass in Pediatric Cardiac Surgery:
Experience with 1200 Cases
Mohamed Ly MD

Objective: Cold cardioplegia is the gold standard in pediatric surgery. We analyzed five years experience in our institution with warm perfusion and blood cardioplegia in pediatric surgery.

11:15 am – 11:25 am
Perfusionists and Registries
Kenneth G. Shann CCP

Objective: To describe the role of perfusionists in the registry business.

11:25 am – 11:35 am
Industry and Registries
Owen White BS

Objective: To describe the role of industry in the registry business.
11:35 am - 11:45 am

Researchers and Registries
Speaker: Donald S. Likosky PhD

Objective: To describe the role of researchers in the registry business.

11:45 am - 12:15 pm

Panel Discussion: Obstacles and Challenges of Implementing and Maintaining a Registry at the Local Level

12:15 pm - 1:45 pm

Lunch on own

Session V: Synthesizing & Reviewing Evidence
Moderators: Donald S. Likosky PhD & Dirck A. Rilla LP CCP

Session Objective: Learn how to critically appraise the literature concerning the formulation of a research question, methodology for conducting a study, and drawing inferences.

1:45 pm - 2:00 pm

Japan Society of ExtraCorporeal Technology (JaSECT) - Overview and Current Activities
Atsushi Sekiguchi

2:00 pm - 2:30 pm

Patient Safety and AmSECT
Carla R. Maul LP CCP PBMT

Objective: To discuss how the American Society of ExtraCorporeal Technology is striving to cultivate and support a culture of safety within the field of perfusion.

2:30 pm - 3:15 pm

Synthesizing & Reviewing Evidence
Two articles (Merry, et al - ATS 2004 & Kerendi et al, ATS 2007) will be distributed to attendees. As they read the articles, attendees are encouraged to think about the following questions:

1. What is the research question? What were the methods by which the authors went about trying to address the question at hand? What would be an alternative approach to addressing the question?

2. What were the main findings? What findings do you question? Are these findings generalizable?

3. What is the impact of this work relative to other studies? Do you question how the authors fit this work in the larger context?

Audience members will be divided into groups, with each group focusing on a different bullet point above. There should be tables of no more than 12-15 (there will be more than 1 table focusing on the same bullet point). Each group will have 15 minutes to talk amongst themselves, and members of the scientific sessions committee will help facilitate. We will then get back together to discuss the findings of each group.

3:15 pm - 3:45 pm

Break

3:45 pm - 4:30 pm

Synthesizing & Reviewing Evidence - Continued

4:30 pm - 5:00 pm

Closing Remarks