

# CESO 2021 Annual Conference Program

**Monday, February 8, 2021**

Time	Topic	Speaker	Speaker Bio	Presentation Description
12:00-12:05	Welcome and Opening Remarks	Bill Gentles Mario Ramirez		
12:05–1:00	<b>Keynote Address</b> Remote Patient Monitoring as Health System Strategy	Chris Gutmann <sup>1</sup> Samantha Herold <sup>2</sup> Pamela Hoffman <sup>3</sup>	(1) Executive Director in ITS for Clinical Engineering, Yale New Haven Health Services (2) Clinical Engineer, Yale New Haven Hospital (3) Medical Director of Telehealth Services at Yale New Haven Health Services and Yale Medicine	Traditional healthcare is experiencing a major shift from expensive medical technology and facility-delivered services to home-based care for improved outcomes and cost reduction. Remote patient monitoring (RPM) is a major driver of this transition. As organizations begin to implement new or bolster existing RPM programs, there are many technical and operational considerations that will impact success. Join us for a discussion on obtaining clinical buy-in, evaluating technologies, and preparing your hospital or health system for the new-wave of patient-centered care.
1:00–1:15	<b>Break &amp; Networking via wonder.me</b>			
1:15 – 2:00	Update On Fluorescence Imaging Devices	Ralph DaCosta	Dr. Ralph DaCosta, PhD (University of Toronto, Canada), is a biomedical physicist with over 30 years of experience in the field of biophotonics, optical physics and molecular imaging. He is a Scientist at the Princess Margaret Cancer Center and Techna Institute, UHN, where he leads a molecular imaging program with a focus on diagnosis and treatment of cancer and other diseases. He is an Assistant Professor in the Faculty of Medicine, University of Toronto. He's held the Cancer Care Ontario Chair in Cancer Imaging and was the 2014 UHN Inventor of the Year. He is internationally recognized for his expertise and biophotonics and molecular imaging as well as contributions to improving the diagnosis and treatment of cancer and other diseases employing photonics-enabled technologies. Dr. DaCosta is Founder, Chief Scientific Officer and Board Director of MolecuLight Inc., a Toronto-based medical imaging company that has commercialized his discoveries and inventions at UHN in wound infection and surgical oncology as well as other areas (e.g. food safety, cosmetics). He is also CEO, CTO and Board Director of SBI Canada which is globally commercializing (fluorescence) image-guided surgery technology invented by Dr. DaCosta.	Dr. DaCosta will discuss the development and commercialization of MolecuLight's wound imaging technology as well as his translational work in fluorescence image-guided breast cancer surgery.
2:00–2:45	Cyber Risk Mitigation in an IoMT World	Kashif Parvaiz	Kashif Parvaiz is a seasoned Cyber Security executive with over 15 years experience managing security programs for large private and public sector organizations in the Energy, Education and Healthcare sectors. Mr. Parvaiz is currently Chief Information Security Officer (CISO) for the University Health Network (UHN). In his career, Mr. Parvaiz has overseen the implementation of successful enterprise wide security awareness, vulnerability management and incident response programs. In addition, Mr. Parvaiz has developed and managed long term Cyber roadmaps to raise organizational Cyber maturity levels. As a CISO, Mr. Parvaiz reports to senior executives and board members on a regular basis and has the ability to represent security posture and risk in business terms. Mr. Parvaiz holds many industry certifications such as CISSP, CISM and CRISC as well as an MBA.	Cyber attacks against healthcare institutions are dramatically increasing ever year. The impact of these cyber incidents is more disruptive to hospital operation than ever before due to the wide use of network-connected clinical devices in patient care. This session will describe why healthcare organizations are targeted, review IoMT cyber risks, describe how these risks can be mitigated and provide a high-level implementation plan.

# CESO 2021 Annual Conference Program

**Tuesday, February 9, 2021**

Time	Topic	Speaker	Speaker Bio	Presentation Description
12:00–1:00	Modelling the Epidemiology of COVID	David Naimark	Dr. Naimark is an associate professor, Department of Medicine and Institute of Health Policy, Management and Evaluation (iHPME), and full member of the School of Graduate Studies, University of Toronto. He joined the Faculty of Medicine as a staff nephrologist at Sunnybrook Health Sciences Centre in 1997 with an interest in the epidemiology of chronic kidney disease (CKD). Dr. Naimark is an active member of the CKD Prognosis Consortium (CKD-PC), an international group of 45 databases containing 11 million CKD patients. He holds a cross-appointment in the Institute of Health Policy Management and Evaluation in the Dalla Lana School of Public Health at the University of Toronto. He is director of the advanced decision analysis course at iHPME and has taught or mentored seventy graduate students with respect to sophisticated decision modeling techniques since his appointment.	In mid-March, after having viewed with horror the breakdown of critical care infrastructure due to the COVID-19 pandemic in Italy, and fearing that a similar scenario could play out in Ontario, a group of academic clinicians and scientists based at the University of Toronto and affiliated hospitals banded together to form the Covid-19 modelling collaborative (Covid-19-MC). Our group drew on our own skills in data collection and synthesis and decision model construction as well as on a cadre of skilled graduate students, to quickly build decision models that have helped to inform government decision making in both the first and second waves. In this presentation, I will review the methodologic history of medical decision analysis and show the structural connections between non-infectious disease model types and their infectious disease counterparts. I will focus on a few of the technical issues of building models and show some of the results to date of the collaborative.
1:00–1:15	<b>Break &amp; Networking via wonder.me</b>			
1:15 – 2:30	Technical Problem-Solving Challenge: In this session, Biomed techs will talk about interesting troubleshooting problems they encountered and their approach to solving them.	Joe Hayward	Biomedical Technologist Clinical Engineering, CHEO	Death of a patient on dialysis soon after completing PM's on their machine.
		Nicole Marsh	General Duty Technologist Clinical Engineering, CHEO	Troubleshooting challenges of a deaf/hard of hearing Biomedical Technologist
		Ron Avery, Dave Morrison, Mike Capuano	Staff and manager Biomedical Technology, Hamilton Health Sciences	Optia Apheresis Machine intermittently shutting down during runtime
		Gad Acosta	Senior Technologist, DLSO Surgical Support Group, Medical Engineering Department University Health Network	Issues with the handpieces of the CUSA Excel Ultrasonic aspirator

# CESO 2021 Annual Conference Program

**Wednesday, February 10, 2021**

Time	Topic	Speaker	Speaker Bio	Presentation Description
12:00–12:45	Clinical Engineering Student Presentations	Sonik Kothari	Clinical Engineering Student University of Ottawa	Assessing the Preventive Maintenance Program and Risk Assessment of Assets at The Ottawa Hospital
		Kajal Madhusudan	Clinical Engineering Student University of Ottawa	Developing a Method to Evaluate a Regional Computerized Maintenance Management System (CMMS)
		Eden D'souza	Clinical Engineering Student Carleton University	Remote Video Monitoring for High Risk Patients
12:45 – 1:00	<b>Break &amp; Networking via wonder.me</b>			
1:00 – 1:45	Biomedical Engineering Technology Student Posters	Ashley Beaulieu	Biomedical Engineering Technology Students St. Clair College	Knowledge is Safety: How displayed temperature can help prevent the spread of sickness.
		Francesco Calvaruso		
		Carrie Poilin		
		Wisam Azimeh		
		Keagan McGeen	Biomedical Engineering Technology Students St. Clair College	The Cleansing Capsule-UVC Sanitation Device
		Quinn Fazekas		
		Abdullah Asfour		
		Joelle Doorenspleet	Biomedical Engineering Technology Students Centennial College	Security in Telemedicine
		Minwoo Cheng		
		Victoria Foster		
		Jisu Hwang		
Fernando Vieira				
Andres Felipe Poveda Mateus				
1:45 – 3:00	<b>Networking for Community Building - Get to Know your Future Colleagues! via wonder.me</b>			

# CESO 2021 Annual Conference Program

**Thursday, February 11, 2021**

Time	Topic	Speaker	Speaker Bio	Presentation Description
12:00–1:00	Vanessa’s Law and Mandatory Reporting	Elizabeth Ptasznik Myriam Sarazin-Frey Colleen Turpin	<p>Elizabeth Ptasznik is a registered nurse and has over 30 years of experience in infection control, occupational health, public health and pediatrics. Elizabeth obtained an undergraduate and a Masters degree in Nursing and has recently joined the Medical Devices Operations Section on assignment from which she has been able to pull from her previous and extensive experience as a Regional Coordinator for the Canada Vigilance Program.</p> <p>Myriam Sarazin-Frey obtained an undergraduate degree in Health Sciences, with a specialization in Social Sciences of Health. Since 2019, she shares the responsibility as co-lead of coordinating and managing the voluntary hospital medical device-reporting program also known as the Canadian Medical Devices Sentinel Network (CMDSNet).</p> <p>Colleen Turpin is also a registered nurse with over 30 years of experience, with a specialization in nephrology nursing. Colleen obtained a Masters of Education while working with a medical company providing clinical support to renal units across Canada. She has been with the Canadian Medical Devices Sentinel Network (CMDSNet) program since its inception in 2009, a program she developed, launched, and now acts as a co-lead.</p>	<p>“Mandatory Reporting of Medical Device Incidents from Hospitals: How are we doing so far?”</p> <p>On December 16 2019, new mandatory reporting (MR) requirements for hospitals came into force. These regulations will help to improve the reporting of serious adverse drug reactions (sADR) and medical device incidents (MDI). It is a key part of implementing the Protecting Canadians from Unsafe Drugs Act (Vanessa’s Law). The central objective of the regulations for mandatory reporting of sADRs and MDIs by hospitals is to improve the quality and increase the quantity of these reports, and to expand on the real world evidence used by Health Canada to monitor the safety and effectiveness of therapeutic products, as part of a life-cycle approach to the regulation of such products. Under the regulations, hospitals are required to report to Health Canada all sADRs and MDIs within 30 days of being documented at the hospital.</p> <p>This presentation aims to provide CESO participants an update on mandatory reporting for hospitals thus far. Discussion will include an overview of the number, quality and types of MDI reports received since coming into force, as well as updates on COVID-19. The presenter will share best reporting practices with the audience to improve the submission of MDI reports. Resources for further MR education and Health Canada’s support will be outlined. An open question and answer session will follow the presentation.</p>
1:00–1:15	Break & Networking via wonder.me			
1:15 – 2:00	Translating needs into action for telehealth and remote patient monitoring: overview of how clinical questions prompt engineering solutions.	Pamela Hoffman	Dr Hoffman is medical director of Telehealth Services at Yale New Haven Health Services and Yale Medicine. She works with a multidisciplinary team across ambulatory and inpatient settings to advance telehealth for the organization. She has clinical responsibilities in the pediatric emergency department, evaluating children in behavioral health crises. She also works at the Yale Center for Medical Informatics where she is the co-training director for the Masters program in Health Informatics.	The global pandemic forced sudden shifts and changes for medical practice and treatment. Additionally, while remote patient monitoring (RPM) is seen by many to be “the future” of patient care, it remains unclear how to actually get there. For both telehealth and RPM advancement, success relies on the integration and collaboration between clinical, operational, and technical teams. I will discuss specific challenges and opportunities encountered in the Yale New Haven Health System to highlight the need for collaboration between clinical leadership and clinical engineering specialists.
2:00-2:30	Update on the Ontario Surplus Hospital Equipment Network (OSHEN) project	Murat Firat Tim Wu	<p>Murat Firat, Manager, Department of Biomedical Engineering, Sunnybrook Health Sciences Centre</p> <p>Tim Wu, Clinical Engineer, Department of Biomedical Engineering, Sunnybrook Health Sciences Centre</p>	Surplus devices are often disposed at great cost and effort by hospitals across Ontario in the frequent replacement of outdated equipment, including many items that could be repurposed for training or donated to low-resource countries. Unfortunately, finding qualified recipients can be a time-consuming process. This session will introduce OSHEN, a new CESO initiative to simplify the process of connecting healthcare organizations with registered charities and not-for-profit organizations to reuse equipment that might otherwise be prematurely discarded.

## CESO 2021 Annual Conference Program

**Thursday, February 11, 2021**

Time	Topic	Speaker	Speaker Bio	Presentation Description
2:30-3:00	Improving Patient Outcomes and Experience by Moving Beyond Patient Portals	Mark Berry	<p>Mark Berry has over 30 years of healthcare experience in both clinical and leadership roles. He has held senior leadership and management positions during his career. He has extensive experience in leading strategic change and achieving results. He provides expertise in aligning people and creating teams to deliver on strategic objectives. Mark is known as a change agent who is flexible and welcomes challenge and innovation whilst ensuring quality standards are achieved and maintained.</p> <p>Mark is a certified facilitator, holds the designation of Professional Innovation Advisor and trainer in the creative problem solving process. Over the past 12 years Mark has successfully utilized this approach in designing and executing both local and regional projects for Grand River Hospital.</p> <p>In addition in his roles as VP and AVP Mark has either lead or been involved in the Strategic planning process from a local, regional and provincial perspective. Over the past 2 years, he has been working as a consultant at Hamilton Health Sciences leading the deployment of a regional patient portal successfully deploying a portal to 22 organizations representing 54 hospitals. With over 60,000 users the experience has created a greater understanding of the need for digital patient engagement tools in healthcare.</p>	<p>As we increasingly embrace an online world to complete day-to-day tasks, from banking to managing the lighting of our home or the temperature set by the thermostat, one thing is abundantly clear: Canadians want to be informed and involved when it comes to their health especially in the new COVID world. More and more patient portals are coming online across the country in an effort to address this desire – but a question emerges: What problem are healthcare providers solving by sharing this information with their patients? Electronic health records assist healthcare providers in their quest to provide the best care possible but how might we capitalize on patients being able to access their own health records to then communicate better with them, and forge a true partnership towards a better health journey and outcome together? The HITS eHealth Office has led the regional deployment of a provincially-recognized patient portal, yielding 60,000 patient enrollments within a six-month time period. Through this work, we’ve gained significant insight into this new and developing area of patient engagement, this presentation will explore the communication shift that needs to happen that goes beyond simply deploying a patient portal and the registration of patients, to truly advance the relationship between healthcare provider and patient.</p>

# CESO 2021 Annual Conference Program

**Friday, February 12, 2021**

Time	Topic	Speaker	Speaker Bio	Presentation Description
12:00–12:45	PM Practices and Alternative Equipment Maintenance	Sonja Markez Adeel Alam	Sonja Markez received a BAsC in Mechanical Engineering from Queen’s University and an MHS in Clinical Engineering from the University of Toronto. She spent over 15 years in the medical device industry working in Regulatory Affairs and Quality Assurance before returning to her Clinical Engineering roots. She currently works as a Clinical Engineer in the Department of Medical Engineering at UHN. Adeel completed a MHS in Clinical Engineering at the University of Toronto. He went on to work at the Massachusetts General Hospital, in Boston, MA, as a clinical engineer, where he replaced an aging defibrillator fleet and supported the ECG system. Adeel then joined St. Joseph’s Healthcare Hamilton where he led the medical device integration strategy and the radiology implementation of the EPIC EPR system. Currently, he is leading the team at Sinai Health as Manager of Biomedical Engineering.	The UHN and Sinai team have been looking at our PM practices and have developed a systematic approach that includes considerations of the clinical practice, the availability of the equipment, and the criticality of the equipment to determine the PM needs of each piece of equipment.
12:45–1:15	Break & Networking via wonder.me			
1:15–1:45	Clinical Engineering Society Of Ontario Annual General Meeting (AGM)	Bill Gentles	Bill Gentles is a Biomedical Engineering consultant and is President of the Clinical Engineering Society of Ontario.	All welcome
1:45 – 2:00	Certification as a Clinical Engineer in Canada	Marie-Ange Janvier	Marie-Ange Janvier is a certified clinical engineer (CCE) that works at the Children’s Hospital of Eastern Ontario (CHEO) in Ottawa Canada. She is a licensed professional engineer in the province of Ontario and Quebec. In 2017, she was awarded Early Career Achievement Award by the Canadian Medical and Biological Engineering Society (CMBES). She is a member of CMBES and the American College of Clinical Engineers (ACCE). Mrs. Janvier is the Chair for the Canadian Board of Examiners for Clinical Engineering Certification. She is also the Chair of Bilingual Affairs Committee in the Canadian Medical and Biological Engineering Society which is Canada’s principal society for engineering in medicine and biology. Mrs. Janvier is as well the North America Regional Group Representative for the Council of Societies in the International Federation for Medical and Biological Engineering (IFMBE) a Non-Governmental Organization (NGO) for the United Nations and the World Health Organization (WHO), who is uniquely positioned to influence the delivery of health care to the world through Biomedical and Clinical Engineering. She has a PhD in biomedical engineering from the University of Montreal/Polytechnique. She also holds a degree from electrical engineering from the University of Ottawa where she graduated with honors as summa cum laude. She is a part-time professor at the University of Ottawa for undergraduates and graduates in the biomedical engineering program. She is an Adjunct Research Professor at Carleton University in the Department of Systems and Computer Engineering. In her spare time, she always looks for ways to help developing countries in equipment donation.	A brief overview of the certification requirements, process and benefits of becoming a Certified Clinical Engineer in Canada. This presentation will cover CCE governance, the application process (including application & prep for the written & oral exams), and the renewal process before briefly fielding questions.

# CESO 2021 Annual Conference Program

**Friday, February 12, 2021**

Time	Topic	Speaker	Speaker Bio	Presentation Description
2:00-2:45	Infection prevention and control	Laurie Streitenberger Anna Cotic	Laurie began her career at SickKids in 1991 and transitioned to Infection Prevention and Control in 1998 where she is currently the Senior Manager. Laurie is well recognized as a provincial & national expert in paediatric and neonatal infection prevention & control (IPAC) and frequently serves in a consultative capacity to external partners. She has co-chaired IPAC – Canada’s Paediatric and Neonatal Interest Group (PNIG) and is the paediatric representative on the IPAC Working Group of the Provincial Infectious Diseases Advisory Committee (PIDAC), responsible for developing IPAC best practice guidelines and recommendations for Ontario. Anna completed her Master of Public Health from the University of Toronto specializing in Occupational and Environmental Health. She started at SickKids in 2017 as an Occupational Hygienist and Radiation Safety Officer in the Occupational Health and Safety Services Department. More recently, she was acting Senior Manager for the Hygiene group. In this role, her primary focus is staff health and safety as it relates to radiation, handling of hazardous drugs and communicable disease exposure. She maintains a close working relationship with the UofT Dalla Lana School of Public Health serving as a guest lecturer.	With the recent COVID Pandemic, Hospitals have refocused attention on the importance of cleaning and disinfection and the proper use of personal protective equipment (PPE). Medical Equipment used on patients requires cleaning and disinfection between each patient use. When medical equipment is not working at the bedside, clinical teams call upon Medical Engineering personnel to rectify issues. Medical Engineering Technologists need to know how to enter each patient room, perform their task(s), and leave each patient room in a safe manner. Safe practice considerations in this setting will be discussed by two experts, Ms. Laurie Streitenberger, Senior Manager, Infection Prevention and Control, and Ms. Anna Cotic, Occupational Hygienist.
2:45-3:00	Closing remarks and prizes	Bill Gentles Mario Ramirez		